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# **python-asff**

***Release 0.1.0***

**xen0l**

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# CONTENTS

<b>1</b>	<b>Overview</b>	<b>3</b>
<b>2</b>	<b>Examples</b>	<b>5</b>
<b>3</b>	<b>User guide</b>	<b>7</b>
<b>4</b>	<b>Developer page</b>	<b>9</b>
<b>5</b>	<b>API Reference</b>	<b>13</b>
<b>6</b>	<b>Index</b>	<b>161</b>
	<b>Python Module Index</b>	<b>163</b>
	<b>Index</b>	<b>165</b>



python-asff is a library to work with Amazon Security Finding Format (ASFF). It aims to provide simple interface for integrations, minimal number of external dependencies and 100% schema correctness.



## OVERVIEW

### 1.1 Motivation

I run security operations in multi-account AWS organization setup. There are various AWS & open source security tools used for handling security events in AWS. However, I found it very beneficial to centralize all findings in [AWS Security Hub](#) as it provides complete overview of all security events in the AWS organization. Apart from that, it also normalizes all security events into a common format: [Amazon Security Finding Format \(ASFF\)](#).

The benefit of this is that regardless of vendor or tool, all the findings share the same format. However, there are some downsides:

- the format is quite extensive (which is DEFINITELY good for verbose information, but can cause headaches what and how much data should be provided)
- there are no easy to use libraries with proper validation and simple interface
- lack of tooling to build ASFF findings regardless of the programming language

*python-asff* tries to rectify this.

### 1.2 Main features

*python-asff* main features are:

- **schema correctness** - once Python class has been created, it will be fully validated, so user can be certain that class is always suitable for ingestion into AWS Security Hub.
- **simplicity** - the library aims to provide extremely simple interface, so people can ingest finding easily and focus on what matters - fixing them. Moreover, it also provides helpers that allow you to fetch information about resources easily.
- **minimal dependencies** - for as wider adoption as possible, we commit to keep the number of external dependencies very small. Only dependency to stay is [pydantic](#), which provides underlying functionality.
- **CLI tooling** - provide CLI tooling that will allow non-Python projects to create ASFF findings from any security tool suitable for ingestion into Security Hub easily.





## EXAMPLES

Code examples of python-asff and how to use it. These snippets are usable “as is”.

### 2.1 Create a new finding

```
1  #!/usr/bin/env python
2
3  from asff import AmazonSecurityFinding
4
5  f = AmazonSecurityFinding.from_kwargs(
6      aws_account_id="0123456789012",
7      title="Example finding",
8      description="Example finding to demonstrate python-asff usage",
9      types=["Software and Configuration Checks/AWS Security Best Practices"],
10     product_name="python-asff-test",
11 )
12
13 print(f.to_json())
```

### 2.2 Send a finding to Security Hub

```
1  #!/usr/bin/env python
2
3  import json
4
5  import boto3
6
7  from asff import AmazonSecurityFinding
8
9  sts = boto3.client("sts")
10 aws_account_id = sts.get_caller_identity()["Account"]
11
12 f = AmazonSecurityFinding.from_kwargs(
13     aws_account_id=aws_account_id,
14     title="Example finding",
15     description="Example finding to demonstrate python-asff usage",
16     types=["Software and Configuration Checks/AWS Security Best Practices"],
17     product_name="python-asff-test",
18 )
19
```

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```
20 sh = boto3.client("securityhub", region_name="eu-west-1")
21 response = sh.batch_import_findings(Findings=[f.to_dict()])
22
23 print(json.dumps(response, indent=4, sort_keys=True))
```

## 3.1 Installation

### 3.1.1 Python support

Required minimal version of Python is 3.6+ and project is actively tested on all supported by versions. Python 3 versions prior to 3.6 can also work with some changes, but the code uses language features from Python 3.6+.

### 3.1.2 PyPI

python-asff is available via PyPI:

```
pip install python-asff
```



## 4.1 Contributing

Contributions are welcome in the following categories:

- integration into open source security tools
- reporting bugs
- documentation
- new functionality & code

### 4.1.1 Reporting bugs

If you found a bug, you should report it in the project [issue tracker](#).

### 4.1.2 Documentation

All documentation contributions should be written in Markdown. The project uses Sphinx as a documentation generator, but this is because it provides the best support for generating documentation from docstrings. mkddocs alternatives did not provide an output of a similar quality (new project idea?).

### 4.1.3 Pull requests

All code contributions have to be made as a pull request as CI checks will run automatically. Every new code added should be accompanied by a test as I would like to maintain 100% test coverage, so detecting regressions is simple as well as adding new functionality.

## 4.2 Testing

### 4.2.1 Local testing

When adding new or changing existing functionality, it is important to ensure that no regressions were introduced. python-asff comes with a test suite that checks functionality.

Just run this from the root of the repository:

```
./tests/run.py
```

These tests will be run automatically during the Github Actions build. However, if you want to see if it will pass the tests, you can just run that quick command on your machine.

## 4.3 Maintenance

The repository contains some scripts in *tools* directory, They are essential for project maintenance. This page documents them.

- **class\_header.template.py** - header template for code generated from ASFF schema
- **generate\_class.py** - script for reading ASFF schema and generating classes in *asff/generated.py*
- **download\_securityhub\_event\_files.py** - helper script for downloading Security Hub event samples used for testing
- **update\_schema.py** - script to check for ASFF schema updates (used by Github Actions)

## 4.4 Interesting read

### 4.4.1 Security Hub custom providers

- <https://docs.aws.amazon.com/securityhub/latest/userguide/securityhub-custom-providers.html>

### 4.4.2 Security Hub finding updates

Security Hub findings can be updated. However, there are some limitations on which attributes can be updated and one should be aware of them. The list can be found [here](#).

### 4.4.3 Findings discovered while working with Security Hub

#### CreatedAt and UpdatedAt ISO 8601 check

Security Hub schema states that CreatedAt, UpdatedAt and similar fields should follow *date-time* from [RFC 3339](#). However, the schema defines this type as non-empty string. Security Hub API returned the following regular expression:

```
(\\d\\d\\d\\d\\d\\d)-[0-1](\\d)-[0-3](\\d)[Tt](?:[0-2](\\d):[0-5](\\d):[0-5](\\d)|23:59:60)(?:\\. (\\d)+)?(?:[Zz]|[-+](\\d\\d\\d)(?::(\\d\\d\\d))?)$
```

## Resources in AwsSecurityFinding cannot be an empty list

Security Hub schema does not seem to mention anything about requiring at least one resource in Resources. Sample error response:

```
{
  "FailedCount": 1,
  "FailedFindings": [
    {
      "ErrorCode": "InvalidInput",
      "ErrorMessage": "Finding does not adhere to Amazon Finding Format. data.
↪Resources should NOT have fewer than 1 items.",
      "Id": "69b19573-f60c-45f4-bad7-cc39c98dad92"
    }
  ],
  "ResponseMetadata": {
    "HTTPHeaders": {
      "connection": "keep-alive",
      "content-length": "244",
      "content-type": "application/json",
      "date": "Tue, 22 Dec 2020 18:55:23 GMT",
      "x-amz-apigw-id": "X98cTGGnDoEFbEg=",
      "x-amzn-requestid": "20359099-5dbd-4652-ac0c-ed2aa031a224",
      "x-amzn-trace-id": "Root=1-5fe2411b-7f834d21130461413669ff32"
    },
    "HTTPStatusCode": 200,
    "RequestId": "20359099-5dbd-4652-ac0c-ed2aa031a224",
    "RetryAttempts": 0
  },
  "SuccessCount": 0
}
```

It seems that the sensible default is `AwsAccount`.

## 4.5 Changelog

### 4.5.1 0.1.1 (2021-01-06)

- ASFF schema is now updated on a weekly basis from Github Actions
- Finding IDs are now calculated in predictable way, so updating findings is easier
- If unset, `resources` now provide an AWS account as the default resource
- All datetime attributes are properly validated for ISO8601 format

### 4.5.2 0.1.0 (2020-12-13)

- Initial release

## 4.6 License

BSD 3-Clause License

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## API REFERENCE

This page contains auto-generated API reference documentation<sup>1</sup>.

### 5.1 asff

#### 5.1.1 Submodules

##### `asff.constants`

##### Module Contents

```
asff.constants.DEFAULT_GENERATOR_ID = GeneratorId
asff.constants.DEFAULT_PRODUCT_ARN_FMT = arn:aws:securityhub:{region}:{aws_account_id}:prod
asff.constants.DEFAULT_PRODUCT_NAME = default
asff.constants.DEFAULT_PRODUCT_VERSION = 1.0.0
asff.constants.DEFAULT_RECORD_STATE = ACTIVE
asff.constants.DEFAULT_REGION
asff.constants.DEFAULT_SCHEMA_VERSION = 2018-10-08
asff.constants.DEFAULT_SEVERITY = MEDIUM
asff.constants.DEFAULT_WORKFLOW_STATUS = NEW
asff.constants.ISO8601_REGEX = (\\d\\d\\d\\d)-[0-1](\\d)-[0-3](\\d)[Tt](?:[0-2](\\d):[0-5](\\d):[0-
```

##### `asff.exceptions`

##### Module Contents

```
exception asff.exceptions.ValidationError(msg)
    Bases: ValueError
```

---

<sup>1</sup> Created with sphinx-autoapi

ValidationError

Inappropriate argument value (of correct type).

`asff.finding`

## Module Contents

### Classes

---

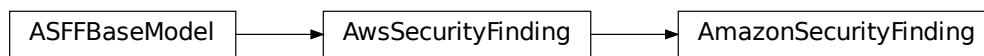
*AmazonSecurityFinding*

Provides consistent format for the contents of the Security Hub-aggregated findings. `AwsSecurityFinding` format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.

---

**class** `asff.finding.AmazonSecurityFinding(**data)`

Bases: *asff.generated.AwsSecurityFinding*



Provides consistent format for the contents of the Security Hub-aggregated findings. `AwsSecurityFinding` format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.

### Parameters

- **schema\_version** – The schema version that a finding is formatted for.
- **id** – The security findings provider-specific identifier for a finding.
- **product\_arn** – The ARN generated by Security Hub that uniquely identifies a product that generates findings. This can be the ARN for a third-party product that is integrated with Security Hub, or the ARN for a custom integration.
- **generator\_id** – The identifier for the solution-specific component (a discrete unit of logic) that generated a finding. In various security-findings providers' solutions, this gener-

ator can be called a rule, a check, a detector, a plugin, etc.

- **aws\_account\_id** – The AWS account ID that a finding is generated in.
- **types** – One or more finding types in the format of namespace/category/classifier that classify a finding. Valid namespace values are: Software and Configuration Checks | TTPs | Effects | Unusual Behaviors | Sensitive Data Identifications
- **first\_observed\_at** – Indicates when the security-findings provider first observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **last\_observed\_at** – Indicates when the security-findings provider most recently observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **created\_at** – Indicates when the security-findings provider created the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **updated\_at** – Indicates when the security-findings provider last updated the finding record. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **severity** – A finding's severity.
- **confidence** – A finding's confidence. Confidence is defined as the likelihood that a finding accurately identifies the behavior or issue that it was intended to identify. Confidence is scored on a 0-100 basis using a ratio scale, where 0 means zero percent confidence and 100 means 100 percent confidence.
- **criticality** – The level of importance assigned to the resources associated with the finding. A score of 0 means that the underlying resources have no criticality, and a score of 100 is reserved for the most critical resources.
- **title** – A finding's title. In this release, Title is a required property.
- **description** – A finding's description. In this release, Description is a required property.
- **remediation** – A data type that describes the remediation options for a finding.
- **source\_url** – A URL that links to a page about the current finding in the security-findings provider's solution.
- **product\_fields** – A data type where security-findings providers can include additional solution-specific details that aren't part of the defined AwsSecurityFinding format.
- **user\_defined\_fields** – A list of name/value string pairs associated with the finding. These are custom, user-defined fields added to a finding.
- **malware** – A list of malware related to a finding.
- **network** – The details of network-related information about a finding.
- **network\_path** – Provides information about a network path that is relevant to a finding. Each entry under NetworkPath represents a component of that path.
- **process** – The details of process-related information about a finding.
- **threat\_intel\_indicators** – Threat intelligence details related to a finding.

- **resources** – A set of resource data types that describe the resources that the finding refers to.
- **compliance** – This data type is exclusive to findings that are generated as the result of a check run against a specific rule in a supported security standard, such as CIS AWS Foundations. Contains security standard-related finding details.
- **verification\_state** – Indicates the veracity of a finding.
- **workflow\_state** – The workflow state of a finding.
- **workflow** – Provides information about the status of the investigation into a finding.
- **record\_state** – The record state of a finding.
- **related\_findings** – A list of related findings.
- **note** – A user-defined note added to a finding.
- **vulnerabilities** – Provides a list of vulnerabilities associated with the findings.
- **patch\_summary** – Provides an overview of the patch compliance status for an instance against a selected compliance standard.

**Returns** AwsSecurityFinding object

**static calculate\_finding\_id**(aws\_account\_id: str, region: str, product\_name: str, title: str)

→ str  
Calculate predictable unique finding ID based on immutable finding attributes. The finding ID is calculated as a SHA256 hash of the string consisting of the following attributes: - aws\_account\_id - region - product\_name - title

finding\_id = SHA256(aws\_account\_id + region + product\_name + title)

In the future, the list of attributes used for calculating hashes might be extended, but the primary purpose is to have a set of attributes that are unique, yet easy to remember, so the finding ID could be calculated easily and found by this library.

#### Parameters

- **aws\_account\_id** – The AWS account ID that the finding applies to.
- **region** – AWS region where the finding was found
- **product\_name** – Product name that generated the finding
- **title** – A finding's title.

**Returns** A predictable unique finding ID

**classmethod from\_dict**(cls, data) → *AmazonSecurityFinding*

Construct the finding from a dictionary.

**Parameters** data – Dictionary holding finding data

**Returns** A finding object

**classmethod from\_json**(cls, data: str) → *AmazonSecurityFinding*

Construct the finding from a JSON string.

**Parameters** data – JSON string with finding data

**Returns** A finding object

```
classmethod from_kwargs (cls, aws_account_id: str, types: TypeList, title: NonEmptyString,
description: NonEmptyString, resources: Optional[List[Any]]
= None, id: Optional[str] = None, schema_version: str = DE-
FAULT_SCHEMA_VERSION, severity: str = DEFAULT_SEVERITY,
product_name: Optional[str] = DEFAULT_PRODUCT_NAME,
product_version: Optional[str] = DEFAULT_PRODUCT_VERSION,
region: str = DEFAULT_REGION, record_state: str =
DEFAULT_RECORD_STATE, workflow_status: str = DE-
FAULT_WORKFLOW_STATUS, generator_id: Optional[str] =
None, created_at: Optional[str] = None, updated_at: Optional[str]
= None, **kwargs)
```

Construct the finding from keyword arguments.

#### Parameters

- **aws\_account\_id** – The AWS account ID that the finding applies to.
- **types** – Finding type that classifies the finding
- **title** – A finding’s title.
- **description** – A finding’s description.
- **resources** – A set of resource data types that describe the resources that the finding refers to.
- **id** – The product-specific identifier for a finding.
- **schema\_version** – The schema version that a finding is formatted for
- **severity** – A finding’s severity.
- **product\_name** – Product name that generated the finding
- **product\_version** – Product version that generated the finding
- **region** – AWS region where the finding was found
- **record\_state** – The record state of a finding.
- **workflow\_status** – Provides information about the status of the investigation into a finding.
- **generator\_id** – The identifier for the solution-specific component that generated a finding.
- **created\_at** – Indicates when the potential security issue captured by a finding was created.
- **updated\_at** – Indicates when the finding provider last updated the finding record.
- **kwargs** – Additional keyword arguments, suitable for passing fields such as notes, user\_defined\_fields etc

**Returns** A finding object

**to\_dict** (*self*) → Dict[str, Any]

Return a dict representation of the finding.

**Returns** A dict representation of the finding

**to\_json** (*self*) → str

Return a JSON representation of the finding.

**Returns** JSON representation of the finding

**asff.generated****Module Contents****Classes**

<i>ASFFBaseModel</i>	Base model with common settings, which other classes inherit from.
<i>AvailabilityZone</i>	Information about an Availability Zone.
<i>AwsApiGatewayAccessLogSettings</i>	Contains information about settings for logging access for the stage.
<i>AwsApiGatewayCanarySettings</i>	Contains information about settings for canary deployment in the stage.
<i>AwsApiGatewayEndpointConfiguration</i>	Contains information about the endpoints for the API.
<i>AwsApiGatewayMethodSettings</i>	Defines settings for a method for the stage.
<i>AwsApiGatewayRestApiDetails</i>	contains information about a REST API in version 1 of Amazon API Gateway.
<i>AwsApiGatewayStageDetails</i>	Provides information about a version 1 Amazon API Gateway stage.
<i>AwsApiGatewayV2ApiDetails</i>	Contains information about a version 2 API in Amazon API Gateway.
<i>AwsApiGatewayV2RouteSettings</i>	Contains route settings for a stage.
<i>AwsApiGatewayV2StageDetails</i>	Contains information about a version 2 stage for Amazon API Gateway.
<i>AwsAutoScalingAutoScalingGroupDetails</i>	Provides details about an auto scaling group.
<i>AwsCertificateManagerCertificateDetails</i>	Provides details about an AWS Certificate Manager certificate.
<i>AwsCertificateManagerCertificateDomainValidationRecords</i>	Contains information about one of the following: The initial validation of each domain name that occurs as a result of the RequestCertificate request The validation of each domain name in the certificate, as it pertains to AWS Certificate Manager managed renewal
<i>AwsCertificateManagerCertificateExtendedKeyUsage</i>	Contains information about an extended key usage X.509 v3 extension object.
<i>AwsCertificateManagerCertificateKeyUsage</i>	Contains information about a key usage X.509 v3 extension object.
<i>AwsCertificateManagerCertificateOptions</i>	Contains other options for the certificate.
<i>AwsCertificateManagerCertificateRenewalInformation</i>	Contains information about the AWS Certificate Manager managed renewal for an AMAZON_ISSUED certificate.
<i>AwsCertificateManagerCertificateResourceRecordSet</i>	Provides details about the CNAME record that is added to the DNS database for domain validation.
<i>AwsCloudFrontDistributionCacheBehavior</i>	Information about a cache behavior for the distribution.
<i>AwsCloudFrontDistributionCacheBehaviors</i>	Provides information about caching for the distribution.
<i>AwsCloudFrontDistributionDefaultCacheBehavior</i>	Contains information about the default cache configuration for the distribution.
<i>AwsCloudFrontDistributionDetails</i>	A distribution configuration.
<i>AwsCloudFrontDistributionLogging</i>	A complex type that controls whether access logs are written for the distribution.
<i>AwsCloudFrontDistributionOriginGroup</i>	Information about an origin group for the distribution.

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Table 2 – continued from previous page

<i>AwsCloudFrontDistributionOriginGroupFailures</i>	Provides information about when an origin group fails over.
<i>AwsCloudFrontDistributionOriginGroupFailureStatusCodes</i>	The status codes that cause an origin group to fail over.
<i>AwsCloudFrontDistributionOriginGroups</i>	Provides information about origin groups that are associated with the distribution.
<i>AwsCloudFrontDistributionOriginItem</i>	A complex type that describes the Amazon S3 bucket, HTTP server (for example, a web server), Amazon Elemental MediaStore, or other server from which CloudFront gets your files.
<i>AwsCloudFrontDistributionOriginsS3OriginInformation</i>	Information about an origin that is an S3 bucket that is not configured with static website hosting.
<i>AwsCloudFrontDistributionOrigins</i>	A complex type that contains information about origins and origin groups for this distribution.
<i>AwsCloudTrailTrailDetails</i>	Provides details about a CloudTrail trail.
<i>AwsCodeBuildProjectDetails</i>	Information about an AWS CodeBuild project.
<i>AwsCodeBuildProjectEnvironment</i>	Information about the build environment for this build project.
<i>AwsCodeBuildProjectEnvironmentRegistryCredentials</i>	The credentials for access to a private registry.
<i>AwsCodeBuildProjectSource</i>	Information about the build input source code for this build project.
<i>AwsCodeBuildProjectVpcConfig</i>	Information about the VPC configuration that AWS CodeBuild accesses.
<i>AwsCorsConfiguration</i>	Contains the cross-origin resource sharing (CORS) configuration for the API. CORS is only supported for HTTP APIs.
<i>AwsDynamoDbTableAttributeDefinition</i>	Contains a definition of an attribute for the table.
<i>AwsDynamoDbTableBillingModeSummary</i>	Provides information about the billing for read/write capacity on the table.
<i>AwsDynamoDbTableDetails</i>	Provides details about a DynamoDB table.
<i>AwsDynamoDbTableGlobalSecondaryIndex</i>	Information about a global secondary index for the table.
<i>AwsDynamoDbTableKeySchema</i>	A component of the key schema for the DynamoDB table, a global secondary index, or a local secondary index.
<i>AwsDynamoDbTableLocalSecondaryIndex</i>	Information about a local secondary index for a DynamoDB table.
<i>AwsDynamoDbTableProjection</i>	For global and local secondary indexes, identifies the attributes that are copied from the table into the index.
<i>AwsDynamoDbTableProvisionedThroughput</i>	Information about the provisioned throughput for the table or for a global secondary index.
<i>AwsDynamoDbTableProvisionedThroughputOverrides</i>	Replica-specific configuration for the provisioned throughput.
<i>AwsDynamoDbTableReplica</i>	Information about a replica of a DynamoDB table.
<i>AwsDynamoDbTableReplicaGlobalSecondaryIndex</i>	Information about a global secondary index for a DynamoDB table replica.
<i>AwsDynamoDbTableRestoreSummary</i>	Information about the restore for the table.
<i>AwsDynamoDbTableSseDescription</i>	Information about the server-side encryption for the table.
<i>AwsDynamoDbTableStreamSpecification</i>	The current DynamoDB Streams configuration for the table.
<i>AwsEc2EipDetails</i>	Information about an Elastic IP address.
<i>AwsEc2InstanceDetails</i>	The details of an Amazon EC2 instance.

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Table 2 – continued from previous page

<i>AwsEc2NetworkInterfaceAttachment</i>	Information about the network interface attachment.
<i>AwsEc2NetworkInterfaceDetails</i>	Details about the network interface
<i>AwsEc2NetworkInterfaceSecurityGroup</i>	A security group associated with the network interface.
<i>AwsEc2SecurityGroupDetails</i>	Details about an EC2 security group.
<i>AwsEc2SecurityGroupIpPermission</i>	An IP permission for an EC2 security group.
<i>AwsEc2SecurityGroupIpRange</i>	A range of IPv4 addresses.
<i>AwsEc2SecurityGroupIpv6Range</i>	A range of IPv6 addresses.
<i>AwsEc2SecurityGroupPrefixListId</i>	A prefix list ID.
<i>AwsEc2SecurityGroupUserIdGroupPair</i>	A relationship between a security group and a user.
<i>AwsEc2VolumeAttachment</i>	An attachment to an AWS EC2 volume.
<i>AwsEc2VolumeDetails</i>	Details about an EC2 volume.
<i>AwsEc2VpcDetails</i>	Details about an EC2 VPC.
<i>AwsElasticsearchDomainDetails</i>	Information about an Elasticsearch domain.
<i>AwsElasticsearchDomainDomainEndpointOptions</i>	Additional options for the domain endpoint, such as whether to require HTTPS for all traffic.
<i>AwsElasticsearchDomainEncryptionAtRestOptions</i>	Details about the configuration for encryption at rest.
<i>AwsElasticsearchDomainNodeToNodeEncryptionOptions</i>	Details about the configuration for node-to-node encryption.
<i>AwsElasticsearchDomainVPCOptions</i>	Information that Amazon ES derives based on VPCOptions for the domain.
<i>AwsElbAppCookieStickinessPolicy</i>	Contains information about a stickiness policy that was created using <code>CreateAppCookieStickinessPolicy</code> .
<i>AwsElbLbCookieStickinessPolicy</i>	Contains information about a stickiness policy that was created using <code>CreateLBCookieStickinessPolicy</code> .
<i>AwsElbLoadBalancerAccessLog</i>	Contains information about the access log configuration for the load balancer.
<i>AwsElbLoadBalancerAttributes</i>	Contains attributes for the load balancer.
<i>AwsElbLoadBalancerBackendServerDescriptions</i>	Provides information about the configuration of an EC2 instance for the load balancer.
<i>AwsElbLoadBalancerConnectionDraining</i>	Contains information about the connection draining configuration for the load balancer.
<i>AwsElbLoadBalancerConnectionSettings</i>	Contains connection settings for the load balancer.
<i>AwsElbLoadBalancerCrossZoneLoadBalancing</i>	Contains cross-zone load balancing settings for the load balancer.
<i>AwsElbLoadBalancerDetails</i>	Contains details about a Classic Load Balancer.
<i>AwsElbLoadBalancerHealthCheck</i>	Contains information about the health checks that are conducted on the load balancer.
<i>AwsElbLoadBalancerInstance</i>	Provides information about an EC2 instance for a load balancer.
<i>AwsElbLoadBalancerListener</i>	Information about a load balancer listener.
<i>AwsElbLoadBalancerListenerDescription</i>	Lists the policies that are enabled for a load balancer listener.
<i>AwsElbLoadBalancerPolicies</i>	Contains information about the policies for a load balancer.
<i>AwsElbLoadBalancerSourceSecurityGroup</i>	Contains information about the security group for the load balancer.
<i>AwsElbv2LoadBalancerDetails</i>	Information about a load balancer.
<i>AwsIamAccessKeyDetails</i>	IAM access key details related to a finding.
<i>AwsIamAccessKeySessionContext</i>	Provides information about the session that the key was used for.
<i>AwsIamAccessKeySessionContextAttributes</i>	Attributes of the session that the key was used for.

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Table 2 – continued from previous page

<i>AwsIamAccessKeySessionContextSessionIss</i>	Information about the entity that created the session.
<i>AwsIamAttachedManagedPolicy</i>	A managed policy that is attached to an IAM principal.
<i>AwsIamGroupDetails</i>	Contains details about an IAM group.
<i>AwsIamGroupPolicy</i>	A managed policy that is attached to the IAM group.
<i>AwsIamInstanceProfile</i>	Information about an instance profile.
<i>AwsIamInstanceProfileRole</i>	Information about a role associated with an instance profile.
<i>AwsIamPermissionsBoundary</i>	Information about the policy used to set the permissions boundary for an IAM principal.
<i>AwsIamPolicyDetails</i>	Represents an IAM permissions policy.
<i>AwsIamPolicyVersion</i>	A version of an IAM policy.
<i>AwsIamRoleDetails</i>	Contains information about an IAM role, including all of the role's policies.
<i>AwsIamRolePolicy</i>	An inline policy that is embedded in the role.
<i>AwsIamUserDetails</i>	Information about an IAM user.
<i>AwsIamUserPolicy</i>	Information about an inline policy that is embedded in the user.
<i>AwsKmsKeyDetails</i>	Contains metadata about a customer master key (CMK).
<i>AwsLambdaFunctionCode</i>	The code for the Lambda function. You can specify either an object in Amazon S3, or upload a deployment package directly.
<i>AwsLambdaFunctionDeadLetterConfig</i>	The dead-letter queue for failed asynchronous invocations.
<i>AwsLambdaFunctionDetails</i>	Details about a function's configuration.
<i>AwsLambdaFunctionEnvironment</i>	A function's environment variable settings.
<i>AwsLambdaFunctionEnvironmentError</i>	Error messages for environment variables that couldn't be applied.
<i>AwsLambdaFunctionLayer</i>	An AWS Lambda layer.
<i>AwsLambdaFunctionTracingConfig</i>	The function's AWS X-Ray tracing configuration.
<i>AwsLambdaFunctionVpcConfig</i>	The VPC security groups and subnets that are attached to a Lambda function. For more information, see VPC Settings.
<i>AwsLambdaLayerVersionDetails</i>	Details about a Lambda layer version.
<i>AwsRdsDbClusterAssociatedRole</i>	An IAM role that is associated with the Amazon RDS DB cluster.
<i>AwsRdsDbClusterDetails</i>	Information about an Amazon RDS DB cluster.
<i>AwsRdsDbClusterMember</i>	Information about an instance in the DB cluster.
<i>AwsRdsDbClusterOptionGroupMembership</i>	Information about an option group membership for a DB cluster.
<i>AwsRdsDbClusterSnapshotDetails</i>	Information about an Amazon RDS DB cluster snapshot.
<i>AwsRdsDbDomainMembership</i>	Information about an Active Directory domain membership record associated with the DB instance.
<i>AwsRdsDbInstanceAssociatedRole</i>	An AWS Identity and Access Management (IAM) role associated with the DB instance.
<i>AwsRdsDbInstanceDetails</i>	Contains the details of an Amazon RDS DB instance.
<i>AwsRdsDbInstanceEndpoint</i>	Specifies the connection endpoint.
<i>AwsRdsDbInstanceVpcSecurityGroup</i>	A VPC security groups that the DB instance belongs to.
<i>AwsRdsDbOptionGroupMembership</i>	
<b>param option_group_name</b>	

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Table 2 – continued from previous page

<i>AwsRdsDbParameterGroup</i>	<b>param db_parameter_group_name</b>
<i>AwsRdsDbPendingModifiedValues</i>	<b>param db_instance_class</b>
<i>AwsRdsDbProcessorFeature</i>	<b>param name</b>
<i>AwsRdsDbSnapshotDetails</i>	<b>param db_snapshot_identifier</b>
<i>AwsRdsDbStatusInfo</i>	Information about the status of a read replica.
<i>AwsRdsDbSubnetGroup</i>	Information about the subnet group for the database instance.
<i>AwsRdsDbSubnetGroupSubnet</i>	Information about a subnet in a subnet group.
<i>AwsRdsDbSubnetGroupSubnetAvailabilityZone</i>	An Availability Zone for a subnet in a subnet group.
<i>AwsRdsPendingCloudWatchLogsExports</i>	Identifies the log types to enable and disable.
<i>AwsRedshiftClusterClusterNode</i>	A node in an Amazon Redshift cluster.
<i>AwsRedshiftClusterClusterParameterGroup</i>	A cluster parameter group that is associated with an Amazon Redshift cluster.
<i>AwsRedshiftClusterClusterParameterStatus</i>	The status of a parameter in a cluster parameter group for an Amazon Redshift cluster.
<i>AwsRedshiftClusterClusterSecurityGroup</i>	A security group that is associated with the cluster.
<i>AwsRedshiftClusterClusterSnapshotCopyStatus</i>	Information about a cross-Region snapshot copy.
<i>AwsRedshiftClusterDeferredMaintenanceWindow</i>	A time windows during which maintenance was deferred for an Amazon Redshift cluster.
<i>AwsRedshiftClusterDetails</i>	Details about an Amazon Redshift cluster.
<i>AwsRedshiftClusterElasticIpStatus</i>	The status of the elastic IP (EIP) address for an Amazon Redshift cluster.
<i>AwsRedshiftClusterEndpoint</i>	The connection endpoint for an Amazon Redshift cluster.
<i>AwsRedshiftClusterHsmStatus</i>	Information about whether an Amazon Redshift cluster finished applying any hardware changes to security module (HSM) settings that were specified in a modify cluster command.
<i>AwsRedshiftClusterIamRole</i>	An IAM role that the cluster can use to access other AWS services.
<i>AwsRedshiftClusterPendingModifiedValues</i>	Changes to the Amazon Redshift cluster that are currently pending.
<i>AwsRedshiftClusterResizeInfo</i>	Information about the resize operation for the cluster.
<i>AwsRedshiftClusterRestoreStatus</i>	Information about the status of a cluster restore action. It only applies if the cluster was created by restoring a snapshot.
<i>AwsRedshiftClusterVpcSecurityGroup</i>	A VPC security group that the cluster belongs to, if the cluster is in a VPC.
<i>AwsS3BucketDetails</i>	The details of an Amazon S3 bucket.
<i>AwsS3BucketServerSideEncryptionByDefault</i>	Specifies the default server-side encryption to apply to new objects in the bucket.
<i>AwsS3BucketServerSideEncryptionConfiguration</i>	The encryption configuration for the S3 bucket.
<i>AwsS3BucketServerSideEncryptionRule</i>	An encryption rule to apply to the S3 bucket.

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Table 2 – continued from previous page

<i>AwsS3ObjectDetails</i>	Details about an Amazon S3 object.
<i>AwsSecretsManagerSecretDetails</i>	Details about an AWS Secrets Manager secret.
<i>AwsSecretsManagerSecretRotationRules</i>	Defines the rotation schedule for the secret.
<i>AwsSecurityFinding</i>	Provides consistent format for the contents of the Security Hub-aggregated findings. <i>AwsSecurityFinding</i> format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.
<i>AwsSnsTopicDetails</i>	A wrapper type for the topic's Amazon Resource Name (ARN).
<i>AwsSnsTopicSubscription</i>	A wrapper type for the attributes of an Amazon SNS subscription.
<i>AwsSqsQueueDetails</i>	Data about a queue.
<i>AwsWafWebAclDetails</i>	Details about a WAF WebACL.
<i>AwsWafWebAclRule</i>	Details for a rule in a WAF WebACL.
<i>CidrBlockAssociation</i>	An IPv4 CIDR block association.
<i>Compliance</i>	Contains finding details that are specific to control-based findings. Only returned for findings generated from controls.
<i>ContainerDetails</i>	Container details related to a finding.
<i>Cvss</i>	CVSS scores from the advisory related to the vulnerability.
<i>Ipv6CidrBlockAssociation</i>	An IPV6 CIDR block association.
<i>LoadBalancerState</i>	Information about the state of the load balancer.
<i>Malware</i>	A list of malware related to a finding.
<i>Network</i>	The details of network-related information about a finding.
<i>NetworkHeader</i>	Details about a network path component that occurs before or after the current component.
<i>NetworkPathComponent</i>	Information about a network path component.
<i>NetworkPathComponentDetails</i>	Information about the destination of the next component in the network path.
<i>Note</i>	A user-defined note added to a finding.
<i>PatchSummary</i>	Provides an overview of the patch compliance status for an instance against a selected compliance standard.
<i>PortRange</i>	A range of ports.
<i>ProcessDetails</i>	The details of process-related information about a finding.
<i>Recommendation</i>	A recommendation on how to remediate the issue identified in a finding.
<i>RelatedFinding</i>	Details about a related finding.
<i>Remediation</i>	Details about the remediation steps for a finding.
<i>Resource</i>	A resource related to a finding.

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Table 2 – continued from previous page

<i>ResourceDetails</i>	Additional details about a resource related to a finding. To provide the details, use the object that corresponds to the resource type. For example, if the resource type is <code>AwsEc2Instance</code> , then you use the <code>AwsEc2Instance</code> object to provide the details. If the type-specific object does not contain all of the fields you want to populate, then you use the <code>Other</code> object to populate those additional fields. You also use the <code>Other</code> object to populate the details when the selected type does not have a corresponding object.
<i>Severity</i>	The severity of the finding. The finding provider can provide the initial severity. The finding provider can only update the severity if it has not been updated using <code>BatchUpdateFindings</code> . The finding must have either <code>Label</code> or <code>Normalized</code> populated. If only one of these attributes is populated, then Security Hub automatically populates the other one. If neither attribute is populated, then the finding is invalid. <code>Label</code> is the preferred attribute.
<i>SoftwarePackage</i>	Information about a software package.
<i>StatusReason</i>	Provides additional context for the value of <code>Compliance.Status</code> .
<i>ThreatIntelIndicator</i>	Details about the threat intelligence related to a finding.
<i>Vulnerability</i>	A vulnerability associated with a finding.
<i>VulnerabilityVendor</i>	A vendor that generates a vulnerability report.
<i>WafAction</i>	Details about the action that CloudFront or AWS WAF takes when a web request matches the conditions in the rule.
<i>WafExcludedRule</i>	Details about a rule to exclude from a rule group.
<i>WafOverrideAction</i>	Details about an override action for a rule.
<i>Workflow</i>	Provides information about the status of the investigation into a finding.

`asff.generated.AvailabilityZones`

`asff.generated.AwsApiGatewayMethodSettingsList`

`asff.generated.AwsCertificateManagerCertificateDomainValidationOptions`

`asff.generated.AwsCertificateManagerCertificateExtendedKeyUsages`

`asff.generated.AwsCertificateManagerCertificateKeyUsages`

`asff.generated.AwsCloudFrontDistributionCacheBehaviorsItemList`

`asff.generated.AwsCloudFrontDistributionOriginGroupFailoverStatusCodesItemList`

`asff.generated.AwsCloudFrontDistributionOriginGroupsItemList`

`asff.generated.AwsCloudFrontDistributionOriginItemList`

`asff.generated.AwsDynamoDbTableAttributeDefinitionList`

`asff.generated.AwsDynamoDbTableGlobalSecondaryIndexList`

`asff.generated.AwsDynamoDbTableKeySchemaList`

`asff.generated.AwsDynamoDbTableLocalSecondaryIndexList`

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asff.generated.AwsDynamoDbTableReplicaGlobalSecondaryIndexList
asff.generated.AwsDynamoDbTableReplicaList
asff.generated.AwsEc2NetworkInterfaceSecurityGroupList
asff.generated.AwsEc2SecurityGroupIpPermissionList
asff.generated.AwsEc2SecurityGroupIpRangeList
asff.generated.AwsEc2SecurityGroupIpv6RangeList
asff.generated.AwsEc2SecurityGroupPrefixListIdList
asff.generated.AwsEc2SecurityGroupUserIdGroupPairList
asff.generated.AwsEc2VolumeAttachmentList
asff.generated.AwsElbAppCookieStickinessPolicies
asff.generated.AwsElbLbCookieStickinessPolicies
asff.generated.AwsElbLoadBalancerBackendServerDescriptions
asff.generated.AwsElbLoadBalancerInstances
asff.generated.AwsElbLoadBalancerListenerDescriptions
asff.generated.AwsIamAccessKeyStatus
asff.generated.AwsIamAttachedManagedPolicyList
asff.generated.AwsIamGroupPolicyList
asff.generated.AwsIamInstanceProfileList
asff.generated.AwsIamInstanceProfileRoles
asff.generated.AwsIamPolicyVersionList
asff.generated.AwsIamRoleAssumeRolePolicyDocument
asff.generated.AwsIamRolePolicyList
asff.generated.AwsIamUserPolicyList
asff.generated.AwsLambdaFunctionLayerList
asff.generated.AwsLambdaLayerVersionNumber
asff.generated.AwsRdsDbClusterAssociatedRoles
asff.generated.AwsRdsDbClusterMembers
asff.generated.AwsRdsDbClusterOptionGroupMemberships
asff.generated.AwsRdsDbDomainMemberships
asff.generated.AwsRdsDbInstanceAssociatedRoles
asff.generated.AwsRdsDbInstanceVpcSecurityGroups
asff.generated.AwsRdsDbOptionGroupMemberships
asff.generated.AwsRdsDbParameterGroups
asff.generated.AwsRdsDbProcessorFeatures
asff.generated.AwsRdsDbStatusInfos
asff.generated.AwsRdsDbSubnetGroupSubnets
```

asff.generated.AwsRedshiftClusterClusterNodes  
asff.generated.AwsRedshiftClusterClusterParameterGroups  
asff.generated.AwsRedshiftClusterClusterParameterStatusList  
asff.generated.AwsRedshiftClusterClusterSecurityGroups  
asff.generated.AwsRedshiftClusterDeferredMaintenanceWindows  
asff.generated.AwsRedshiftClusterIamRoles  
asff.generated.AwsRedshiftClusterVpcSecurityGroups  
asff.generated.AwsS3BucketServerSideEncryptionRules  
asff.generated.AwsSnsTopicSubscriptionList  
asff.generated.AwsWafWebAclRuleList  
asff.generated.Boolean  
asff.generated.CidrBlockAssociationList  
asff.generated.ComplianceStatus  
asff.generated.CvssList  
asff.generated.Double  
asff.generated.FieldMap  
asff.generated.ISO8601\_REGEX = (\d\d\d\d)-[0-1](\d)-[0-3](\d)[Tt](?:[0-2](\d):[0-5](\d):[0-9](\d))?  
asff.generated.Integer  
asff.generated.Ipv6CidrBlockAssociationList  
asff.generated.Iso8601Timestamp  
asff.generated.Long  
asff.generated.MalwareList  
asff.generated.MalwareState  
asff.generated.MalwareType  
asff.generated.NetworkDirection  
asff.generated.NetworkPathList  
asff.generated.NonEmptyString  
asff.generated.NonEmptyStringList  
asff.generated.Partition  
asff.generated.PortRangeList  
asff.generated.RecordState  
asff.generated.RelatedFindingList  
asff.generated.RelatedRequirementsList  
asff.generated.ResourceList  
asff.generated.SecurityGroups  
asff.generated.SeverityLabel

```

asff.generated.SizeBytes
asff.generated.SoftwarePackageList
asff.generated.StatusReasonsList
asff.generated.StringList
asff.generated.ThreatIntelIndicatorCategory
asff.generated.ThreatIntelIndicatorList
asff.generated.ThreatIntelIndicatorType
asff.generated.TypeList
asff.generated.VerificationState
asff.generated.VulnerabilityList
asff.generated.WafExcludedRuleList
asff.generated.WorkflowState
asff.generated.WorkflowStatus
class asff.generated.ASFFBaseModel
    Bases: pydantic.BaseModel

```

ASFFBaseModel

Base model with common settings, which other classes inherit from.

```

class Config

    alias_generator
    allow_population_by_field_name = True
    validate_assignment = True

class asff.generated.AvailabilityZone
    Bases: asff.generated.ASFFBaseModel

```

ASFFBaseModel

→

AvailabilityZone

Information about an Availability Zone.

**Parameters**

- **zone\_name** – The name of the Availability Zone.
- **subnet\_id** – The ID of the subnet. You can specify one subnet per Availability Zone.

**Returns** AvailabilityZone object

**subnet\_id** :Optional[NonEmptyString]

**zone\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsApiGatewayAccessLogSettings

Bases: *asff.generated.ASFFBaseModel*



Contains information about settings for logging access for the stage.

#### Parameters

- **format** – A single-line format of the access logs of data, as specified by selected \$context variables. The format must include at least \$context.requestId.
- **destination\_arn** – The ARN of the CloudWatch Logs log group that receives the access logs.

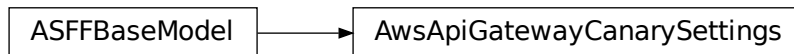
**Returns** AwsApiGatewayAccessLogSettings object

**destination\_arn** :Optional[NonEmptyString]

**format** :Optional[NonEmptyString]

**class** asff.generated.AwsApiGatewayCanarySettings

Bases: *asff.generated.ASFFBaseModel*



Contains information about settings for canary deployment in the stage.

#### Parameters

- **percent\_traffic** – The percentage of traffic that is diverted to a canary deployment.
- **deployment\_id** – The deployment identifier for the canary deployment.
- **stage\_variable\_overrides** – Stage variables that are overridden in the canary release deployment. The variables include new stage variables that are introduced in the canary. Each variable is represented as a string-to-string map between the stage variable name and the variable value.



- **use\_stage\_cache** – Indicates whether the canary deployment uses the stage cache.

**Returns** `AwsApiGatewayCanarySettings` object

**deployment\_id** : `Optional[NonEmptyString]`

**percent\_traffic** : `Optional[Double]`

**stage\_variable\_overrides** : `Optional[FieldMap]`

**use\_stage\_cache** : `Optional[Boolean]`

**class** `asff.generated.AwsApiGatewayEndpointConfiguration`

Bases: `asff.generated.ASFFBaseModel`



Contains information about the endpoints for the API.

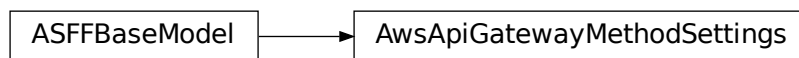
**Parameters** **types** – A list of endpoint types for the REST API. For an edge-optimized API, the endpoint type is `EDGE`. For a Regional API, the endpoint type is `REGIONAL`. For a private API, the endpoint type is `PRIVATE`.

**Returns** `AwsApiGatewayEndpointConfiguration` object

**types** : `Optional[NonEmptyStringList]`

**class** `asff.generated.AwsApiGatewayMethodSettings`

Bases: `asff.generated.ASFFBaseModel`



Defines settings for a method for the stage.

#### Parameters

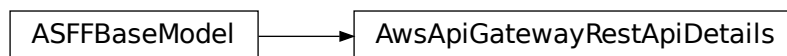
- **metrics\_enabled** – Indicates whether CloudWatch metrics are enabled for the method.
- **logging\_level** – The logging level for this method. The logging level affects the log entries that are pushed to CloudWatch Logs. If the logging level is `ERROR`, then the logs only include error-level entries. If the logging level is `INFO`, then the logs include both `ERROR` events and extra informational events. Valid values: `OFF` | `ERROR` | `INFO`
- **data\_trace\_enabled** – Indicates whether data trace logging is enabled for the method. Data trace logging affects the log entries that are pushed to CloudWatch Logs.
- **throttling\_burst\_limit** – The throttling burst limit for the method.
- **throttling\_rate\_limit** – The throttling rate limit for the method.

- **cache\_enabled** – Indicates whether responses are cached and returned for requests. For responses to be cached, a cache cluster must be enabled on the stage.
- **cache\_ttl\_in\_seconds** – Specifies the time to live (TTL), in seconds, for cached responses. The higher the TTL, the longer the response is cached.
- **cache\_data\_encrypted** – Indicates whether the cached responses are encrypted.
- **require\_authorization\_for\_cache\_control** – Indicates whether authorization is required for a cache invalidation request.
- **unauthorized\_cache\_control\_header\_strategy** – Indicates how to handle unauthorized requests for cache invalidation. Valid values: `FAIL_WITH_403` | `SUCCESS_WITH_RESPONSE_HEADER` | `SUCCESS_WITHOUT_RESPONSE_HEADER`
- **http\_method** – The HTTP method. You can use an asterisk (\*) as a wildcard to apply method settings to multiple methods.
- **resource\_path** – The resource path for this method. Forward slashes (/) are encoded as ~1 . The initial slash must include a forward slash. For example, the path value /resource/subresource must be encoded as /~1resource~1subresource. To specify the root path, use only a slash (/). You can use an asterisk (\*) as a wildcard to apply method settings to multiple methods.

**Returns** `AwsApiGatewayMethodSettings` object

```
cache_data_encrypted :Optional[Boolean]
cache_ttl_in_seconds :Optional[Integer]
cache_enabled :Optional[Boolean]
data_trace_enabled :Optional[Boolean]
http_method :Optional[NonEmptyString]
logging_level :Optional[NonEmptyString]
metrics_enabled :Optional[Boolean]
require_authorization_for_cache_control :Optional[Boolean]
resource_path :Optional[NonEmptyString]
throttling_burst_limit :Optional[Integer]
throttling_rate_limit :Optional[Double]
unauthorized_cache_control_header_strategy :Optional[NonEmptyString]

class asff.generated.AwsApiGatewayRestApiDetails
  Bases: asff.generated.ASFFBaseModel
```



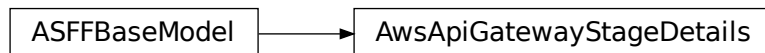
contains information about a REST API in version 1 of Amazon API Gateway.

#### Parameters

- **id** – The identifier of the REST API.
- **name** – The name of the REST API.
- **description** – A description of the REST API.
- **created\_date** – Indicates when the API was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **version** – The version identifier for the REST API.
- **binary\_media\_types** – The list of binary media types supported by the REST API.
- **minimum\_compression\_size** – The minimum size in bytes of a payload before compression is enabled. If null, then compression is disabled. If 0, then all payloads are compressed.
- **api\_key\_source** – The source of the API key for metering requests according to a usage plan. HEADER indicates whether to read the API key from the X-API-Key header of a request. AUTHORIZER indicates whether to read the API key from the UsageIdentifierKey from a custom authorizer.
- **endpoint\_configuration** – The endpoint configuration of the REST API.

**Returns** AwsApiGatewayRestApiDetails object

```
api_key_source :Optional[NonEmptyString]
binary_media_types :Optional[NonEmptyStringList]
created_date :Optional[Iso8601Timestamp]
description :Optional[NonEmptyString]
endpoint_configuration :Optional[AwsApiGatewayEndpointConfiguration]
id :Optional[NonEmptyString]
minimum_compression_size :Optional[Integer]
name :Optional[NonEmptyString]
version :Optional[NonEmptyString]
class asff.generated.AwsApiGatewayStageDetails
    Bases: asff.generated.ASFFBaseModel
```



Provides information about a version 1 Amazon API Gateway stage.

#### Parameters

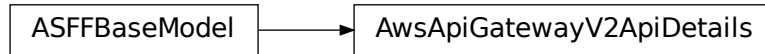
- **deployment\_id** – The identifier of the deployment that the stage points to.
- **client\_certificate\_id** – The identifier of the client certificate for the stage.
- **stage\_name** – The name of the stage.

- **description** – A description of the stage.
- **cache\_cluster\_enabled** – Indicates whether a cache cluster is enabled for the stage.
- **cache\_cluster\_size** – If a cache cluster is enabled, the size of the cache cluster.
- **cache\_cluster\_status** – If a cache cluster is enabled, the status of the cache cluster.
- **method\_settings** – Defines the method settings for the stage.
- **variables** – A map that defines the stage variables for the stage. Variable names can have alphanumeric and underscore characters. Variable values can contain the following characters: Uppercase and lowercase letters Numbers Special characters `-.~:/?#&=`,
- **documentation\_version** – The version of the API documentation that is associated with the stage.
- **access\_log\_settings** – Settings for logging access for the stage.
- **canary\_settings** – Information about settings for canary deployment in the stage.
- **tracing\_enabled** – Indicates whether active tracing with AWS X-Ray is enabled for the stage.
- **created\_date** – Indicates when the stage was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **last\_updated\_date** – Indicates when the stage was most recently updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **web\_acl\_arn** – The ARN of the web ACL associated with the stage.

**Returns** AwsApiGatewayStageDetails object

```
access_log_settings :Optional[AwsApiGatewayAccessLogSettings]
cache_cluster_enabled :Optional[Boolean]
cache_cluster_size :Optional[NonEmptyString]
cache_cluster_status :Optional[NonEmptyString]
canary_settings :Optional[AwsApiGatewayCanarySettings]
client_certificate_id :Optional[NonEmptyString]
created_date :Optional[Iso8601Timestamp]
deployment_id :Optional[NonEmptyString]
description :Optional[NonEmptyString]
documentation_version :Optional[NonEmptyString]
last_updated_date :Optional[NonEmptyString]
method_settings :Optional[AwsApiGatewayMethodSettingsList]
stage_name :Optional[NonEmptyString]
tracing_enabled :Optional[Boolean]
variables :Optional[FieldMap]
web_acl_arn :Optional[NonEmptyString]
```

```
class asff.generated.AwsApiGatewayV2ApiDetails
    Bases: asff.generated.ASFFBaseModel
```



Contains information about a version 2 API in Amazon API Gateway.

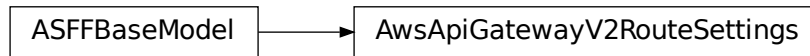
#### Parameters

- **api\_endpoint** – The URI of the API. Uses the format `<api-id>.execute-api.<region>.amazonaws.com`. The stage name is typically appended to the URI to form a complete path to a deployed API stage.
- **api\_id** – The identifier of the API.
- **api\_key\_selection\_expression** – An API key selection expression. Supported only for WebSocket APIs.
- **created\_date** – Indicates when the API was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **description** – A description of the API.
- **version** – The version identifier for the API.
- **name** – The name of the API.
- **protocol\_type** – The API protocol for the API. Valid values: `WEBSOCKET | HTTP`
- **route\_selection\_expression** – The route selection expression for the API. For HTTP APIs, must be `${request.method} ${request.path}`. This is the default value for HTTP APIs. For WebSocket APIs, there is no default value.
- **cors\_configuration** – A cross-origin resource sharing (CORS) configuration. Supported only for HTTP APIs.

**Returns** `AwsApiGatewayV2ApiDetails` object

```
api_endpoint :Optional[NonEmptyString]
api_id :Optional[NonEmptyString]
api_key_selection_expression :Optional[NonEmptyString]
cors_configuration :Optional[AwsCorsConfiguration]
created_date :Optional[Iso8601Timestamp]
description :Optional[NonEmptyString]
name :Optional[NonEmptyString]
protocol_type :Optional[NonEmptyString]
route_selection_expression :Optional[NonEmptyString]
version :Optional[NonEmptyString]
```

```
class asff.generated.AwsApiGatewayV2RouteSettings
    Bases: asff.generated.ASFFBaseModel
```



Contains route settings for a stage.

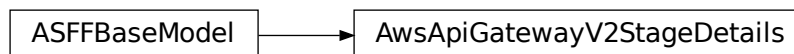
#### Parameters

- **detailed\_metrics\_enabled** – Indicates whether detailed metrics are enabled.
- **logging\_level** – The logging level. The logging level affects the log entries that are pushed to CloudWatch Logs. Supported only for WebSocket APIs. If the logging level is ERROR, then the logs only include error-level entries. If the logging level is INFO, then the logs include both ERROR events and extra informational events. Valid values: OFF | ERROR | INFO
- **data\_trace\_enabled** – Indicates whether data trace logging is enabled. Data trace logging affects the log entries that are pushed to CloudWatch Logs. Supported only for WebSocket APIs.
- **throttling\_burst\_limit** – The throttling burst limit.
- **throttling\_rate\_limit** – The throttling rate limit.

**Returns** AwsApiGatewayV2RouteSettings object

```
data_trace_enabled :Optional[Boolean]
detailed_metrics_enabled :Optional[Boolean]
logging_level :Optional[NonEmptyString]
throttling_burst_limit :Optional[Integer]
throttling_rate_limit :Optional[Double]
```

```
class asff.generated.AwsApiGatewayV2StageDetails
    Bases: asff.generated.ASFFBaseModel
```



Contains information about a version 2 stage for Amazon API Gateway.

#### Parameters

- **created\_date** – Indicates when the stage was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **description** – The description of the stage.
- **default\_route\_settings** – Default route settings for the stage.
- **deployment\_id** – The identifier of the deployment that the stage is associated with.
- **last\_updated\_date** – Indicates when the stage was most recently updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **route\_settings** – The route settings for the stage.
- **stage\_name** – The name of the stage.
- **stage\_variables** – A map that defines the stage variables for the stage. Variable names can have alphanumeric and underscore characters. Variable values can contain the following characters: Uppercase and lowercase letters Numbers Special characters `-.~:/?#&=`,
- **access\_log\_settings** – Information about settings for logging access for the stage.
- **auto\_deploy** – Indicates whether updates to an API automatically trigger a new deployment.
- **last\_deployment\_status\_message** – The status of the last deployment of a stage. Supported only if the stage has automatic deployment enabled.
- **api\_gateway\_managed** – Indicates whether the stage is managed by API Gateway.

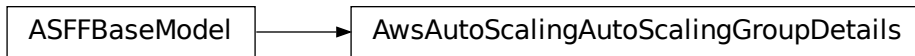
**Returns** AwsApiGatewayV2StageDetails object

```

access_log_settings :Optional[AwsApiGatewayAccessLogSettings]
api_gateway_managed :Optional[Boolean]
auto_deploy :Optional[Boolean]
created_date :Optional[Iso8601Timestamp]
default_route_settings :Optional[AwsApiGatewayV2RouteSettings]
deployment_id :Optional[NonEmptyString]
description :Optional[NonEmptyString]
last_deployment_status_message :Optional[NonEmptyString]
last_updated_date :Optional[NonEmptyString]
route_settings :Optional[AwsApiGatewayV2RouteSettings]
stage_name :Optional[NonEmptyString]
stage_variables :Optional[FieldMap]

class asff.generated.AwsAutoScalingAutoScalingGroupDetails
    Bases: asff.generated.ASFFBaseModel

```



Provides details about an auto scaling group.

#### Parameters

- **launch\_configuration\_name** – The name of the launch configuration.
- **load\_balancer\_names** – The list of load balancers associated with the group.
- **health\_check\_type** – The service to use for the health checks.
- **health\_check\_grace\_period** – The amount of time, in seconds, that Amazon EC2 Auto Scaling waits before it checks the health status of an EC2 instance that has come into service.
- **created\_time** – Indicates when the auto scaling group was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** `AwsAutoScalingAutoScalingGroupDetails` object

```
created_time :Optional[Iso8601Timestamp]
health_check_grace_period :Optional[Integer]
health_check_type :Optional[NonEmptyString]
launch_configuration_name :Optional[NonEmptyString]
load_balancer_names :Optional[StringList]
```

```
class asff.generated.AwsCertificateManagerCertificateDetails
    Bases: asff.generated.ASFFBaseModel
```



Provides details about an AWS Certificate Manager certificate.

#### Parameters

- **certificate\_authority\_arn** – The ARN of the private certificate authority (CA) that will be used to issue the certificate.
- **created\_at** – Indicates when the certificate was requested. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.



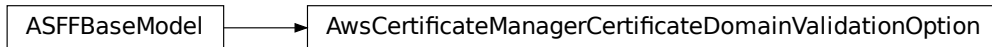
- **domain\_name** – The fully qualified domain name (FQDN), such as `www.example.com`, that is secured by the certificate.
- **domain\_validation\_options** – Contains information about the initial validation of each domain name that occurs as a result of the `RequestCertificate` request. Only provided if the certificate type is `AMAZON_ISSUED`.
- **extended\_key\_usages** – Contains a list of Extended Key Usage X.509 v3 extension objects. Each object specifies a purpose for which the certificate public key can be used and consists of a name and an object identifier (OID).
- **failure\_reason** – For a failed certificate request, the reason for the failure. Valid values: `NO_AVAILABLE_CONTACTS` | `ADDITIONAL_VERIFICATION_REQUIRED` | `DOMAIN_NOT_ALLOWED` | `INVALID_PUBLIC_DOMAIN` | `DOMAIN_VALIDATION_DENIED` | `CAA_ERROR` | `PCA_LIMIT_EXCEEDED` | `PCA_INVALID_ARN` | `PCA_INVALID_STATE` | `PCA_REQUEST_FAILED` | `PCA_NAME_CONSTRAINTS_VALIDATION` | `PCA_RESOURCE_NOT_FOUND` | `PCA_INVALID_ARGS` | `PCA_INVALID_DURATION` | `PCA_ACCESS_DENIED` | `SLR_NOT_FOUND` | `OTHER`
- **imported\_at** – Indicates when the certificate was imported. Provided if the certificate type is `IMPORTED`. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **in\_use\_by** – The list of ARNs for the AWS resources that use the certificate.
- **issued\_at** – Indicates when the certificate was issued. Provided if the certificate type is `AMAZON_ISSUED`. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **issuer** – The name of the certificate authority that issued and signed the certificate.
- **key\_algorithm** – The algorithm that was used to generate the public-private key pair. Valid values: `RSA_2048` | `RSA_1024` | `RSA_4096` | `EC_prime256v1` | `EC_secp384r1` | `EC_secp521r1`
- **key\_usages** – A list of key usage X.509 v3 extension objects.
- **not\_after** – The time after which the certificate becomes invalid. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **not\_before** – The time before which the certificate is not valid. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **options** – Provides a value that specifies whether to add the certificate to a transparency log.
- **renewal\_eligibility** – Whether the certificate is eligible for renewal. Valid values: `ELIGIBLE` | `INELIGIBLE`
- **renewal\_summary** – Information about the status of the AWS Certificate Manager managed renewal for the certificate. Provided only when the certificate type is `AMAZON_ISSUED`.
- **serial** – The serial number of the certificate.
- **signature\_algorithm** – The algorithm that was used to sign the certificate.

- **status** – The status of the certificate. Valid values: PENDING\_VALIDATION | ISSUED | INACTIVE | EXPIRED | VALIDATION\_TIMED\_OUT | REVOKED | FAILED
- **subject** – The name of the entity that is associated with the public key contained in the certificate.
- **subject\_alternative\_names** – One or more domain names (subject alternative names) included in the certificate. This list contains the domain names that are bound to the public key that is contained in the certificate. The subject alternative names include the canonical domain name (CN) of the certificate and additional domain names that can be used to connect to the website.
- **type** – The source of the certificate. For certificates that AWS Certificate Manager provides, Type is AMAZON\_ISSUED. For certificates that are imported with ImportCertificate, Type is IMPORTED. Valid values: IMPORTED | AMAZON\_ISSUED | PRIVATE

**Returns** AwsCertificateManagerCertificateDetails object

```
certificate_authority_arn :Optional[NonEmptyString]
created_at :Optional[Iso8601Timestamp]
domain_name :Optional[NonEmptyString]
domain_validation_options :Optional[AwsCertificateManagerCertificateDomainValidationOptions]
extended_key_usages :Optional[AwsCertificateManagerCertificateExtendedKeyUsages]
failure_reason :Optional[NonEmptyString]
imported_at :Optional[NonEmptyString]
in_use_by :Optional[StringList]
issued_at :Optional[NonEmptyString]
issuer :Optional[NonEmptyString]
key_algorithm :Optional[NonEmptyString]
key_usages :Optional[AwsCertificateManagerCertificateKeyUsages]
not_after :Optional[NonEmptyString]
not_before :Optional[NonEmptyString]
options :Optional[AwsCertificateManagerCertificateOptions]
renewal_eligibility :Optional[NonEmptyString]
renewal_summary :Optional[AwsCertificateManagerCertificateRenewalSummary]
serial :Optional[NonEmptyString]
signature_algorithm :Optional[NonEmptyString]
status :Optional[NonEmptyString]
subject :Optional[NonEmptyString]
subject_alternative_names :Optional[StringList]
type :Optional[NonEmptyString]
```

**class** asff.generated.AwsCertificateManagerCertificateDomainValidationOption  
Bases: *asff.generated.ASFFBaseModel*



Contains information about one of the following: The initial validation of each domain name that occurs as a result of the RequestCertificate request The validation of each domain name in the certificate, as it pertains to AWS Certificate Manager managed renewal

#### Parameters

- **domain\_name** – A fully qualified domain name (FQDN) in the certificate.
- **resource\_record** – The CNAME record that is added to the DNS database for domain validation.
- **validation\_domain** – The domain name that AWS Certificate Manager uses to send domain validation emails.
- **validation\_emails** – A list of email addresses that AWS Certificate Manager uses to send domain validation emails.
- **validation\_method** – The method used to validate the domain name.
- **validation\_status** – The validation status of the domain name.

**Returns** AwsCertificateManagerCertificateDomainValidationOption object

```

domain_name :Optional[NonEmptyString]
resource_record :Optional[AwsCertificateManagerCertificateResourceRecord]
validation_domain :Optional[NonEmptyString]
validation_emails :Optional[StringList]
validation_method :Optional[NonEmptyString]
validation_status :Optional[NonEmptyString]
  
```

```

class asff.generated.AwsCertificateManagerCertificateExtendedKeyUsage
  Bases: asff.generated.ASFFBaseModel
  
```



Contains information about an extended key usage X.509 v3 extension object.

#### Parameters

- **name** – The name of an extension value. Indicates the purpose for which the certificate public key can be used.
- **o\_id** – An object identifier (OID) for the extension value. The format is numbers separated by periods.

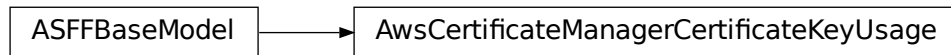
**Returns** `AwsCertificateManagerCertificateExtendedKeyUsage` object

**name** : `Optional[NonEmptyString]`

**o\_id** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsCertificateManagerCertificateKeyUsage`

Bases: `asff.generated.ASFFBaseModel`



Contains information about a key usage X.509 v3 extension object.

**Parameters** **name** – The key usage extension name.

**Returns** `AwsCertificateManagerCertificateKeyUsage` object

**name** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsCertificateManagerCertificateOptions`

Bases: `asff.generated.ASFFBaseModel`



Contains other options for the certificate.

**Parameters** **certificate\_transparency\_logging\_preference** – Whether to add the certificate to a transparency log. Valid values: DISABLED | ENABLED

**Returns** `AwsCertificateManagerCertificateOptions` object

**certificate\_transparency\_logging\_preference** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsCertificateManagerCertificateRenewalSummary`

Bases: `asff.generated.ASFFBaseModel`



Contains information about the AWS Certificate Manager managed renewal for an AMAZON\_ISSUED certificate.

**Parameters**

- **domain\_validation\_options** – Information about the validation of each domain name in the certificate, as it pertains to AWS Certificate Manager managed renewal. Provided only when the certificate type is AMAZON\_ISSUED.
- **renewal\_status** – The status of the AWS Certificate Manager managed renewal of the certificate. Valid values: PENDING\_AUTO\_RENEWAL | PENDING\_VALIDATION | SUCCESS | FAILED
- **renewal\_status\_reason** – The reason that a renewal request was unsuccessful. Valid values: NO\_AVAILABLE\_CONTACTS | ADDITIONAL\_VERIFICATION\_REQUIRED | DOMAIN\_NOT\_ALLOWED | INVALID\_PUBLIC\_DOMAIN | DOMAIN\_VALIDATION\_DENIED | CAA\_ERROR | PCA\_LIMIT\_EXCEEDED | PCA\_INVALID\_ARN | PCA\_INVALID\_STATE | PCA\_REQUEST\_FAILED | PCA\_NAME\_CONSTRAINTS\_VALIDATION | PCA\_RESOURCE\_NOT\_FOUND | PCA\_INVALID\_ARGS | PCA\_INVALID\_DURATION | PCA\_ACCESS\_DENIED | SLR\_NOT\_FOUND | OTHER
- **updated\_at** – Indicates when the renewal summary was last updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** `AwsCertificateManagerCertificateRenewalSummary` object

**domain\_validation\_options** :Optional[`AwsCertificateManagerCertificateDomainValidationOp`

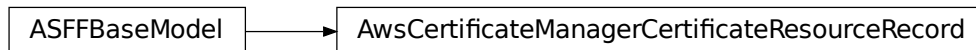
**renewal\_status** :Optional[`NonEmptyString`]

**renewal\_status\_reason** :Optional[`NonEmptyString`]

**updated\_at** :Optional[`Iso8601Timestamp`]

**class** `asff.generated.AwsCertificateManagerCertificateResourceRecord`

Bases: `asff.generated.ASFFBaseModel`



Provides details about the CNAME record that is added to the DNS database for domain validation.

**Parameters**

- **name** – The name of the resource.
- **type** – The type of resource.
- **value** – The value of the resource.

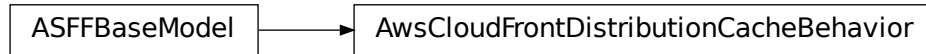
**Returns** `AwsCertificateManagerCertificateResourceRecord` object

**name** :Optional[`NonEmptyString`]

**type** :Optional[`NonEmptyString`]

**value** :Optional[`NonEmptyString`]

```
class asff.generated.AwsCloudFrontDistributionCacheBehavior
    Bases: asff.generated.ASFFBaseModel
```



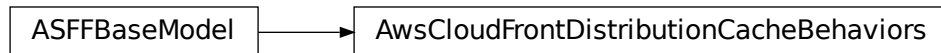
Information about a cache behavior for the distribution.

**Parameters** **viewer\_protocol\_policy** – The protocol that viewers can use to access the files in an origin. You can specify the following options: allow-all - Viewers can use HTTP or HTTPS. redirect-to-https - CloudFront responds to HTTP requests with an HTTP status code of 301 (Moved Permanently) and the HTTPS URL. The viewer then uses the new URL to resubmit. https-only - CloudFront responds to HTTP request with an HTTP status code of 403 (Forbidden).

**Returns** `AwsCloudFrontDistributionCacheBehavior` object

**viewer\_protocol\_policy** :`Optional[NonEmptyString]`

```
class asff.generated.AwsCloudFrontDistributionCacheBehaviors
    Bases: asff.generated.ASFFBaseModel
```



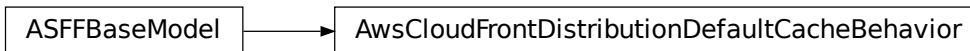
Provides information about caching for the distribution.

**Parameters** **items** – The cache behaviors for the distribution.

**Returns** `AwsCloudFrontDistributionCacheBehaviors` object

**items** :`Optional[AwsCloudFrontDistributionCacheBehaviorsItemList]`

```
class asff.generated.AwsCloudFrontDistributionDefaultCacheBehavior
    Bases: asff.generated.ASFFBaseModel
```



Contains information about the default cache configuration for the distribution.

**Parameters** **viewer\_protocol\_policy** – The protocol that viewers can use to access the files in an origin. You can specify the following options: allow-all - Viewers can use HTTP or

HTTPS. redirect-to-https - CloudFront responds to HTTP requests with an HTTP status code of 301 (Moved Permanently) and the HTTPS URL. The viewer then uses the new URL to resubmit.  
 https-only - CloudFront responds to HTTP request with an HTTP status code of 403 (Forbidden).

**Returns** `AwsCloudFrontDistributionDefaultCacheBehavior` object

**viewer\_protocol\_policy** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsCloudFrontDistributionDetails`

Bases: `asff.generated.ASFFBaseModel`



A distribution configuration.

#### Parameters

- **cache\_behaviors** – Provides information about the cache configuration for the distribution.
- **default\_cache\_behavior** – The default cache behavior for the configuration.
- **default\_root\_object** – The object that CloudFront sends in response to requests from the origin (for example, `index.html`) when a viewer requests the root URL for the distribution (<http://www.example.com>) instead of an object in your distribution (<http://www.example.com/product-description.html>).
- **domain\_name** – The domain name corresponding to the distribution.
- **e\_tag** – The entity tag is a hash of the object.
- **last\_modified\_time** – Indicates when that the distribution was last modified. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.
- **logging** – A complex type that controls whether access logs are written for the distribution.
- **origins** – A complex type that contains information about origins for this distribution.
- **origin\_groups** – Provides information about the origin groups in the distribution.
- **status** – Indicates the current status of the distribution.
- **web\_acl\_id** – A unique identifier that specifies the AWS WAF web ACL, if any, to associate with this distribution.

**Returns** `AwsCloudFrontDistributionDetails` object

**cache\_behaviors** : `Optional[AwsCloudFrontDistributionCacheBehaviors]`

**default\_cache\_behavior** : `Optional[AwsCloudFrontDistributionDefaultCacheBehavior]`

**default\_root\_object** : `Optional[NonEmptyString]`

**domain\_name** : `Optional[NonEmptyString]`

**e\_tag** : `Optional[NonEmptyString]`

```
last_modified_time :Optional[Iso8601Timestamp]
logging :Optional[AwsCloudFrontDistributionLogging]
origin_groups :Optional[AwsCloudFrontDistributionOriginGroups]
origins :Optional[AwsCloudFrontDistributionOrigins]
status :Optional[NonEmptyString]
web_acl_id :Optional[NonEmptyString]
class asff.generated.AwsCloudFrontDistributionLogging
  Bases: asff.generated.ASFFBaseModel
```



A complex type that controls whether access logs are written for the distribution.

**Parameters**

- **bucket** – The Amazon S3 bucket to store the access logs in.
- **enabled** – With this field, you can enable or disable the selected distribution.
- **include\_cookies** – Specifies whether you want CloudFront to include cookies in access logs.
- **prefix** – An optional string that you want CloudFront to use as a prefix to the access log filenames for this distribution.

**Returns** AwsCloudFrontDistributionLogging object

```
bucket :Optional[NonEmptyString]
enabled :Optional[Boolean]
include_cookies :Optional[Boolean]
prefix :Optional[NonEmptyString]
class asff.generated.AwsCloudFrontDistributionOriginGroup
  Bases: asff.generated.ASFFBaseModel
```



Information about an origin group for the distribution.

**Parameters** **failover\_criteria** – Provides the criteria for an origin group to fail over.

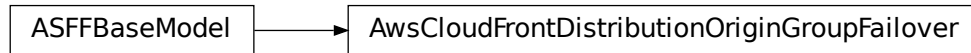


**Returns** `AwsCloudFrontDistributionOriginGroup` object

**failover\_criteria** : `Optional[AwsCloudFrontDistributionOriginGroupFailover]`

**class** `asff.generated.AwsCloudFrontDistributionOriginGroupFailover`

Bases: `asff.generated.ASFFBaseModel`



Provides information about when an origin group fails over.

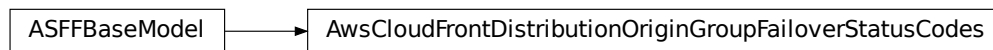
**Parameters** **status\_codes** – Information about the status codes that cause an origin group to fail over.

**Returns** `AwsCloudFrontDistributionOriginGroupFailover` object

**status\_codes** : `Optional[AwsCloudFrontDistributionOriginGroupFailoverStatusCodes]`

**class** `asff.generated.AwsCloudFrontDistributionOriginGroupFailoverStatusCodes`

Bases: `asff.generated.ASFFBaseModel`



The status codes that cause an origin group to fail over.

**Parameters**

- **items** – The list of status code values that can cause a failover to the next origin.
- **quantity** – The number of status codes that can cause a failover.

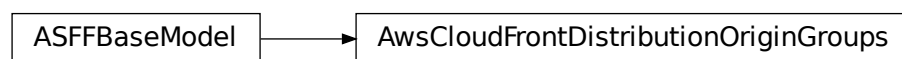
**Returns** `AwsCloudFrontDistributionOriginGroupFailoverStatusCodes` object

**items** : `Optional[AwsCloudFrontDistributionOriginGroupFailoverStatusCodesItemList]`

**quantity** : `Optional[Integer]`

**class** `asff.generated.AwsCloudFrontDistributionOriginGroups`

Bases: `asff.generated.ASFFBaseModel`



Provides information about origin groups that are associated with the distribution.

**Parameters** `items` – The list of origin groups.

**Returns** `AwsCloudFrontDistributionOriginGroups` object

`items` : `Optional[AwsCloudFrontDistributionOriginGroupsItemList]`

**class** `asff.generated.AwsCloudFrontDistributionOriginItem`

Bases: `asff.generated.ASFFBaseModel`



A complex type that describes the Amazon S3 bucket, HTTP server (for example, a web server), Amazon Elemental MediaStore, or other server from which CloudFront gets your files.

**Parameters**

- **domain\_name** – Amazon S3 origins: The DNS name of the Amazon S3 bucket from which you want CloudFront to get objects for this origin.
- **id** – A unique identifier for the origin or origin group.
- **origin\_path** – An optional element that causes CloudFront to request your content from a directory in your Amazon S3 bucket or your custom origin.
- **s3\_origin\_config** – An origin that is an S3 bucket that is not configured with static website hosting.

**Returns** `AwsCloudFrontDistributionOriginItem` object

`domain_name` : `Optional[NonEmptyString]`

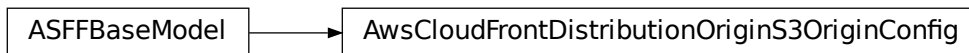
`id` : `Optional[NonEmptyString]`

`origin_path` : `Optional[NonEmptyString]`

`s3_origin_config` : `Optional[AwsCloudFrontDistributionOriginS3OriginConfig]`

**class** `asff.generated.AwsCloudFrontDistributionOriginS3OriginConfig`

Bases: `asff.generated.ASFFBaseModel`



Information about an origin that is an S3 bucket that is not configured with static website hosting.

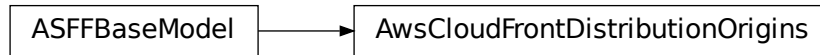
**Parameters** `origin_access_identity` – The CloudFront origin access identity to associate with the origin.

**Returns** `AwsCloudFrontDistributionOriginS3OriginConfig` object

```

    origin_access_identity :Optional[NonEmptyString]
class asff.generated.AwsCloudFrontDistributionOrigins
    Bases: asff.generated.ASFFBaseModel

```



A complex type that contains information about origins and origin groups for this distribution.

**Parameters** **items** – A complex type that contains origins or origin groups for this distribution.

**Returns** AwsCloudFrontDistributionOrigins object

```

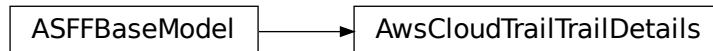
    items :Optional[AwsCloudFrontDistributionOriginItemList]

```

```

class asff.generated.AwsCloudTrailTrailDetails
    Bases: asff.generated.ASFFBaseModel

```



Provides details about a CloudTrail trail.

#### Parameters

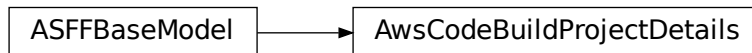
- **cloud\_watch\_logs\_log\_group\_arn** – The ARN of the log group that CloudTrail logs are delivered to.
- **cloud\_watch\_logs\_role\_arn** – The ARN of the role that the CloudWatch Logs endpoint assumes when it writes to the log group.
- **has\_custom\_event\_selectors** – Indicates whether the trail has custom event selectors.
- **home\_region** – The Region where the trail was created.
- **include\_global\_service\_events** – Indicates whether the trail publishes events from global services such as IAM to the log files.
- **is\_multi\_region\_trail** – Indicates whether the trail applies only to the current Region or to all Regions.
- **is\_organization\_trail** – Whether the trail is created for all accounts in an organization in AWS Organizations, or only for the current AWS account.
- **kms\_key\_id** – The AWS KMS key ID to use to encrypt the logs.
- **log\_file\_validation\_enabled** – Indicates whether CloudTrail log file validation is enabled.

- **name** – The name of the trail.
- **s3\_bucket\_name** – The name of the S3 bucket where the log files are published.
- **s3\_key\_prefix** – The S3 key prefix. The key prefix is added after the name of the S3 bucket where the log files are published.
- **sns\_topic\_arn** – The ARN of the SNS topic that is used for notifications of log file delivery.
- **sns\_topic\_name** – The name of the SNS topic that is used for notifications of log file delivery.
- **trail\_arn** – The ARN of the trail.

**Returns** `AwsCloudTrailTrailDetails` object

```
cloud_watch_logs_log_group_arn :Optional[NonEmptyString]
cloud_watch_logs_role_arn :Optional[NonEmptyString]
has_custom_event_selectors :Optional[Boolean]
home_region :Optional[NonEmptyString]
include_global_service_events :Optional[Boolean]
is_multi_region_trail :Optional[Boolean]
is_organization_trail :Optional[Boolean]
kms_key_id :Optional[NonEmptyString]
log_file_validation_enabled :Optional[Boolean]
name :Optional[NonEmptyString]
s3_bucket_name :Optional[NonEmptyString]
s3_key_prefix :Optional[NonEmptyString]
sns_topic_arn :Optional[NonEmptyString]
sns_topic_name :Optional[NonEmptyString]
trail_arn :Optional[NonEmptyString]

class asff.generated.AwsCodeBuildProjectDetails
    Bases: asff.generated.ASFFBaseModel
```



Information about an AWS CodeBuild project.

#### Parameters

- **encryption\_key** – The AWS Key Management Service (AWS KMS) customer master key (CMK) used to encrypt the build output artifacts. You can specify either the Amazon Resource Name (ARN) of the CMK or, if available, the CMK alias (using the format alias/alias-name).
- **environment** – Information about the build environment for this build project.
- **name** – The name of the build project.
- **source** – Information about the build input source code for this build project.
- **service\_role** – The ARN of the IAM role that enables AWS CodeBuild to interact with dependent AWS services on behalf of the AWS account.
- **vpc\_config** – Information about the VPC configuration that AWS CodeBuild accesses.

**Returns** AwsCodeBuildProjectDetails object

```

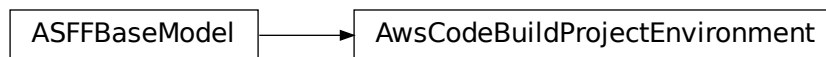
encryption_key :Optional[NonEmptyString]
environment :Optional[AwsCodeBuildProjectEnvironment]
name :Optional[NonEmptyString]
service_role :Optional[NonEmptyString]
source :Optional[AwsCodeBuildProjectSource]
vpc_config :Optional[AwsCodeBuildProjectVpcConfig]

```

```

class asff.generated.AwsCodeBuildProjectEnvironment
    Bases: asff.generated.ASFFBaseModel

```



Information about the build environment for this build project.

#### Parameters

- **certificate** – The certificate to use with this build project.
- **image\_pull\_credentials\_type** – The type of credentials AWS CodeBuild uses to pull images in your build. Valid values: CODEBUILD specifies that AWS CodeBuild uses its own credentials. This requires that you modify your ECR repository policy to trust the AWS CodeBuild service principal. SERVICE\_ROLE specifies that AWS CodeBuild uses your build project's service role. When you use a cross-account or private registry image, you must use SERVICE\_ROLE credentials. When you use an AWS CodeBuild curated image, you must use CODEBUILD credentials.
- **registry\_credential** – The credentials for access to a private registry.
- **type** – The type of build environment to use for related builds. The environment type ARM\_CONTAINER is available only in Regions US East (N. Virginia), US East (Ohio), US West (Oregon), Europe (Ireland), Asia Pacific (Mumbai), Asia Pacific (Tokyo), Asia Pacific (Sydney), and Europe (Frankfurt). The environment type LINUX\_CONTAINER

with compute type `build.general1.2xlarge` is available only in Regions US East (N. Virginia), US East (N. Virginia), US West (Oregon), Canada (Central), Europe (Ireland), Europe (London), Europe (Frankfurt), Asia Pacific (Tokyo), Asia Pacific (Seoul), Asia Pacific (Singapore), Asia Pacific (Sydney), China (Beijing), and China (Ningxia). The environment type `LINUX_GPU_CONTAINER` is available only in Regions US East (N. Virginia), US East (N. Virginia), US West (Oregon), Canada (Central), Europe (Ireland), Europe (London), Europe (Frankfurt), Asia Pacific (Tokyo), Asia Pacific (Seoul), Asia Pacific (Singapore), Asia Pacific (Sydney), China (Beijing), and China (Ningxia). Valid values: `WINDOWS_CONTAINER` | `LINUX_CONTAINER` | `LINUX_GPU_CONTAINER` | `ARM_CONTAINER`

**Returns** `AwsCodeBuildProjectEnvironment` object

**certificate** :Optional[NonEmptyString]

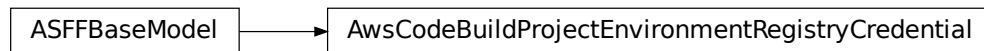
**image\_pull\_credentials\_type** :Optional[NonEmptyString]

**registry\_credential** :Optional[AwsCodeBuildProjectEnvironmentRegistryCredential]

**type** :Optional[NonEmptyString]

**class** `asff.generated.AwsCodeBuildProjectEnvironmentRegistryCredential`

Bases: `asff.generated.ASFFBaseModel`



The credentials for access to a private registry.

#### Parameters

- **credential** – The Amazon Resource Name (ARN) or name of credentials created using AWS Secrets Manager. The credential can use the name of the credentials only if they exist in your current AWS Region.
- **credential\_provider** – The service that created the credentials to access a private Docker registry. The valid value, `SECRETS_MANAGER`, is for AWS Secrets Manager.

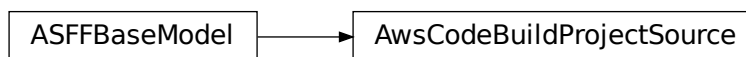
**Returns** `AwsCodeBuildProjectEnvironmentRegistryCredential` object

**credential** :Optional[NonEmptyString]

**credential\_provider** :Optional[NonEmptyString]

**class** `asff.generated.AwsCodeBuildProjectSource`

Bases: `asff.generated.ASFFBaseModel`



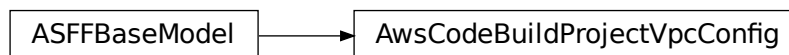
Information about the build input source code for this build project.

### Parameters

- **type** – The type of repository that contains the source code to be built. Valid values are: BITBUCKET - The source code is in a Bitbucket repository. CODECOMMIT - The source code is in an AWS CodeCommit repository. CODEPIPELINE - The source code settings are specified in the source action of a pipeline in AWS CodePipeline. GITHUB - The source code is in a GitHub repository. GITHUB\_ENTERPRISE - The source code is in a GitHub Enterprise repository. NO\_SOURCE - The project does not have input source code. S3 - The source code is in an S3 input bucket.
- **location** – Information about the location of the source code to be built. Valid values include: For source code settings that are specified in the source action of a pipeline in AWS CodePipeline, location should not be specified. If it is specified, AWS CodePipeline ignores it. This is because AWS CodePipeline uses the settings in a pipeline's source action instead of this value. For source code in an AWS CodeCommit repository, the HTTPS clone URL to the repository that contains the source code and the build spec file (for example, <https://git-codecommit.region-ID.amazonaws.com/v1/repos/repo-name>). For source code in an S3 input bucket, one of the following. The path to the ZIP file that contains the source code (for example, bucket-name/path/to/object-name.zip). The path to the folder that contains the source code (for example, bucket-name/path/to/source-code/folder/). For source code in a GitHub repository, the HTTPS clone URL to the repository that contains the source and the build spec file. For source code in a Bitbucket repository, the HTTPS clone URL to the repository that contains the source and the build spec file.
- **git\_clone\_depth** – Information about the Git clone depth for the build project.
- **insecure\_ssl** – Whether to ignore SSL warnings while connecting to the project source code.

**Returns** AwsCodeBuildProjectSource object

```
git_clone_depth :Optional[Integer]
insecure_ssl :Optional[Boolean]
location :Optional[NonEmptyString]
type :Optional[NonEmptyString]
class asff.generated.AwsCodeBuildProjectVpcConfig
Bases: asff.generated.ASFFBaseModel
```



Information about the VPC configuration that AWS CodeBuild accesses.

### Parameters

- **vpc\_id** – The ID of the VPC.
- **subnets** – A list of one or more subnet IDs in your Amazon VPC.
- **security\_group\_ids** – A list of one or more security group IDs in your Amazon VPC.

**Returns** `AwsCodeBuildProjectVpcConfig` object

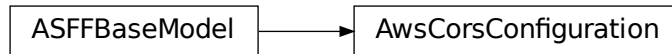
**security\_group\_ids** : `Optional[NonEmptyStringList]`

**subnets** : `Optional[NonEmptyStringList]`

**vpc\_id** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsCorsConfiguration`

Bases: `asff.generated.ASFFBaseModel`



Contains the cross-origin resource sharing (CORS) configuration for the API. CORS is only supported for HTTP APIs.

#### Parameters

- **allow\_origins** – The allowed origins for CORS requests.
- **allow\_credentials** – Indicates whether the CORS request includes credentials.
- **expose\_headers** – The exposed headers for CORS requests.
- **max\_age** – The number of seconds for which the browser caches preflight request results.
- **allow\_methods** – The allowed methods for CORS requests.
- **allow\_headers** – The allowed headers for CORS requests.

**Returns** `AwsCorsConfiguration` object

**allow\_credentials** : `Optional[Boolean]`

**allow\_headers** : `Optional[NonEmptyStringList]`

**allow\_methods** : `Optional[NonEmptyStringList]`

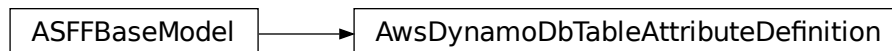
**allow\_origins** : `Optional[NonEmptyStringList]`

**expose\_headers** : `Optional[NonEmptyStringList]`

**max\_age** : `Optional[Integer]`

**class** `asff.generated.AwsDynamoDbTableAttributeDefinition`

Bases: `asff.generated.ASFFBaseModel`



Contains a definition of an attribute for the table.



**Parameters**

- **attribute\_name** – The name of the attribute.
- **attribute\_type** – The type of the attribute.

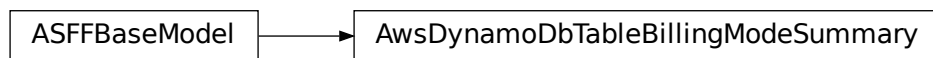
**Returns** `AwsDynamoDbTableAttributeDefinition` object

**attribute\_name** : `Optional[NonEmptyString]`

**attribute\_type** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsDynamoDbTableBillingModeSummary`

Bases: `asff.generated.ASFFBaseModel`



Provides information about the billing for read/write capacity on the table.

**Parameters**

- **billing\_mode** – The method used to charge for read and write throughput and to manage capacity.
- **last\_update\_to\_pay\_per\_request\_date\_time** – If the billing mode is `PAY_PER_REQUEST`, indicates when the billing mode was set to that value. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, `2020-03-22T13:22:13.933Z`.

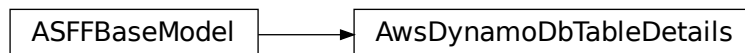
**Returns** `AwsDynamoDbTableBillingModeSummary` object

**billing\_mode** : `Optional[NonEmptyString]`

**last\_update\_to\_pay\_per\_request\_date\_time** : `Optional[Iso8601Timestamp]`

**class** `asff.generated.AwsDynamoDbTableDetails`

Bases: `asff.generated.ASFFBaseModel`



Provides details about a DynamoDB table.

**Parameters**

- **attribute\_definitions** – A list of attribute definitions for the table.
- **billing\_mode\_summary** – Information about the billing for read/write capacity on the table.

- **creation\_date\_time** – Indicates when the table was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **global\_secondary\_indexes** – List of global secondary indexes for the table.
- **global\_table\_version** – The version of global tables being used.
- **item\_count** – The number of items in the table.
- **key\_schema** – The primary key structure for the table.
- **latest\_stream\_arn** – The ARN of the latest stream for the table.
- **latest\_stream\_label** – The label of the latest stream. The label is not a unique identifier.
- **local\_secondary\_indexes** – The list of local secondary indexes for the table.
- **provisioned\_throughput** – Information about the provisioned throughput for the table.
- **replicas** – The list of replicas of this table.
- **restore\_summary** – Information about the restore for the table.
- **sse\_description** – Information about the server-side encryption for the table.
- **stream\_specification** – The current DynamoDB Streams configuration for the table.
- **table\_id** – The identifier of the table.
- **table\_name** – The name of the table.
- **table\_size\_bytes** – The total size of the table in bytes.
- **table\_status** – The current status of the table.

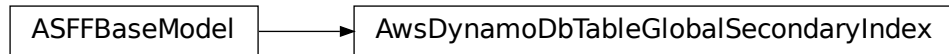
**Returns** `AwsDynamoDbTableDetails` object

```
attribute_definitions :Optional[AwsDynamoDbTableAttributeDefinitionList]
billing_mode_summary  :Optional[AwsDynamoDbTableBillingModeSummary]
creation_date_time    :Optional[Iso8601Timestamp]
global_secondary_indexes :Optional[AwsDynamoDbTableGlobalSecondaryIndexList]
global_table_version  :Optional[NonEmptyString]
item_count            :Optional[Integer]
key_schema             :Optional[AwsDynamoDbTableKeySchemaList]
latest_stream_arn     :Optional[NonEmptyString]
latest_stream_label   :Optional[NonEmptyString]
local_secondary_indexes :Optional[AwsDynamoDbTableLocalSecondaryIndexList]
provisioned_throughput :Optional[AwsDynamoDbTableProvisionedThroughput]
replicas              :Optional[AwsDynamoDbTableReplicaList]
restore_summary        :Optional[AwsDynamoDbTableRestoreSummary]
sse_description        :Optional[AwsDynamoDbTableSseDescription]
stream_specification  :Optional[AwsDynamoDbTableStreamSpecification]
```

```

    table_id :Optional[NonEmptyString]
    table_name :Optional[NonEmptyString]
    table_size_bytes :Optional[SizeBytes]
    table_status :Optional[NonEmptyString]
class asff.generated.AwsDynamoDbTableGlobalSecondaryIndex
    Bases: asff.generated.ASFFBaseModel

```



Information about a global secondary index for the table.

#### Parameters

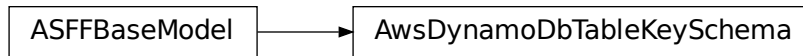
- **backfilling** – Whether the index is currently backfilling.
- **index\_arn** – The ARN of the index.
- **index\_name** – The name of the index.
- **index\_size\_bytes** – The total size in bytes of the index.
- **index\_status** – The current status of the index.
- **item\_count** – The number of items in the index.
- **key\_schema** – The key schema for the index.
- **projection** – Attributes that are copied from the table into an index.
- **provisioned\_throughput** – Information about the provisioned throughput settings for the indexes.

**Returns** `AwsDynamoDbTableGlobalSecondaryIndex` object

```

backfilling :Optional[Boolean]
index_arn :Optional[NonEmptyString]
index_name :Optional[NonEmptyString]
index_size_bytes :Optional[SizeBytes]
index_status :Optional[NonEmptyString]
item_count :Optional[Integer]
key_schema :Optional[AwsDynamoDbTableKeySchemaList]
projection :Optional[AwsDynamoDbTableProjection]
provisioned_throughput :Optional[AwsDynamoDbTableProvisionedThroughput]
class asff.generated.AwsDynamoDbTableKeySchema
    Bases: asff.generated.ASFFBaseModel

```



A component of the key schema for the DynamoDB table, a global secondary index, or a local secondary index.

**Parameters**

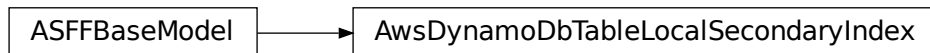
- **attribute\_name** – The name of the key schema attribute.
- **key\_type** – The type of key used for the key schema attribute.

**Returns** AwsDynamoDbTableKeySchema object

**attribute\_name** :Optional[NonEmptyString]

**key\_type** :Optional[NonEmptyString]

**class** asff.generated.AwsDynamoDbTableLocalSecondaryIndex  
Bases: *asff.generated.ASFFBaseModel*



Information about a local secondary index for a DynamoDB table.

**Parameters**

- **index\_arn** – The ARN of the index.
- **index\_name** – The name of the index.
- **key\_schema** – The complete key schema for the index.
- **projection** – Attributes that are copied from the table into the index. These are in addition to the primary key attributes and index key attributes, which are automatically projected.

**Returns** AwsDynamoDbTableLocalSecondaryIndex object

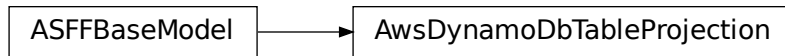
**index\_arn** :Optional[NonEmptyString]

**index\_name** :Optional[NonEmptyString]

**key\_schema** :Optional[AwsDynamoDbTableKeySchemaList]

**projection** :Optional[AwsDynamoDbTableProjection]

**class** asff.generated.AwsDynamoDbTableProjection  
Bases: *asff.generated.ASFFBaseModel*



For global and local secondary indexes, identifies the attributes that are copied from the table into the index.

#### Parameters

- **non\_key\_attributes** – The nonkey attributes that are projected into the index. For each attribute, provide the attribute name.
- **projection\_type** – The types of attributes that are projected into the index.

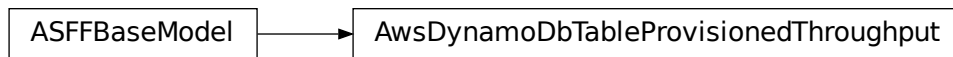
**Returns** AwsDynamoDbTableProjection object

**non\_key\_attributes** :Optional[StringList]

**projection\_type** :Optional[NonEmptyString]

**class** asff.generated.AwsDynamoDbTableProvisionedThroughput

Bases: *asff.generated.ASFFBaseModel*



Information about the provisioned throughput for the table or for a global secondary index.

#### Parameters

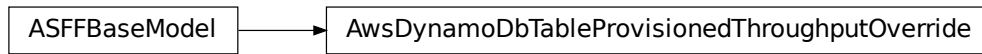
- **last\_decrease\_date\_time** – Indicates when the provisioned throughput was last decreased. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **last\_increase\_date\_time** – Indicates when the provisioned throughput was last increased. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **number\_of\_decreases\_today** – The number of times during the current UTC calendar day that the provisioned throughput was decreased.
- **read\_capacity\_units** – The maximum number of strongly consistent reads consumed per second before DynamoDB returns a ThrottlingException.
- **write\_capacity\_units** – The maximum number of writes consumed per second before DynamoDB returns a ThrottlingException.

**Returns** AwsDynamoDbTableProvisionedThroughput object

**last\_decrease\_date\_time** :Optional[Iso8601Timestamp]

**last\_increase\_date\_time** :Optional[Iso8601Timestamp]

```
number_of_decreases_today :Optional[Integer]
read_capacity_units :Optional[Integer]
write_capacity_units :Optional[Integer]
class asff.generated.AwsDynamoDbTableProvisionedThroughputOverride
    Bases: asff.generated.ASFFBaseModel
```



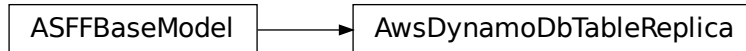
Replica-specific configuration for the provisioned throughput.

**Parameters** **read\_capacity\_units** – The read capacity units for the replica.

**Returns** *AwsDynamoDbTableProvisionedThroughputOverride* object

```
read_capacity_units :Optional[Integer]
```

```
class asff.generated.AwsDynamoDbTableReplica
    Bases: asff.generated.ASFFBaseModel
```



Information about a replica of a DynamoDB table.

**Parameters**

- **global\_secondary\_indexes** – List of global secondary indexes for the replica.
- **kms\_master\_key\_id** – The identifier of the AWS KMS customer master key (CMK) that will be used for AWS KMS encryption for the replica.
- **provisioned\_throughput\_override** – Replica-specific configuration for the provisioned throughput.
- **region\_name** – The name of the Region where the replica is located.
- **replica\_status** – The current status of the replica.
- **replica\_status\_description** – Detailed information about the replica status.

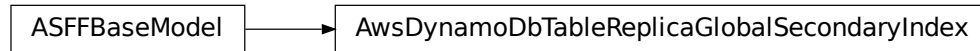
**Returns** *AwsDynamoDbTableReplica* object

```
global_secondary_indexes :Optional[AwsDynamoDbTableReplicaGlobalSecondaryIndexList]
kms_master_key_id :Optional[NonEmptyString]
provisioned_throughput_override :Optional[AwsDynamoDbTableProvisionedThroughputOverride]
region_name :Optional[NonEmptyString]
```

```

    replica_status :Optional[NonEmptyString]
    replica_status_description :Optional[NonEmptyString]
class asff.generated.AwsDynamoDbTableReplicaGlobalSecondaryIndex
    Bases: asff.generated.ASFFBaseModel

```



Information about a global secondary index for a DynamoDB table replica.

#### Parameters

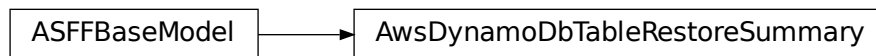
- **index\_name** – The name of the index.
- **provisioned\_throughput\_override** – Replica-specific configuration for the provisioned throughput for the index.

**Returns** AwsDynamoDbTableReplicaGlobalSecondaryIndex object

```

index_name :Optional[NonEmptyString]
provisioned_throughput_override :Optional[AwsDynamoDbTableProvisionedThroughputOverride]
class asff.generated.AwsDynamoDbTableRestoreSummary
    Bases: asff.generated.ASFFBaseModel

```



Information about the restore for the table.

#### Parameters

- **source\_backup\_arn** – The ARN of the source backup from which the table was restored.
- **source\_table\_arn** – The ARN of the source table for the backup.
- **restore\_date\_time** – Indicates the point in time that the table was restored to. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **restore\_in\_progress** – Whether a restore is currently in progress.

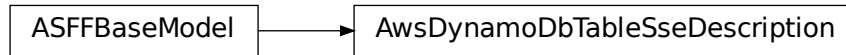
**Returns** AwsDynamoDbTableRestoreSummary object

```

restore_date_time :Optional[Iso8601Timestamp]
restore_in_progress :Optional[Boolean]

```

```
source_backup_arn :Optional[NonEmptyString]
source_table_arn :Optional[NonEmptyString]
class asff.generated.AwsDynamoDbTableSseDescription
  Bases: asff.generated.ASFFBaseModel
```



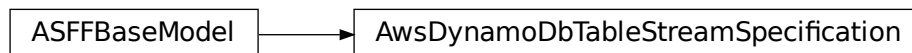
Information about the server-side encryption for the table.

#### Parameters

- **inaccessible\_encryption\_date\_time** – If the key is inaccessible, the date and time when DynamoDB detected that the key was inaccessible. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **status** – The status of the server-side encryption.
- **sse\_type** – The type of server-side encryption.
- **kms\_master\_key\_arn** – The ARN of the AWS KMS customer master key (CMK) that is used for the AWS KMS encryption.

**Returns** AwsDynamoDbTableSseDescription object

```
inaccessible_encryption_date_time :Optional[Iso8601Timestamp]
kms_master_key_arn :Optional[NonEmptyString]
sse_type :Optional[NonEmptyString]
status :Optional[NonEmptyString]
class asff.generated.AwsDynamoDbTableStreamSpecification
  Bases: asff.generated.ASFFBaseModel
```



The current DynamoDB Streams configuration for the table.

#### Parameters

- **stream\_enabled** – Indicates whether DynamoDB Streams is enabled on the table.
- **stream\_view\_type** – Determines the information that is written to the table.

**Returns** AwsDynamoDbTableStreamSpecification object



```

    stream_enabled :Optional[Boolean]
    stream_view_type :Optional[NonEmptyString]
class asff.generated.AwsEc2EipDetails
    Bases: asff.generated.ASFFBaseModel

```



Information about an Elastic IP address.

#### Parameters

- **instance\_id** – The identifier of the EC2 instance.
- **public\_ip** – A public IP address that is associated with the EC2 instance.
- **allocation\_id** – The identifier that AWS assigns to represent the allocation of the Elastic IP address for use with Amazon VPC.
- **association\_id** – The identifier that represents the association of the Elastic IP address with an EC2 instance.
- **domain** – The domain in which to allocate the address. If the address is for use with EC2 instances in a VPC, then Domain is vpc. Otherwise, Domain is standard.
- **public\_ipv4\_pool** – The identifier of an IP address pool. This parameter allows Amazon EC2 to select an IP address from the address pool.
- **network\_border\_group** – The name of the location from which the Elastic IP address is advertised.
- **network\_interface\_id** – The identifier of the network interface.
- **network\_interface\_owner\_id** – The AWS account ID of the owner of the network interface.
- **private\_ip\_address** – The private IP address that is associated with the Elastic IP address.

**Returns** AwsEc2EipDetails object

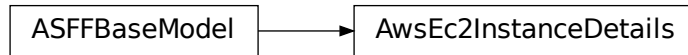
```

allocation_id :Optional[NonEmptyString]
association_id :Optional[NonEmptyString]
domain :Optional[NonEmptyString]
instance_id :Optional[NonEmptyString]
network_border_group :Optional[NonEmptyString]
network_interface_id :Optional[NonEmptyString]
network_interface_owner_id :Optional[NonEmptyString]
private_ip_address :Optional[NonEmptyString]
public_ip :Optional[NonEmptyString]

```

```
    public_ipv4_pool :Optional[NonEmptyString]

class asff.generated.AwsEc2InstanceDetails
    Bases: asff.generated.ASFFBaseModel
```



The details of an Amazon EC2 instance.

#### Parameters

- **type** – The instance type of the instance.
- **image\_id** – The Amazon Machine Image (AMI) ID of the instance.
- **ip\_v4\_addresses** – The IPv4 addresses associated with the instance.
- **ip\_v6\_addresses** – The IPv6 addresses associated with the instance.
- **key\_name** – The key name associated with the instance.
- **iam\_instance\_profile\_arn** – The IAM profile ARN of the instance.
- **vpc\_id** – The identifier of the VPC that the instance was launched in.
- **subnet\_id** – The identifier of the subnet that the instance was launched in.
- **launched\_at** – Indicates when the instance was launched. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** AwsEc2InstanceDetails object

```
    iam_instance_profile_arn :Optional[NonEmptyString]
    image_id :Optional[NonEmptyString]
    ip_v4_addresses :Optional[StringList]
    ip_v6_addresses :Optional[StringList]
    key_name :Optional[NonEmptyString]
    launched_at :Optional[Iso8601Timestamp]
    subnet_id :Optional[NonEmptyString]
    type :Optional[NonEmptyString]
    vpc_id :Optional[NonEmptyString]

class asff.generated.AwsEc2NetworkInterfaceAttachment
    Bases: asff.generated.ASFFBaseModel
```



Information about the network interface attachment.

#### Parameters

- **attach\_time** – Indicates when the attachment initiated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **attachment\_id** – The identifier of the network interface attachment
- **delete\_on\_termination** – Indicates whether the network interface is deleted when the instance is terminated.
- **device\_index** – The device index of the network interface attachment on the instance.
- **instance\_id** – The ID of the instance.
- **instance\_owner\_id** – The AWS account ID of the owner of the instance.
- **status** – The attachment state. Valid values: attaching | attached | detaching | detached

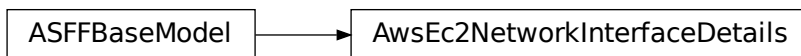
**Returns** AwsEc2NetworkInterfaceAttachment object

```

attach_time :Optional[Iso8601Timestamp]
attachment_id :Optional[NonEmptyString]
delete_on_termination :Optional[Boolean]
device_index :Optional[Integer]
instance_id :Optional[NonEmptyString]
instance_owner_id :Optional[NonEmptyString]
status :Optional[NonEmptyString]
  
```

```

class asff.generated.AwsEc2NetworkInterfaceDetails
  Bases: asff.generated.ASFFBaseModel
  
```



Details about the network interface

#### Parameters

- **attachment** – The network interface attachment.

- **network\_interface\_id** – The ID of the network interface.
- **security\_groups** – Security groups for the network interface.
- **source\_dest\_check** – Indicates whether traffic to or from the instance is validated.

**Returns** `AwsEc2NetworkInterfaceDetails` object

**attachment** : `Optional[AwsEc2NetworkInterfaceAttachment]`

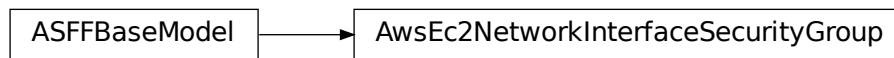
**network\_interface\_id** : `Optional[NonEmptyString]`

**security\_groups** : `Optional[AwsEc2NetworkInterfaceSecurityGroupList]`

**source\_dest\_check** : `Optional[Boolean]`

**class** `asff.generated.AwsEc2NetworkInterfaceSecurityGroup`

Bases: `asff.generated.ASFFBaseModel`



A security group associated with the network interface.

**Parameters**

- **group\_name** – The name of the security group.
- **group\_id** – The ID of the security group.

**Returns** `AwsEc2NetworkInterfaceSecurityGroup` object

**group\_id** : `Optional[NonEmptyString]`

**group\_name** : `Optional[NonEmptyString]`

**class** `asff.generated.AwsEc2SecurityGroupDetails`

Bases: `asff.generated.ASFFBaseModel`



Details about an EC2 security group.

**Parameters**

- **group\_name** – The name of the security group.
- **group\_id** – The ID of the security group.
- **owner\_id** – The AWS account ID of the owner of the security group.
- **vpc\_id** – [VPC only] The ID of the VPC for the security group.

- **ip\_permissions** – The inbound rules associated with the security group.
- **ip\_permissions\_egress** – [VPC only] The outbound rules associated with the security group.

**Returns** `AwsEc2SecurityGroupDetails` object

```
group_id :Optional[NonEmptyString]
group_name :Optional[NonEmptyString]
ip_permissions :Optional[AwsEc2SecurityGroupIpPermissionList]
ip_permissions_egress :Optional[AwsEc2SecurityGroupIpPermissionList]
owner_id :Optional[NonEmptyString]
vpc_id :Optional[NonEmptyString]
```

```
class asff.generated.AwsEc2SecurityGroupIpPermission
```

Bases: `asff.generated.ASFFBaseModel`



An IP permission for an EC2 security group.

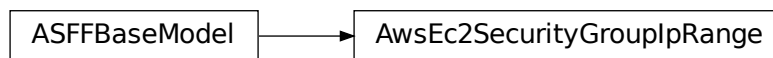
#### Parameters

- **ip\_protocol** – The IP protocol name (tcp, udp, icmp, icmpv6) or number. [VPC only] Use -1 to specify all protocols. When authorizing security group rules, specifying -1 or a protocol number other than tcp, udp, icmp, or icmpv6 allows traffic on all ports, regardless of any port range you specify. For tcp, udp, and icmp, you must specify a port range. For icmpv6, the port range is optional. If you omit the port range, traffic for all types and codes is allowed.
- **from\_port** – The start of the port range for the TCP and UDP protocols, or an ICMP/ICMPv6 type number. A value of -1 indicates all ICMP/ICMPv6 types. If you specify all ICMP/ICMPv6 types, you must specify all codes.
- **to\_port** – The end of the port range for the TCP and UDP protocols, or an ICMP/ICMPv6 code. A value of -1 indicates all ICMP/ICMPv6 codes. If you specify all ICMP/ICMPv6 types, you must specify all codes.
- **user\_id\_group\_pairs** – The security group and AWS account ID pairs.
- **ip\_ranges** – The IPv4 ranges.
- **ipv6\_ranges** – The IPv6 ranges.
- **prefix\_list\_ids** – [VPC only] The prefix list IDs for an AWS service. With outbound rules, this is the AWS service to access through a VPC endpoint from instances associated with the security group.

**Returns** `AwsEc2SecurityGroupIpPermission` object

```
from_port :Optional[Integer]
```

```
ip_protocol :Optional[NonEmptyString]
ip_ranges :Optional[AwsEc2SecurityGroupIpRangeList]
ipv6_ranges :Optional[AwsEc2SecurityGroupIpv6RangeList]
prefix_list_ids :Optional[AwsEc2SecurityGroupPrefixListIdList]
to_port :Optional[Integer]
user_id_group_pairs :Optional[AwsEc2SecurityGroupUserIdGroupPairList]
class asff.generated.AwsEc2SecurityGroupIpRange
    Bases: asff.generated.ASFFBaseModel
```



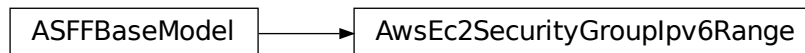
A range of IPv4 addresses.

**Parameters** `cidr_ip` – The IPv4 CIDR range. You can specify either a CIDR range or a source security group, but not both. To specify a single IPv4 address, use the /32 prefix length.

**Returns** `AwsEc2SecurityGroupIpRange` object

```
cidr_ip :Optional[NonEmptyString]
```

```
class asff.generated.AwsEc2SecurityGroupIpv6Range
    Bases: asff.generated.ASFFBaseModel
```



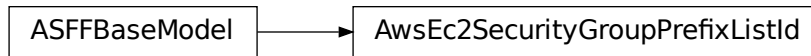
A range of IPv6 addresses.

**Parameters** `cidr_ipv6` – The IPv6 CIDR range. You can specify either a CIDR range or a source security group, but not both. To specify a single IPv6 address, use the /128 prefix length.

**Returns** `AwsEc2SecurityGroupIpv6Range` object

```
cidr_ipv6 :Optional[NonEmptyString]
```

```
class asff.generated.AwsEc2SecurityGroupPrefixListId
    Bases: asff.generated.ASFFBaseModel
```



A prefix list ID.

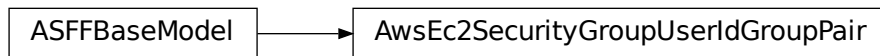
**Parameters** `prefix_list_id` – The ID of the prefix.

**Returns** `AwsEc2SecurityGroupPrefixListId` object

`prefix_list_id : Optional[NonEmptyString]`

**class** `asff.generated.AwsEc2SecurityGroupUserIdGroupPair`

Bases: `asff.generated.ASFFBaseModel`



A relationship between a security group and a user.

**Parameters**

- `group_id` – The ID of the security group.
- `group_name` – The name of the security group.
- `peering_status` – The status of a VPC peering connection, if applicable.
- `user_id` – The ID of an AWS account. For a referenced security group in another VPC, the account ID of the referenced security group is returned in the response. If the referenced security group is deleted, this value is not returned. [EC2-Classic] Required when adding or removing rules that reference a security group in another AWS.
- `vpc_id` – The ID of the VPC for the referenced security group, if applicable.
- `vpc_peering_connection_id` – The ID of the VPC peering connection, if applicable.

**Returns** `AwsEc2SecurityGroupUserIdGroupPair` object

`group_id : Optional[NonEmptyString]`

`group_name : Optional[NonEmptyString]`

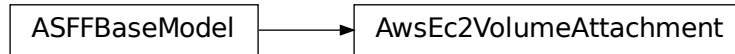
`peering_status : Optional[NonEmptyString]`

`user_id : Optional[NonEmptyString]`

`vpc_id : Optional[NonEmptyString]`

`vpc_peering_connection_id : Optional[NonEmptyString]`

```
class asff.generated.AwsEc2VolumeAttachment
    Bases: asff.generated.ASFFBaseModel
```



An attachment to an AWS EC2 volume.

#### Parameters

- **attach\_time** – The datetime when the attachment initiated.
- **delete\_on\_termination** – Whether the EBS volume is deleted when the EC2 instance is terminated.
- **instance\_id** – The identifier of the EC2 instance.
- **status** – The attachment state of the volume.

**Returns** `AwsEc2VolumeAttachment` object

```
attach_time :Optional[Iso8601Timestamp]
delete_on_termination :Optional[Boolean]
instance_id :Optional[NonEmptyString]
status :Optional[NonEmptyString]
```

```
class asff.generated.AwsEc2VolumeDetails
    Bases: asff.generated.ASFFBaseModel
```



Details about an EC2 volume.

#### Parameters

- **create\_time** – Indicates when the volume was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **encrypted** – Whether the volume is encrypted.
- **size** – The size of the volume, in GiBs.
- **snapshot\_id** – The snapshot from which the volume was created.
- **status** – The volume state.

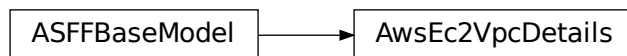


- **kms\_key\_id** – The ARN of the AWS Key Management Service (AWS KMS) customer master key (CMK) that was used to protect the volume encryption key for the volume.
- **attachments** – The volume attachments.

**Returns** AwsEc2VolumeDetails object

```
attachments :Optional[AwsEc2VolumeAttachmentList]
create_time :Optional[Iso8601Timestamp]
encrypted :Optional[Boolean]
kms_key_id :Optional[NonEmptyString]
size :Optional[Integer]
snapshot_id :Optional[NonEmptyString]
status :Optional[NonEmptyString]
```

```
class asff.generated.AwsEc2VpcDetails
  Bases: asff.generated.ASFFBaseModel
```



Details about an EC2 VPC.

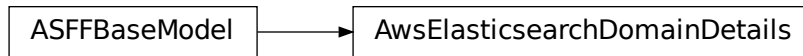
#### Parameters

- **cidr\_block\_association\_set** – Information about the IPv4 CIDR blocks associated with the VPC.
- **ipv6\_cidr\_block\_association\_set** – Information about the IPv6 CIDR blocks associated with the VPC.
- **dhcp\_options\_id** – The identifier of the set of Dynamic Host Configuration Protocol (DHCP) options that are associated with the VPC. If the default options are associated with the VPC, then this is default.
- **state** – The current state of the VPC.

**Returns** AwsEc2VpcDetails object

```
cidr_block_association_set :Optional[CidrBlockAssociationList]
dhcp_options_id :Optional[NonEmptyString]
ipv6_cidr_block_association_set :Optional[Ipv6CidrBlockAssociationList]
state :Optional[NonEmptyString]
```

```
class asff.generated.AwsElasticsearchDomainDetails
  Bases: asff.generated.ASFFBaseModel
```



Information about an Elasticsearch domain.

#### Parameters

- **access\_policies** – IAM policy document specifying the access policies for the new Amazon ES domain.
- **domain\_endpoint\_options** – Additional options for the domain endpoint.
- **domain\_id** – Unique identifier for an Amazon ES domain.
- **domain\_name** – Name of an Amazon ES domain. Domain names are unique across all domains owned by the same account within an AWS Region. Domain names must start with a lowercase letter and must be between 3 and 28 characters. Valid characters are a-z (lowercase only), 0-9, and – (hyphen).
- **endpoint** – Domain-specific endpoint used to submit index, search, and data upload requests to an Amazon ES domain. The endpoint is a service URL.
- **endpoints** – The key-value pair that exists if the Amazon ES domain uses VPC endpoints.
- **elasticsearch\_version** – Elasticsearch version.
- **encryption\_at\_rest\_options** – Details about the configuration for encryption at rest.
- **node\_to\_node\_encryption\_options** – Details about the configuration for node-to-node encryption.
- **vpc\_options** – Information that Amazon ES derives based on VPCOptions for the domain.

**Returns** AwsElasticsearchDomainDetails object

```
access_policies :Optional[NonEmptyString]
domain_endpoint_options :Optional[AwsElasticsearchDomainDomainEndpointOptions]
domain_id :Optional[NonEmptyString]
domain_name :Optional[NonEmptyString]
elasticsearch_version :Optional[NonEmptyString]
encryption_at_rest_options :Optional[AwsElasticsearchDomainEncryptionAtRestOptions]
endpoint :Optional[NonEmptyString]
endpoints :Optional[FieldMap]
node_to_node_encryption_options :Optional[AwsElasticsearchDomainNodeToNodeEncryptionOptions]
vpc_options :Optional[AwsElasticsearchDomainVPCOptions]
```

```
class asff.generated.AwsElasticsearchDomainDomainEndpointOptions
    Bases: asff.generated.ASFFBaseModel
```



Additional options for the domain endpoint, such as whether to require HTTPS for all traffic.

#### Parameters

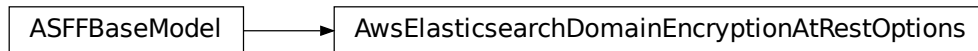
- **enforce\_https** – Whether to require that all traffic to the domain arrive over HTTPS.
- **tls\_security\_policy** – The TLS security policy to apply to the HTTPS endpoint of the Elasticsearch domain. Valid values: Policy-Min-TLS-1-0-2019-07, which supports TLSv1.0 and higher Policy-Min-TLS-1-2-2019-07, which only supports TLSv1.2

**Returns** AwsElasticsearchDomainDomainEndpointOptions object

**enforce\_https** :Optional[Boolean]

**tls\_security\_policy** :Optional[NonEmptyString]

```
class asff.generated.AwsElasticsearchDomainEncryptionAtRestOptions
    Bases: asff.generated.ASFFBaseModel
```



Details about the configuration for encryption at rest.

#### Parameters

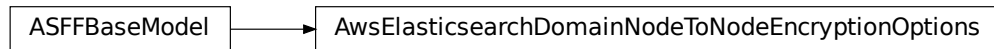
- **enabled** – Whether encryption at rest is enabled.
- **kms\_key\_id** – The KMS key ID. Takes the form 1a2a3a4-1a2a-3a4a-5a6a-1a2a3a4a5a6a.

**Returns** AwsElasticsearchDomainEncryptionAtRestOptions object

**enabled** :Optional[Boolean]

**kms\_key\_id** :Optional[NonEmptyString]

```
class asff.generated.AwsElasticsearchDomainNodeToNodeEncryptionOptions
    Bases: asff.generated.ASFFBaseModel
```



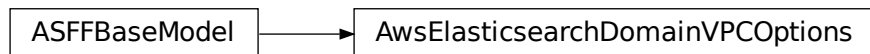
Details about the configuration for node-to-node encryption.

**Parameters** **enabled** – Whether node-to-node encryption is enabled.

**Returns** `AwsElasticsearchDomainNodeToNodeEncryptionOptions` object

**enabled** : `Optional[Boolean]`

```
class asff.generated.AwsElasticsearchDomainVPCOptions
    Bases: asff.generated.ASFFBaseModel
```



Information that Amazon ES derives based on VPCOptions for the domain.

**Parameters**

- **availability\_zones** – The list of Availability Zones associated with the VPC subnets.
- **security\_group\_ids** – The list of security group IDs associated with the VPC endpoints for the domain.
- **subnet\_ids** – A list of subnet IDs associated with the VPC endpoints for the domain.
- **vpc\_id** – ID for the VPC.

**Returns** `AwsElasticsearchDomainVPCOptions` object

**availability\_zones** : `Optional[NonEmptyStringList]`

**security\_group\_ids** : `Optional[NonEmptyStringList]`

**subnet\_ids** : `Optional[NonEmptyStringList]`

**vpc\_id** : `Optional[NonEmptyString]`

```
class asff.generated.AwsElbAppCookieStickinessPolicy
    Bases: asff.generated.ASFFBaseModel
```



Contains information about a stickiness policy that was created using CreateAppCookieStickinessPolicy.

#### Parameters

- **cookie\_name** – The name of the application cookie used for stickiness.
- **policy\_name** – The mnemonic name for the policy being created. The name must be unique within the set of policies for the load balancer.

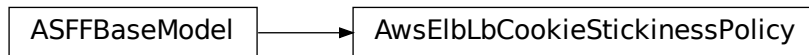
**Returns** AwsElbAppCookieStickinessPolicy object

**cookie\_name** :Optional[NonEmptyString]

**policy\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsElbLbCookieStickinessPolicy

Bases: *asff.generated.ASFFBaseModel*



Contains information about a stickiness policy that was created using CreateLBCookieStickinessPolicy.

#### Parameters

- **cookie\_expiration\_period** – The amount of time, in seconds, after which the cookie is considered stale. If an expiration period is not specified, the stickiness session lasts for the duration of the browser session.
- **policy\_name** – The name of the policy. The name must be unique within the set of policies for the load balancer.

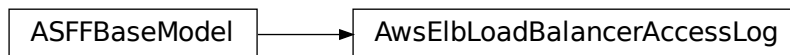
**Returns** AwsElbLbCookieStickinessPolicy object

**cookie\_expiration\_period** :Optional[Long]

**policy\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsElbLoadBalancerAccessLog

Bases: *asff.generated.ASFFBaseModel*



Contains information about the access log configuration for the load balancer.

#### Parameters

- **emit\_interval** – The interval in minutes for publishing the access logs. You can publish access logs either every 5 minutes or every 60 minutes.

- **enabled** – Indicates whether access logs are enabled for the load balancer.
- **s3\_bucket\_name** – The name of the S3 bucket where the access logs are stored.
- **s3\_bucket\_prefix** – The logical hierarchy that was created for the S3 bucket. If a prefix is not provided, the log is placed at the root level of the bucket.

**Returns** `AwsElbLoadBalancerAccessLog` object

**emit\_interval** :Optional[Integer]

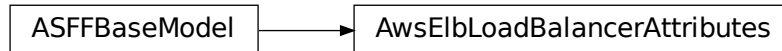
**enabled** :Optional[Boolean]

**s3\_bucket\_name** :Optional[NonEmptyString]

**s3\_bucket\_prefix** :Optional[NonEmptyString]

**class** `asff.generated.AwsElbLoadBalancerAttributes`

Bases: `asff.generated.ASFFBaseModel`



Contains attributes for the load balancer.

#### Parameters

- **access\_log** – Information about the access log configuration for the load balancer. If the access log is enabled, the load balancer captures detailed information about all requests. It delivers the information to a specified S3 bucket.
- **connection\_draining** – Information about the connection draining configuration for the load balancer. If connection draining is enabled, the load balancer allows existing requests to complete before it shifts traffic away from a deregistered or unhealthy instance.
- **connection\_settings** – Connection settings for the load balancer. If an idle timeout is configured, the load balancer allows connections to remain idle for the specified duration. When a connection is idle, no data is sent over the connection.
- **cross\_zone\_load\_balancing** – Cross-zone load balancing settings for the load balancer. If cross-zone load balancing is enabled, the load balancer routes the request traffic evenly across all instances regardless of the Availability Zones.

**Returns** `AwsElbLoadBalancerAttributes` object

**access\_log** :Optional[AwsElbLoadBalancerAccessLog]

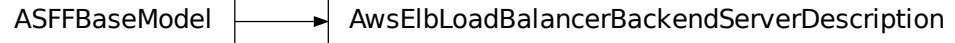
**connection\_draining** :Optional[AwsElbLoadBalancerConnectionDraining]

**connection\_settings** :Optional[AwsElbLoadBalancerConnectionSettings]

**cross\_zone\_load\_balancing** :Optional[AwsElbLoadBalancerCrossZoneLoadBalancing]

**class** `asff.generated.AwsElbLoadBalancerBackendServerDescription`

Bases: `asff.generated.ASFFBaseModel`



Provides information about the configuration of an EC2 instance for the load balancer.

#### Parameters

- **instance\_port** – The port on which the EC2 instance is listening.
- **policy\_names** – The names of the policies that are enabled for the EC2 instance.

**Returns** AwsElbLoadBalancerBackendServerDescription object

**instance\_port** :Optional[Integer]

**policy\_names** :Optional[StringList]

**class** asff.generated.AwsElbLoadBalancerConnectionDraining  
 Bases: *asff.generated.ASFFBaseModel*



Contains information about the connection draining configuration for the load balancer.

#### Parameters

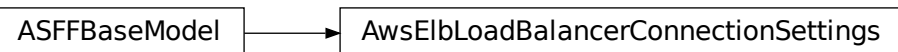
- **enabled** – Indicates whether connection draining is enabled for the load balancer.
- **timeout** – The maximum time, in seconds, to keep the existing connections open before deregistering the instances.

**Returns** AwsElbLoadBalancerConnectionDraining object

**enabled** :Optional[Boolean]

**timeout** :Optional[Integer]

**class** asff.generated.AwsElbLoadBalancerConnectionSettings  
 Bases: *asff.generated.ASFFBaseModel*



Contains connection settings for the load balancer.

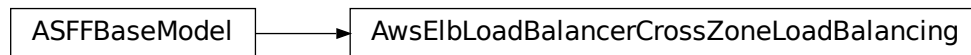
**Parameters** `idle_timeout` – The time, in seconds, that the connection can be idle (no data is sent over the connection) before it is closed by the load balancer.

**Returns** `AwsElbLoadBalancerConnectionSettings` object

`idle_timeout :Optional[Integer]`

**class** `asff.generated.AwsElbLoadBalancerCrossZoneLoadBalancing`

Bases: `asff.generated.ASFFBaseModel`



Contains cross-zone load balancing settings for the load balancer.

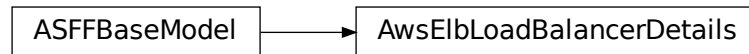
**Parameters** `enabled` – Indicates whether cross-zone load balancing is enabled for the load balancer.

**Returns** `AwsElbLoadBalancerCrossZoneLoadBalancing` object

`enabled :Optional[Boolean]`

**class** `asff.generated.AwsElbLoadBalancerDetails`

Bases: `asff.generated.ASFFBaseModel`



Contains details about a Classic Load Balancer.

**Parameters**

- **availability\_zones** – The list of Availability Zones for the load balancer.
- **backend\_server\_descriptions** – Information about the configuration of the EC2 instances.
- **canonical\_hosted\_zone\_name** – The name of the Amazon Route 53 hosted zone for the load balancer.
- **canonical\_hosted\_zone\_name\_id** – The ID of the Amazon Route 53 hosted zone for the load balancer.
- **created\_time** – Indicates when the load balancer was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **dns\_name** – The DNS name of the load balancer.

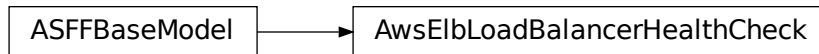


- **health\_check** – Information about the health checks that are conducted on the load balancer.
- **instances** – List of EC2 instances for the load balancer.
- **listener\_descriptions** – The policies that are enabled for the load balancer listeners.
- **load\_balancer\_attributes** – The attributes for a load balancer.
- **load\_balancer\_name** – The name of the load balancer.
- **policies** – The policies for a load balancer.
- **scheme** – The type of load balancer. Only provided if the load balancer is in a VPC. If Scheme is internet-facing, the load balancer has a public DNS name that resolves to a public IP address. If Scheme is internal, the load balancer has a public DNS name that resolves to a private IP address.
- **security\_groups** – The security groups for the load balancer. Only provided if the load balancer is in a VPC.
- **source\_security\_group** – Information about the security group for the load balancer. This is the security group that is used for inbound rules.
- **subnets** – The list of subnet identifiers for the load balancer.
- **vpc\_id** – The identifier of the VPC for the load balancer.

**Returns** AwsElbLoadBalancerDetails object

```
availability_zones :Optional[StringList]
backend_server_descriptions :Optional[AwsElbLoadBalancerBackendServerDescriptions]
canonical_hosted_zone_name :Optional[NonEmptyString]
canonical_hosted_zone_name_id :Optional[NonEmptyString]
created_time :Optional[Iso8601Timestamp]
dns_name :Optional[NonEmptyString]
health_check :Optional[AwsElbLoadBalancerHealthCheck]
instances :Optional[AwsElbLoadBalancerInstances]
listener_descriptions :Optional[AwsElbLoadBalancerListenerDescriptions]
load_balancer_attributes :Optional[AwsElbLoadBalancerAttributes]
load_balancer_name :Optional[NonEmptyString]
policies :Optional[AwsElbLoadBalancerPolicies]
scheme :Optional[NonEmptyString]
security_groups :Optional[StringList]
source_security_group :Optional[AwsElbLoadBalancerSourceSecurityGroup]
subnets :Optional[StringList]
vpc_id :Optional[NonEmptyString]

class asff.generated.AwsElbLoadBalancerHealthCheck
    Bases: asff.generated.ASFFBaseModel
```



Contains information about the health checks that are conducted on the load balancer.

#### Parameters

- **healthy\_threshold** – The number of consecutive health check successes required before the instance is moved to the Healthy state.
- **interval** – The approximate interval, in seconds, between health checks of an individual instance.
- **target** – The instance that is being checked. The target specifies the protocol and port. The available protocols are TCP, SSL, HTTP, and HTTPS. The range of valid ports is 1 through 65535. For the HTTP and HTTPS protocols, the target also specifies the ping path. For the TCP protocol, the target is specified as TCP: <port> . For the SSL protocol, the target is specified as SSL.<port> . For the HTTP and HTTPS protocols, the target is specified as <protocol>:<port>/<path to ping> .
- **timeout** – The amount of time, in seconds, during which no response means a failed health check.
- **unhealthy\_threshold** – The number of consecutive health check failures that must occur before the instance is moved to the Unhealthy state.

**Returns** AwsElbLoadBalancerHealthCheck object

**healthy\_threshold** :Optional[Integer]

**interval** :Optional[Integer]

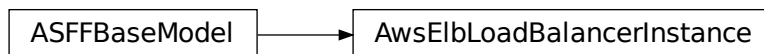
**target** :Optional[NonEmptyString]

**timeout** :Optional[Integer]

**unhealthy\_threshold** :Optional[Integer]

**class** asff.generated.AwsElbLoadBalancerInstance

Bases: *asff.generated.ASFFBaseModel*



Provides information about an EC2 instance for a load balancer.

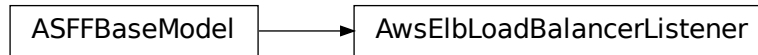
**Parameters** **instance\_id** – The instance identifier.

**Returns** AwsElbLoadBalancerInstance object

```

    instance_id :Optional[NonEmptyString]
class asff.generated.AwsElbLoadBalancerListener
    Bases: asff.generated.ASFFBaseModel

```



Information about a load balancer listener.

#### Parameters

- **instance\_port** – The port on which the instance is listening.
- **instance\_protocol** – The protocol to use to route traffic to instances. Valid values: HTTP | HTTPS | TCP | SSL
- **load\_balancer\_port** – The port on which the load balancer is listening. On EC2-VPC, you can specify any port from the range 1-65535. On EC2-Classic, you can specify any port from the following list: 25, 80, 443, 465, 587, 1024-65535.
- **protocol** – The load balancer transport protocol to use for routing. Valid values: HTTP | HTTPS | TCP | SSL
- **ssl\_certificate\_id** – The ARN of the server certificate.

**Returns** AwsElbLoadBalancerListener object

```

instance_port :Optional[Integer]
instance_protocol :Optional[NonEmptyString]
load_balancer_port :Optional[Integer]
protocol :Optional[NonEmptyString]
ssl_certificate_id :Optional[NonEmptyString]
class asff.generated.AwsElbLoadBalancerListenerDescription
    Bases: asff.generated.ASFFBaseModel

```



Lists the policies that are enabled for a load balancer listener.

#### Parameters

- **listener** – Information about the listener.
- **policy\_names** – The policies enabled for the listener.

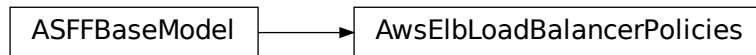
**Returns** `AwsElbLoadBalancerListenerDescription` object

**listener** : `Optional[AwsElbLoadBalancerListener]`

**policy\_names** : `Optional[StringList]`

**class** `asff.generated.AwsElbLoadBalancerPolicies`

Bases: `asff.generated.ASFFBaseModel`



Contains information about the policies for a load balancer.

**Parameters**

- **app\_cookie\_stickiness\_policies** – The stickiness policies that are created using `CreateAppCookieStickinessPolicy`.
- **lb\_cookie\_stickiness\_policies** – The stickiness policies that are created using `CreateLBCookieStickinessPolicy`.
- **other\_policies** – The policies other than the stickiness policies.

**Returns** `AwsElbLoadBalancerPolicies` object

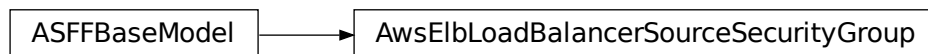
**app\_cookie\_stickiness\_policies** : `Optional[AwsElbAppCookieStickinessPolicies]`

**lb\_cookie\_stickiness\_policies** : `Optional[AwsElbLbCookieStickinessPolicies]`

**other\_policies** : `Optional[StringList]`

**class** `asff.generated.AwsElbLoadBalancerSourceSecurityGroup`

Bases: `asff.generated.ASFFBaseModel`



Contains information about the security group for the load balancer.

**Parameters**

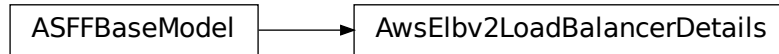
- **group\_name** – The name of the security group.
- **owner\_alias** – The owner of the security group.

**Returns** `AwsElbLoadBalancerSourceSecurityGroup` object

**group\_name** : `Optional[NonEmptyString]`

**owner\_alias** : `Optional[NonEmptyString]`

```
class asff.generated.AwsElbv2LoadBalancerDetails
    Bases: asff.generated.ASFFBaseModel
```



Information about a load balancer.

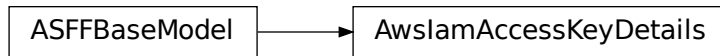
#### Parameters

- **availability\_zones** – The Availability Zones for the load balancer.
- **canonical\_hosted\_zone\_id** – The ID of the Amazon Route 53 hosted zone associated with the load balancer.
- **created\_time** – Indicates when the load balancer was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **dns\_name** – The public DNS name of the load balancer.
- **ip\_address\_type** – The type of IP addresses used by the subnets for your load balancer. The possible values are ipv4 (for IPv4 addresses) and dualstack (for IPv4 and IPv6 addresses).
- **scheme** – The nodes of an Internet-facing load balancer have public IP addresses.
- **security\_groups** – The IDs of the security groups for the load balancer.
- **state** – The state of the load balancer.
- **type** – The type of load balancer.
- **vpc\_id** – The ID of the VPC for the load balancer.

**Returns** `AwsElbv2LoadBalancerDetails` object

```
availability_zones :Optional[AvailabilityZones]
canonical_hosted_zone_id :Optional[NonEmptyString]
created_time :Optional[Iso8601Timestamp]
dns_name :Optional[NonEmptyString]
ip_address_type :Optional[NonEmptyString]
scheme :Optional[NonEmptyString]
security_groups :Optional[SecurityGroups]
state :Optional[LoadBalancerState]
type :Optional[NonEmptyString]
vpc_id :Optional[NonEmptyString]
```

```
class asff.generated.AwsIamAccessKeyDetails
    Bases: asff.generated.ASFFBaseModel
```



IAM access key details related to a finding.

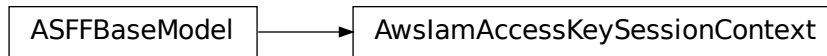
#### Parameters

- **user\_name** – The user associated with the IAM access key related to a finding. The `UserName` parameter has been replaced with the `PrincipalName` parameter because access keys can also be assigned to principals that are not IAM users.
- **status** – The status of the IAM access key related to a finding.
- **created\_at** – Indicates when the IAM access key was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **principal\_id** – The ID of the principal associated with an access key.
- **principal\_type** – The type of principal associated with an access key.
- **principal\_name** – The name of the principal.
- **account\_id** – The AWS account ID of the account for the key.
- **access\_key\_id** – The identifier of the access key.
- **session\_context** – Information about the session that the key was used for.

**Returns** `AwsIamAccessKeyDetails` object

```
access_key_id :Optional[NonEmptyString]
account_id :Optional[NonEmptyString]
created_at :Optional[Iso8601Timestamp]
principal_id :Optional[NonEmptyString]
principal_name :Optional[NonEmptyString]
principal_type :Optional[NonEmptyString]
session_context :Optional[AwsIamAccessKeySessionContext]
status :Optional[AwsIamAccessKeyStatus]
user_name :Optional[NonEmptyString]

class asff.generated.AwsIamAccessKeySessionContext
    Bases: asff.generated.ASFFBaseModel
```



Provides information about the session that the key was used for.

#### Parameters

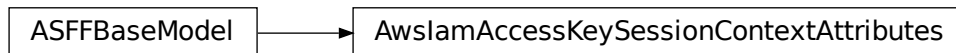
- **attributes** – Attributes of the session that the key was used for.
- **session\_issuer** – Information about the entity that created the session.

**Returns** AwsIamAccessKeySessionContext object

**attributes** :Optional[AwsIamAccessKeySessionContextAttributes]

**session\_issuer** :Optional[AwsIamAccessKeySessionContextSessionIssuer]

**class** asff.generated.AwsIamAccessKeySessionContextAttributes  
 Bases: *asff.generated.ASFFBaseModel*



Attributes of the session that the key was used for.

#### Parameters

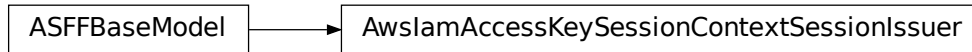
- **mfa\_authenticated** – Indicates whether the session used multi-factor authentication (MFA).
- **creation\_date** – Indicates when the session was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** AwsIamAccessKeySessionContextAttributes object

**creation\_date** :Optional[Iso8601Timestamp]

**mfa\_authenticated** :Optional[Boolean]

**class** asff.generated.AwsIamAccessKeySessionContextSessionIssuer  
 Bases: *asff.generated.ASFFBaseModel*



Information about the entity that created the session.

**Parameters**

- **type** – The type of principal (user, role, or group) that created the session.
- **principal\_id** – The principal ID of the principal (user, role, or group) that created the session.
- **arn** – The ARN of the session.
- **account\_id** – The identifier of the AWS account that created the session.
- **user\_name** – The name of the principal that created the session.

**Returns** AwsIamAccessKeySessionContextSessionIssuer object

```
account_id :Optional[NonEmptyString]
arn :Optional[NonEmptyString]
principal_id :Optional[NonEmptyString]
type :Optional[NonEmptyString]
user_name :Optional[NonEmptyString]
```

```
class asff.generated.AwsIamAttachedManagedPolicy
    Bases: asff.generated.ASFFBaseModel
```



A managed policy that is attached to an IAM principal.

**Parameters**

- **policy\_name** – The name of the policy.
- **policy\_arn** – The ARN of the policy.

**Returns** AwsIamAttachedManagedPolicy object

```
policy_arn :Optional[NonEmptyString]
policy_name :Optional[NonEmptyString]
```

```
class asff.generated.AwsIamGroupDetails
    Bases: asff.generated.ASFFBaseModel
```





Contains details about an IAM group.

#### Parameters

- **attached\_managed\_policies** – A list of the managed policies that are attached to the IAM group.
- **create\_date** – Indicates when the IAM group was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **group\_id** – The identifier of the IAM group.
- **group\_name** – The name of the IAM group.
- **group\_policy\_list** – The list of inline policies that are embedded in the group.
- **path** – The path to the group.

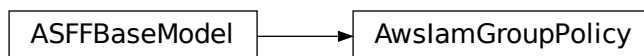
**Returns** AwsIamGroupDetails object

```

attached_managed_policies :Optional[AwsIamAttachedManagedPolicyList]
create_date :Optional[Iso8601Timestamp]
group_id :Optional[NonEmptyString]
group_name :Optional[NonEmptyString]
group_policy_list :Optional[AwsIamGroupPolicyList]
path :Optional[NonEmptyString]
  
```

```

class asff.generated.AwsIamGroupPolicy
  Bases: asff.generated.ASFFBaseModel
  
```



A managed policy that is attached to the IAM group.

**Parameters** **policy\_name** – The name of the policy.

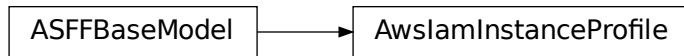
**Returns** AwsIamGroupPolicy object

```

policy_name :Optional[NonEmptyString]
  
```

```

class asff.generated.AwsIamInstanceProfile
  Bases: asff.generated.ASFFBaseModel
  
```



Information about an instance profile.

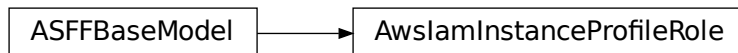
#### Parameters

- **arn** – The ARN of the instance profile.
- **create\_date** – Indicates when the instance profile was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **instance\_profile\_id** – The identifier of the instance profile.
- **instance\_profile\_name** – The name of the instance profile.
- **path** – The path to the instance profile.
- **roles** – The roles associated with the instance profile.

**Returns** AwsIamInstanceProfile object

```
arn :Optional[NonEmptyString]
create_date :Optional[Iso8601Timestamp]
instance_profile_id :Optional[NonEmptyString]
instance_profile_name :Optional[NonEmptyString]
path :Optional[NonEmptyString]
roles :Optional[AwsIamInstanceProfileRoles]

class asff.generated.AwsIamInstanceProfileRole
    Bases: asff.generated.ASFFBaseModel
```



Information about a role associated with an instance profile.

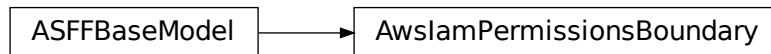
#### Parameters

- **arn** – The ARN of the role.
- **assume\_role\_policy\_document** – The policy that grants an entity permission to assume the role.

- **create\_date** – Indicates when the role was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **path** – The path to the role.
- **role\_id** – The identifier of the role.
- **role\_name** – The name of the role.

**Returns** AwsIamInstanceProfileRole object

```
arn :Optional[NonEmptyString]
assume_role_policy_document :Optional[AwsIamRoleAssumeRolePolicyDocument]
create_date :Optional[Iso8601Timestamp]
path :Optional[NonEmptyString]
role_id :Optional[NonEmptyString]
role_name :Optional[NonEmptyString]
class asff.generated.AwsIamPermissionsBoundary
    Bases: asff.generated.ASFFBaseModel
```



Information about the policy used to set the permissions boundary for an IAM principal.

#### Parameters

- **permissions\_boundary\_arn** – The ARN of the policy used to set the permissions boundary.
- **permissions\_boundary\_type** – The usage type for the permissions boundary.

**Returns** AwsIamPermissionsBoundary object

```
permissions_boundary_arn :Optional[NonEmptyString]
permissions_boundary_type :Optional[NonEmptyString]
class asff.generated.AwsIamPolicyDetails
    Bases: asff.generated.ASFFBaseModel
```



Represents an IAM permissions policy.

**Parameters**

- **attachment\_count** – The number of users, groups, and roles that the policy is attached to.
- **create\_date** – When the policy was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **default\_version\_id** – The identifier of the default version of the policy.
- **description** – A description of the policy.
- **is\_attachable** – Whether the policy can be attached to a user, group, or role.
- **path** – The path to the policy.
- **permissions\_boundary\_usage\_count** – The number of users and roles that use the policy to set the permissions boundary.
- **policy\_id** – The unique identifier of the policy.
- **policy\_name** – The name of the policy.
- **policy\_version\_list** – List of versions of the policy.
- **update\_date** – When the policy was most recently updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** AwsIamPolicyDetails object

```
attachment_count :Optional[Integer]
create_date :Optional[Iso8601Timestamp]
default_version_id :Optional[NonEmptyString]
description :Optional[NonEmptyString]
is_attachable :Optional[Boolean]
path :Optional[NonEmptyString]
permissions_boundary_usage_count :Optional[Integer]
policy_id :Optional[NonEmptyString]
policy_name :Optional[NonEmptyString]
policy_version_list :Optional[AwsIamPolicyVersionList]
update_date :Optional[Iso8601Timestamp]
```

```
class asff.generated.AwsIamPolicyVersion
    Bases: asff.generated.ASFFBaseModel
```



A version of an IAM policy.

#### Parameters

- **version\_id** – The identifier of the policy version.
- **is\_default\_version** – Whether the version is the default version.
- **create\_date** – Indicates when the version was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** AwsIamPolicyVersion object

**create\_date** :Optional[Iso8601Timestamp]

**is\_default\_version** :Optional[Boolean]

**version\_id** :Optional[NonEmptyString]

**class** asff.generated.AwsIamRoleDetails

Bases: *asff.generated.ASFFBaseModel*



Contains information about an IAM role, including all of the role's policies.

#### Parameters

- **assume\_role\_policy\_document** – The trust policy that grants permission to assume the role.
- **attached\_managed\_policies** – The list of the managed policies that are attached to the role.
- **create\_date** – Indicates when the role was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **instance\_profile\_list** – The list of instance profiles that contain this role.
- **role\_id** – The stable and unique string identifying the role.
- **role\_name** – The friendly name that identifies the role.
- **role\_policy\_list** – The list of inline policies that are embedded in the role.
- **max\_session\_duration** – The maximum session duration (in seconds) that you want to set for the specified role.
- **path** – The path to the role.

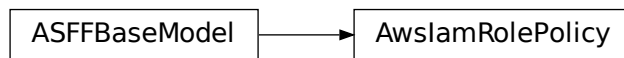
**Returns** AwsIamRoleDetails object

**assume\_role\_policy\_document** :Optional[AwsIamRoleAssumeRolePolicyDocument]

**attached\_managed\_policies** :Optional[AwsIamAttachedManagedPolicyList]

**create\_date** :Optional[Iso8601Timestamp]

```
instance_profile_list :Optional[AwsIamInstanceProfileList]
max_session_duration :Optional[Integer]
path :Optional[NonEmptyString]
permissions_boundary :Optional[AwsIamPermissionsBoundary]
role_id :Optional[NonEmptyString]
role_name :Optional[NonEmptyString]
role_policy_list :Optional[AwsIamRolePolicyList]
class asff.generated.AwsIamRolePolicy
    Bases: asff.generated.ASFFBaseModel
```

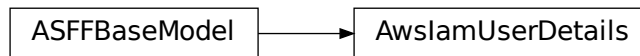


An inline policy that is embedded in the role.

**Parameters** `policy_name` – The name of the policy.

**Returns** `AwsIamRolePolicy` object

```
policy_name :Optional[NonEmptyString]
class asff.generated.AwsIamUserDetails
    Bases: asff.generated.ASFFBaseModel
```



Information about an IAM user.

**Parameters**

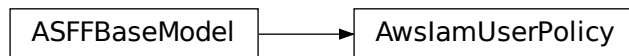
- **attached\_managed\_policies** – A list of the managed policies that are attached to the user.
- **create\_date** – Indicates when the user was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **group\_list** – A list of IAM groups that the user belongs to.
- **path** – The path to the user.
- **permissions\_boundary** – The permissions boundary for the user.
- **user\_id** – The unique identifier for the user.

- **user\_name** – The name of the user.
- **user\_policy\_list** – The list of inline policies that are embedded in the user.

**Returns** AwsIamUserDetails object

```
attached_managed_policies :Optional[AwsIamAttachedManagedPolicyList]
create_date :Optional[Iso8601Timestamp]
group_list :Optional[StringList]
path :Optional[NonEmptyString]
permissions_boundary :Optional[AwsIamPermissionsBoundary]
user_id :Optional[NonEmptyString]
user_name :Optional[NonEmptyString]
user_policy_list :Optional[AwsIamUserPolicyList]
```

```
class asff.generated.AwsIamUserPolicy
    Bases: asff.generated.ASFFBaseModel
```



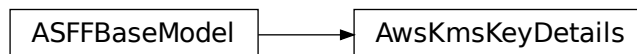
Information about an inline policy that is embedded in the user.

**Parameters** **policy\_name** – The name of the policy.

**Returns** AwsIamUserPolicy object

```
policy_name :Optional[NonEmptyString]
```

```
class asff.generated.AwsKmsKeyDetails
    Bases: asff.generated.ASFFBaseModel
```



Contains metadata about a customer master key (CMK).

**Parameters**

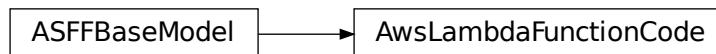
- **aws\_account\_id** – The twelve-digit account ID of the AWS account that owns the CMK.
- **creation\_date** – Indicates when the CMK was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

- **key\_id** – The globally unique identifier for the CMK.
- **key\_manager** – The manager of the CMK. CMKs in your AWS account are either customer managed or AWS managed.
- **key\_state** – The state of the CMK.
- **origin** – The source of the CMK’s key material. When this value is `AWS_KMS`, AWS KMS created the key material. When this value is `EXTERNAL`, the key material was imported from your existing key management infrastructure or the CMK lacks key material. When this value is `AWS_CLOUDHSM`, the key material was created in the AWS CloudHSM cluster associated with a custom key store.
- **description** – A description of the key.

**Returns** `AwsKmsKeyDetails` object

```
aws_account_id :Optional[NonEmptyString]
creation_date :Optional[Iso8601Timestamp]
description :Optional[NonEmptyString]
key_id :Optional[NonEmptyString]
key_manager :Optional[NonEmptyString]
key_state :Optional[NonEmptyString]
origin :Optional[NonEmptyString]

class asff.generated.AwsLambdaFunctionCode
    Bases: asff.generated.ASFFBaseModel
```



The code for the Lambda function. You can specify either an object in Amazon S3, or upload a deployment package directly.

#### Parameters

- **s3\_bucket** – An Amazon S3 bucket in the same AWS Region as your function. The bucket can be in a different AWS account.
- **s3\_key** – The Amazon S3 key of the deployment package.
- **s3\_object\_version** – For versioned objects, the version of the deployment package object to use.
- **zip\_file** – The base64-encoded contents of the deployment package. AWS SDK and AWS CLI clients handle the encoding for you.

**Returns** `AwsLambdaFunctionCode` object

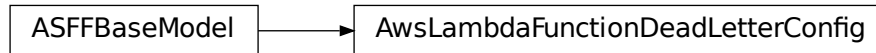
```
s3_bucket :Optional[NonEmptyString]
s3_key :Optional[NonEmptyString]
```



```

s3_object_version :Optional[NonEmptyString]
zip_file :Optional[NonEmptyString]
class asff.generated.AwsLambdaFunctionDeadLetterConfig
  Bases: asff.generated.ASFFBaseModel

```



The dead-letter queue for failed asynchronous invocations.

**Parameters** **target\_arn** – The Amazon Resource Name (ARN) of an Amazon SQS queue or Amazon SNS topic.

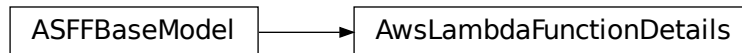
**Returns** `AwsLambdaFunctionDeadLetterConfig` object

```
target_arn :Optional[NonEmptyString]
```

```

class asff.generated.AwsLambdaFunctionDetails
  Bases: asff.generated.ASFFBaseModel

```



Details about a function's configuration.

#### Parameters

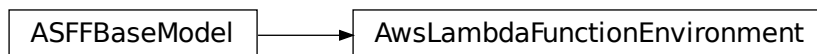
- **code** – An `AwsLambdaFunctionCode` object.
- **code\_sha256** – The SHA256 hash of the function's deployment package.
- **dead\_letter\_config** – The function's dead letter queue.
- **environment** – The function's environment variables.
- **function\_name** – The name of the function.
- **handler** – The function that Lambda calls to begin executing your function.
- **kms\_key\_arn** – The KMS key that's used to encrypt the function's environment variables. This key is only returned if you've configured a customer managed CMK.
- **last\_modified** – Indicates when the function was last updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **layers** – The function's layers.
- **master\_arn** – For `Lambda@Edge` functions, the ARN of the master function.

- **memory\_size** – The memory that’s allocated to the function.
- **revision\_id** – The latest updated revision of the function or alias.
- **role** – The function’s execution role.
- **runtime** – The runtime environment for the Lambda function.
- **timeout** – The amount of time that Lambda allows a function to run before stopping it.
- **tracing\_config** – The function’s AWS X-Ray tracing configuration.
- **vpc\_config** – The function’s networking configuration.
- **version** – The version of the Lambda function.

**Returns** `AwsLambdaFunctionDetails` object

```
code :Optional[AwsLambdaFunctionCode]
code_sha256 :Optional[NonEmptyString]
dead_letter_config :Optional[AwsLambdaFunctionDeadLetterConfig]
environment :Optional[AwsLambdaFunctionEnvironment]
function_name :Optional[NonEmptyString]
handler :Optional[NonEmptyString]
kms_key_arn :Optional[NonEmptyString]
last_modified :Optional[Iso8601Timestamp]
layers :Optional[AwsLambdaFunctionLayerList]
master_arn :Optional[NonEmptyString]
memory_size :Optional[Integer]
revision_id :Optional[NonEmptyString]
role :Optional[NonEmptyString]
runtime :Optional[NonEmptyString]
timeout :Optional[Integer]
tracing_config :Optional[AwsLambdaFunctionTracingConfig]
version :Optional[NonEmptyString]
vpc_config :Optional[AwsLambdaFunctionVpcConfig]

class asff.generated.AwsLambdaFunctionEnvironment
    Bases: asff.generated.ASFFBaseModel
```



A function’s environment variable settings.

**Parameters**

- **variables** – Environment variable key-value pairs.
- **error** – An `AwsLambdaFunctionEnvironmentError` object.

**Returns** `AwsLambdaFunctionEnvironment` object

**error** :Optional[`AwsLambdaFunctionEnvironmentError`]

**variables** :Optional[`FieldMap`]

**class** `asff.generated.AwsLambdaFunctionEnvironmentError`

Bases: `asff.generated.ASFFBaseModel`



Error messages for environment variables that couldn't be applied.

**Parameters**

- **error\_code** – The error code.
- **message** – The error message.

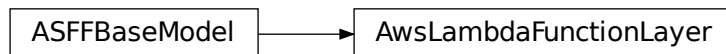
**Returns** `AwsLambdaFunctionEnvironmentError` object

**error\_code** :Optional[`NonEmptyString`]

**message** :Optional[`NonEmptyString`]

**class** `asff.generated.AwsLambdaFunctionLayer`

Bases: `asff.generated.ASFFBaseModel`



An AWS Lambda layer.

**Parameters**

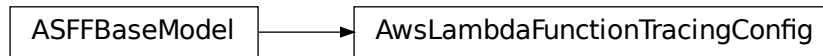
- **arn** – The Amazon Resource Name (ARN) of the function layer.
- **code\_size** – The size of the layer archive in bytes.

**Returns** `AwsLambdaFunctionLayer` object

**arn** :Optional[`NonEmptyString`]

**code\_size** :Optional[`Integer`]

```
class asff.generated.AwsLambdaFunctionTracingConfig
    Bases: asff.generated.ASFFBaseModel
```



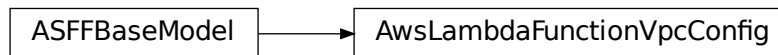
The function's AWS X-Ray tracing configuration.

**Parameters** **mode** – The tracing mode.

**Returns** `AwsLambdaFunctionTracingConfig` object

**mode** : `Optional[NonEmptyString]`

```
class asff.generated.AwsLambdaFunctionVpcConfig
    Bases: asff.generated.ASFFBaseModel
```



The VPC security groups and subnets that are attached to a Lambda function. For more information, see VPC Settings.

**Parameters**

- **security\_group\_ids** – A list of VPC security groups IDs.
- **subnet\_ids** – A list of VPC subnet IDs.
- **vpc\_id** – The ID of the VPC.

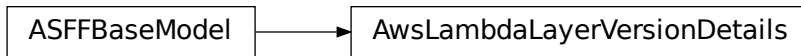
**Returns** `AwsLambdaFunctionVpcConfig` object

**security\_group\_ids** : `Optional[NonEmptyStringList]`

**subnet\_ids** : `Optional[NonEmptyStringList]`

**vpc\_id** : `Optional[NonEmptyString]`

```
class asff.generated.AwsLambdaLayerVersionDetails
    Bases: asff.generated.ASFFBaseModel
```



Details about a Lambda layer version.

#### Parameters

- **version** – The version number.
- **compatible\_runtimes** – The layer’s compatible runtimes. Maximum number of five items. Valid values: nodejs10.x | nodejs12.x | java8 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | dotnetcore1.0 | dotnetcore2.1 | go1.x | ruby2.5 | provided
- **created\_date** – Indicates when the version was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** AwsLambdaLayerVersionDetails object

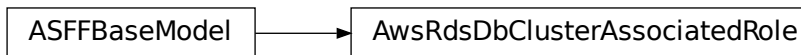
**compatible\_runtimes** :Optional[NonEmptyStringList]

**created\_date** :Optional[Iso8601Timestamp]

**version** :Optional[AwsLambdaLayerVersionNumber]

**class** asff.generated.AwsRdsDbClusterAssociatedRole

Bases: *asff.generated.ASFFBaseModel*



An IAM role that is associated with the Amazon RDS DB cluster.

#### Parameters

- **role\_arn** – The ARN of the IAM role.
- **status** – The status of the association between the IAM role and the DB cluster.

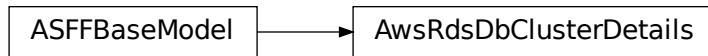
**Returns** AwsRdsDbClusterAssociatedRole object

**role\_arn** :Optional[NonEmptyString]

**status** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsDbClusterDetails

Bases: *asff.generated.ASFFBaseModel*



Information about an Amazon RDS DB cluster.

#### Parameters

- **allocated\_storage** – For all database engines except Aurora, specifies the allocated storage size in gibibytes (GiB).
- **availability\_zones** – A list of Availability Zones (AZs) where instances in the DB cluster can be created.
- **backup\_retention\_period** – The number of days for which automated backups are retained.
- **database\_name** – The name of the database.
- **status** – The current status of this DB cluster.
- **endpoint** – The connection endpoint for the primary instance of the DB cluster.
- **reader\_endpoint** – The reader endpoint for the DB cluster.
- **custom\_endpoints** – A list of custom endpoints for the DB cluster.
- **multi\_az** – Whether the DB cluster has instances in multiple Availability Zones.
- **engine** – The name of the database engine to use for this DB cluster.
- **engine\_version** – The version number of the database engine to use.
- **port** – The port number on which the DB instances in the DB cluster accept connections.
- **master\_username** – The name of the master user for the DB cluster.
- **preferred\_backup\_window** – The range of time each day when automated backups are created, if automated backups are enabled. Uses the format HH:MM-HH:MM. For example, 04:52-05:22.
- **preferred\_maintenance\_window** – The weekly time range during which system maintenance can occur, in Universal Coordinated Time (UTC). Uses the format <day>:HH:MM-<day>:HH:MM. For the day values, use mon|tue|wed|thu|fri|sat|sun. For example, sun:09:32-sun:10:02.
- **read\_replica\_identifiers** – The identifiers of the read replicas that are associated with this DB cluster.
- **vpc\_security\_groups** – A list of VPC security groups that the DB cluster belongs to.
- **hosted\_zone\_id** – Specifies the identifier that Amazon Route 53 assigns when you create a hosted zone.
- **storage\_encrypted** – Whether the DB cluster is encrypted.
- **kms\_key\_id** – The ARN of the AWS KMS master key that is used to encrypt the database instances in the DB cluster.

- **db\_cluster\_resource\_id** – The identifier of the DB cluster. The identifier must be unique within each AWS Region and is immutable.
- **associated\_roles** – A list of the IAM roles that are associated with the DB cluster.
- **cluster\_create\_time** – Indicates when the DB cluster was created, in Universal Coordinated Time (UTC). Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **enabled\_cloud\_watch\_logs\_exports** – A list of log types that this DB cluster is configured to export to CloudWatch Logs.
- **engine\_mode** – The database engine mode of the DB cluster.
- **deletion\_protection** – Whether the DB cluster has deletion protection enabled.
- **http\_endpoint\_enabled** – Whether the HTTP endpoint for an Aurora Serverless DB cluster is enabled.
- **activity\_stream\_status** – The status of the database activity stream.
- **copy\_tags\_to\_snapshot** – Whether tags are copied from the DB cluster to snapshots of the DB cluster.
- **cross\_account\_clone** – Whether the DB cluster is a clone of a DB cluster owned by a different AWS account.
- **domain\_memberships** – The Active Directory domain membership records that are associated with the DB cluster.
- **db\_cluster\_parameter\_group** – The name of the DB cluster parameter group for the DB cluster.
- **db\_subnet\_group** – The subnet group that is associated with the DB cluster, including the name, description, and subnets in the subnet group.
- **db\_cluster\_option\_group\_memberships** – The list of option group memberships for this DB cluster.
- **db\_cluster\_identifier** – The DB cluster identifier that the user assigned to the cluster. This identifier is the unique key that identifies a DB cluster.
- **db\_cluster\_members** – The list of instances that make up the DB cluster.
- **iam\_database\_authentication\_enabled** – Whether the mapping of IAM accounts to database accounts is enabled.

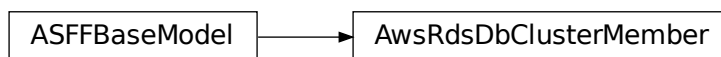
**Returns** AwsRdsDbClusterDetails object

```

activity_stream_status :Optional[NonEmptyString]
allocated_storage      :Optional[Integer]
associated_roles       :Optional[AwsRdsDbClusterAssociatedRoles]
availability_zones     :Optional[StringList]
backup_retention_period :Optional[Integer]
cluster_create_time    :Optional[Iso8601Timestamp]
copy_tags_to_snapshot  :Optional[Boolean]
cross_account_clone    :Optional[Boolean]
custom_endpoints       :Optional[StringList]

```

```
database_name :Optional[NonEmptyString]
db_cluster_identifier :Optional[NonEmptyString]
db_cluster_members :Optional[AwsRdsDbClusterMembers]
db_cluster_option_group_memberships :Optional[AwsRdsDbClusterOptionGroupMemberships]
db_cluster_parameter_group :Optional[NonEmptyString]
db_cluster_resource_id :Optional[NonEmptyString]
db_subnet_group :Optional[NonEmptyString]
deletion_protection :Optional[Boolean]
domain_memberships :Optional[AwsRdsDbDomainMemberships]
enabled_cloud_watch_logs_exports :Optional[StringList]
endpoint :Optional[NonEmptyString]
engine :Optional[NonEmptyString]
engine_mode :Optional[NonEmptyString]
engine_version :Optional[NonEmptyString]
hosted_zone_id :Optional[NonEmptyString]
http_endpoint_enabled :Optional[Boolean]
iam_database_authentication_enabled :Optional[Boolean]
kms_key_id :Optional[NonEmptyString]
master_username :Optional[NonEmptyString]
multi_az :Optional[Boolean]
port :Optional[Integer]
preferred_backup_window :Optional[NonEmptyString]
preferred_maintenance_window :Optional[NonEmptyString]
read_replica_identifiers :Optional[StringList]
reader_endpoint :Optional[NonEmptyString]
status :Optional[NonEmptyString]
storage_encrypted :Optional[Boolean]
vpc_security_groups :Optional[AwsRdsDbInstanceVpcSecurityGroups]
class asff.generated.AwsRdsDbClusterMember
  Bases: asff.generated.ASFFBaseModel
```





Information about an instance in the DB cluster.

#### Parameters

- **is\_cluster\_writer** – Whether the cluster member is the primary instance for the DB cluster.
- **promotion\_tier** – Specifies the order in which an Aurora replica is promoted to the primary instance when the existing primary instance fails.
- **db\_instance\_identifier** – The instance identifier for this member of the DB cluster.
- **db\_cluster\_parameter\_group\_status** – The status of the DB cluster parameter group for this member of the DB cluster.

**Returns** AwsRdsDbClusterMember object

**db\_cluster\_parameter\_group\_status** :Optional[NonEmptyString]

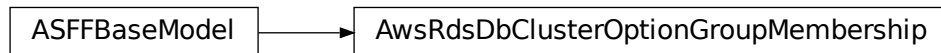
**db\_instance\_identifier** :Optional[NonEmptyString]

**is\_cluster\_writer** :Optional[Boolean]

**promotion\_tier** :Optional[Integer]

**class** asff.generated.AwsRdsDbClusterOptionGroupMembership

Bases: *asff.generated.ASFFBaseModel*



Information about an option group membership for a DB cluster.

#### Parameters

- **db\_cluster\_option\_group\_name** – The name of the DB cluster option group.
- **status** – The status of the DB cluster option group.

**Returns** AwsRdsDbClusterOptionGroupMembership object

**db\_cluster\_option\_group\_name** :Optional[NonEmptyString]

**status** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsDbClusterSnapshotDetails

Bases: *asff.generated.ASFFBaseModel*



Information about an Amazon RDS DB cluster snapshot.

### Parameters

- **availability\_zones** – A list of Availability Zones where instances in the DB cluster can be created.
- **snapshot\_create\_time** – Indicates when the snapshot was taken. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **engine** –
- **allocated\_storage** – Specifies the allocated storage size in gibibytes (GiB).
- **status** – The status of this DB cluster snapshot.
- **port** – The port number on which the DB instances in the DB cluster accept connections.
- **vpc\_id** – The VPC ID that is associated with the DB cluster snapshot.
- **cluster\_create\_time** – Indicates when the DB cluster was created, in Universal Coordinated Time (UTC). Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **master\_username** – The name of the master user for the DB cluster.
- **engine\_version** – The version of the database engine to use.
- **license\_model** – The license model information for this DB cluster snapshot.
- **snapshot\_type** – The type of DB cluster snapshot.
- **percent\_progress** – Specifies the percentage of the estimated data that has been transferred.
- **storage\_encrypted** – Whether the DB cluster is encrypted.
- **kms\_key\_id** – The ARN of the AWS KMS master key that is used to encrypt the database instances in the DB cluster.
- **db\_cluster\_identifier** – The DB cluster identifier.
- **db\_cluster\_snapshot\_identifier** – The identifier of the DB cluster snapshot.
- **iam\_database\_authentication\_enabled** – Whether mapping of IAM accounts to database accounts is enabled.

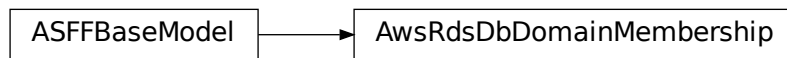
**Returns** AwsRdsDbClusterSnapshotDetails object

```
allocated_storage :Optional[Integer]
availability_zones :Optional[StringList]
cluster_create_time :Optional[Iso8601Timestamp]
db_cluster_identifier :Optional[NonEmptyString]
db_cluster_snapshot_identifier :Optional[NonEmptyString]
engine :Optional[NonEmptyString]
engine_version :Optional[NonEmptyString]
iam_database_authentication_enabled :Optional[Boolean]
kms_key_id :Optional[NonEmptyString]
license_model :Optional[NonEmptyString]
```

```

    master_username :Optional[NonEmptyString]
    percent_progress :Optional[Integer]
    port :Optional[Integer]
    snapshot_create_time :Optional[Iso8601Timestamp]
    snapshot_type :Optional[NonEmptyString]
    status :Optional[NonEmptyString]
    storage_encrypted :Optional[Boolean]
    vpc_id :Optional[NonEmptyString]
class asff.generated.AwsRdsDbDomainMembership
    Bases: asff.generated.ASFFBaseModel

```



Information about an Active Directory domain membership record associated with the DB instance.

#### Parameters

- **domain** – The identifier of the Active Directory domain.
- **status** – The status of the Active Directory Domain membership for the DB instance.
- **fqdn** – The fully qualified domain name of the Active Directory domain.
- **iam\_role\_name** – The name of the IAM role to use when making API calls to the Directory Service.

**Returns** AwsRdsDbDomainMembership object

```

domain :Optional[NonEmptyString]
fqdn :Optional[NonEmptyString]
iam_role_name :Optional[NonEmptyString]
status :Optional[NonEmptyString]
class asff.generated.AwsRdsDbInstanceAssociatedRole
    Bases: asff.generated.ASFFBaseModel

```



An AWS Identity and Access Management (IAM) role associated with the DB instance.

**Parameters**

- **role\_arn** – The Amazon Resource Name (ARN) of the IAM role that is associated with the DB instance.
- **feature\_name** – The name of the feature associated with the IAM role.
- **status** – Describes the state of the association between the IAM role and the DB instance. The Status property returns one of the following values: ACTIVE - The IAM role ARN is associated with the DB instance and can be used to access other AWS services on your behalf. PENDING - The IAM role ARN is being associated with the DB instance. INVALID - The IAM role ARN is associated with the DB instance. But the DB instance is unable to assume the IAM role in order to access other AWS services on your behalf.

**Returns** AwsRdsDbInstanceAssociatedRole object

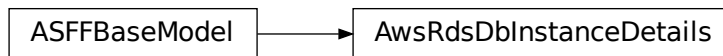
**feature\_name** :Optional[NonEmptyString]

**role\_arn** :Optional[NonEmptyString]

**status** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsDbInstanceDetails

Bases: *asff.generated.ASFFBaseModel*



Contains the details of an Amazon RDS DB instance.

**Parameters**

- **associated\_roles** – The AWS Identity and Access Management (IAM) roles associated with the DB instance.
- **ca\_certificate\_identifier** – The identifier of the CA certificate for this DB instance.
- **db\_cluster\_identifier** – If the DB instance is a member of a DB cluster, contains the name of the DB cluster that the DB instance is a member of.
- **db\_instance\_identifier** – Contains a user-supplied database identifier. This identifier is the unique key that identifies a DB instance.
- **db\_instance\_class** – Contains the name of the compute and memory capacity class of the DB instance.
- **db\_instance\_port** – Specifies the port that the DB instance listens on. If the DB instance is part of a DB cluster, this can be a different port than the DB cluster port.
- **dbi\_resource\_id** – The AWS Region-unique, immutable identifier for the DB instance. This identifier is found in AWS CloudTrail log entries whenever the AWS KMS key for the DB instance is accessed.
- **db\_name** – The meaning of this parameter differs according to the database engine you use. MySQL, MariaDB, SQL Server, PostgreSQL Contains the name of the initial database of this instance that was provided at create time, if one was specified when the DB instance

was created. This same name is returned for the life of the DB instance. Oracle Contains the Oracle System ID (SID) of the created DB instance. Not shown when the returned parameters do not apply to an Oracle DB instance.

- **deletion\_protection** – Indicates whether the DB instance has deletion protection enabled. When deletion protection is enabled, the database cannot be deleted.
- **endpoint** – Specifies the connection endpoint.
- **engine** – Provides the name of the database engine to use for this DB instance.
- **engine\_version** – Indicates the database engine version.
- **iam\_database\_authentication\_enabled** – True if mapping of AWS Identity and Access Management (IAM) accounts to database accounts is enabled, and otherwise false. IAM database authentication can be enabled for the following database engines. For MySQL 5.6, minor version 5.6.34 or higher For MySQL 5.7, minor version 5.7.16 or higher Aurora 5.6 or higher
- **instance\_create\_time** – Indicates when the DB instance was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **kms\_key\_id** – If StorageEncrypted is true, the AWS KMS key identifier for the encrypted DB instance.
- **publicly\_accessible** – Specifies the accessibility options for the DB instance. A value of true specifies an Internet-facing instance with a publicly resolvable DNS name, which resolves to a public IP address. A value of false specifies an internal instance with a DNS name that resolves to a private IP address.
- **storage\_encrypted** – Specifies whether the DB instance is encrypted.
- **tde\_credential\_arn** – The ARN from the key store with which the instance is associated for TDE encryption.
- **vpc\_security\_groups** – A list of VPC security groups that the DB instance belongs to.
- **multi\_az** – Whether the DB instance is a multiple Availability Zone deployment.
- **enhanced\_monitoring\_resource\_arn** – The ARN of the CloudWatch Logs log stream that receives the enhanced monitoring metrics data for the DB instance.
- **db\_instance\_status** – The current status of the DB instance.
- **master\_username** – The master user name of the DB instance.
- **allocated\_storage** – The amount of storage (in gigabytes) to initially allocate for the DB instance.
- **preferred\_backup\_window** – The range of time each day when automated backups are created, if automated backups are enabled. Uses the format HH:MM-HH:MM. For example, 04:52-05:22.
- **backup\_retention\_period** – The number of days for which to retain automated backups.
- **db\_security\_groups** – A list of the DB security groups to assign to the DB instance.
- **db\_parameter\_groups** – A list of the DB parameter groups to assign to the DB instance.
- **availability\_zone** – The Availability Zone where the DB instance will be created.

- **db\_subnet\_group** – Information about the subnet group that is associated with the DB instance.
- **preferred\_maintenance\_window** – The weekly time range during which system maintenance can occur, in Universal Coordinated Time (UTC). Uses the format <day>:HH:MM-<day>:HH:MM. For the day values, use mon|tue|wed|thu|fri|sat|sun. For example, sun:09:32-sun:10:02.
- **pending\_modified\_values** – Changes to the DB instance that are currently pending.
- **latest\_restorable\_time** – Specifies the latest time to which a database can be restored with point-in-time restore. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **auto\_minor\_version\_upgrade** – Indicates whether minor version patches are applied automatically.
- **read\_replica\_source\_db\_instance\_identifier** – If this DB instance is a read replica, contains the identifier of the source DB instance.
- **read\_replica\_db\_instance\_identifiers** – List of identifiers of the read replicas associated with this DB instance.
- **read\_replica\_db\_cluster\_identifiers** – List of identifiers of Aurora DB clusters to which the RDS DB instance is replicated as a read replica.
- **license\_model** – License model information for this DB instance.
- **iops** – Specifies the provisioned IOPS (I/O operations per second) for this DB instance.
- **option\_group\_memberships** – The list of option group memberships for this DB instance.
- **character\_set\_name** – The name of the character set that this DB instance is associated with.
- **secondary\_availability\_zone** – For a DB instance with multi-Availability Zone support, the name of the secondary Availability Zone.
- **status\_infos** – The status of a read replica. If the instance isn't a read replica, this is empty.
- **storage\_type** – The storage type for the DB instance.
- **domain\_memberships** – The Active Directory domain membership records associated with the DB instance.
- **copy\_tags\_to\_snapshot** – Whether to copy resource tags to snapshots of the DB instance.
- **monitoring\_interval** – The interval, in seconds, between points when enhanced monitoring metrics are collected for the DB instance.
- **monitoring\_role\_arn** – The ARN for the IAM role that permits Amazon RDS to send enhanced monitoring metrics to CloudWatch Logs.
- **promotion\_tier** – The order in which to promote an Aurora replica to the primary instance after a failure of the existing primary instance.
- **timezone** – The time zone of the DB instance.
- **performance\_insights\_enabled** – Indicates whether Performance Insights is enabled for the DB instance.

- **performance\_insights\_kms\_key\_id** – The identifier of the AWS KMS key used to encrypt the Performance Insights data.
- **performance\_insights\_retention\_period** – The number of days to retain Performance Insights data.
- **enabled\_cloud\_watch\_logs\_exports** – A list of log types that this DB instance is configured to export to CloudWatch Logs.
- **processor\_features** – The number of CPU cores and the number of threads per core for the DB instance class of the DB instance.
- **max\_allocated\_storage** – The upper limit to which Amazon RDS can automatically scale the storage of the DB instance.

**Returns** AwsRdsDbInstanceDetails object

```

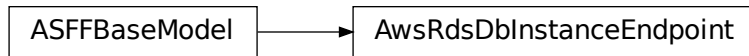
allocated_storage :Optional[Integer]
associated_roles :Optional[AwsRdsDbInstanceAssociatedRoles]
auto_minor_version_upgrade :Optional[Boolean]
availability_zone :Optional[NonEmptyString]
backup_retention_period :Optional[Integer]
ca_certificate_identifier :Optional[NonEmptyString]
character_set_name :Optional[NonEmptyString]
copy_tags_to_snapshot :Optional[Boolean]
db_cluster_identifier :Optional[NonEmptyString]
db_instance_class :Optional[NonEmptyString]
db_instance_identifier :Optional[NonEmptyString]
db_instance_port :Optional[Integer]
db_instance_status :Optional[NonEmptyString]
db_name :Optional[NonEmptyString]
db_parameter_groups :Optional[AwsRdsDbParameterGroups]
db_security_groups :Optional[StringList]
db_subnet_group :Optional[AwsRdsDbSubnetGroup]
dbi_resource_id :Optional[NonEmptyString]
deletion_protection :Optional[Boolean]
domain_memberships :Optional[AwsRdsDbDomainMemberships]
enabled_cloud_watch_logs_exports :Optional[StringList]
endpoint :Optional[AwsRdsDbInstanceEndpoint]
engine :Optional[NonEmptyString]
engine_version :Optional[NonEmptyString]
enhanced_monitoring_resource_arn :Optional[NonEmptyString]
iam_database_authentication_enabled :Optional[Boolean]
instance_create_time :Optional[Iso8601Timestamp]

```

```
iops :Optional[Integer]
kms_key_id :Optional[NonEmptyString]
latest_restorable_time :Optional[Iso8601Timestamp]
license_model :Optional[NonEmptyString]
listener_endpoint :Optional[AwsRdsDbInstanceEndpoint]
master_username :Optional[NonEmptyString]
max_allocated_storage :Optional[Integer]
monitoring_interval :Optional[Integer]
monitoring_role_arn :Optional[NonEmptyString]
multi_az :Optional[Boolean]
option_group_memberships :Optional[AwsRdsDbOptionGroupMemberships]
pending_modified_values :Optional[AwsRdsDbPendingModifiedValues]
performance_insights_enabled :Optional[Boolean]
performance_insights_kms_key_id :Optional[NonEmptyString]
performance_insights_retention_period :Optional[Integer]
preferred_backup_window :Optional[NonEmptyString]
preferred_maintenance_window :Optional[NonEmptyString]
processor_features :Optional[AwsRdsDbProcessorFeatures]
promotion_tier :Optional[Integer]
publicly_accessible :Optional[Boolean]
read_replica_db_cluster_identifiers :Optional[StringList]
read_replica_db_instance_identifiers :Optional[StringList]
read_replica_source_db_instance_identifier :Optional[NonEmptyString]
secondary_availability_zone :Optional[NonEmptyString]
status_infos :Optional[AwsRdsDbStatusInfos]
storage_encrypted :Optional[Boolean]
storage_type :Optional[NonEmptyString]
tde_credential_arn :Optional[NonEmptyString]
timezone :Optional[NonEmptyString]
vpc_security_groups :Optional[AwsRdsDbInstanceVpcSecurityGroups]

class asff.generated.AwsRdsDbInstanceEndpoint
    Bases: asff.generated.ASFFBaseModel
```





Specifies the connection endpoint.

#### Parameters

- **address** – Specifies the DNS address of the DB instance.
- **port** – Specifies the port that the database engine is listening on.
- **hosted\_zone\_id** – Specifies the ID that Amazon Route 53 assigns when you create a hosted zone.

**Returns** AwsRdsDbInstanceEndpoint object

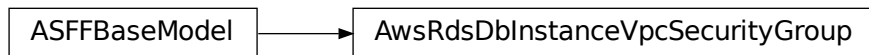
**address** :Optional[NonEmptyString]

**hosted\_zone\_id** :Optional[NonEmptyString]

**port** :Optional[Integer]

**class** asff.generated.AwsRdsDbInstanceVpcSecurityGroup

Bases: *asff.generated.ASFFBaseModel*



A VPC security groups that the DB instance belongs to.

#### Parameters

- **vpc\_security\_group\_id** – The name of the VPC security group.
- **status** – The status of the VPC security group.

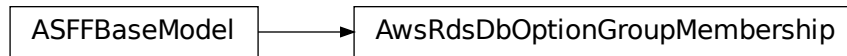
**Returns** AwsRdsDbInstanceVpcSecurityGroup object

**status** :Optional[NonEmptyString]

**vpc\_security\_group\_id** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsDbOptionGroupMembership

Bases: *asff.generated.ASFFBaseModel*

**Parameters**

- `option_group_name` –
- `status` –

**Returns** `AwsRdsDbOptionGroupMembership` object

`option_group_name` : `Optional[NonEmptyString]`

`status` : `Optional[NonEmptyString]`

**class** `asff.generated.AwsRdsDbParameterGroup`  
Bases: `asff.generated.ASFFBaseModel`

**Parameters**

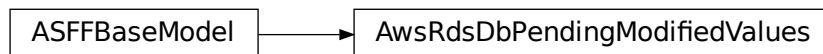
- `db_parameter_group_name` –
- `parameter_apply_status` –

**Returns** `AwsRdsDbParameterGroup` object

`db_parameter_group_name` : `Optional[NonEmptyString]`

`parameter_apply_status` : `Optional[NonEmptyString]`

**class** `asff.generated.AwsRdsDbPendingModifiedValues`  
Bases: `asff.generated.ASFFBaseModel`

**Parameters**

- `db_instance_class` –
- `allocated_storage` –

- `master_user_password` -
- `port` -
- `backup_retention_period` -
- `multi_az` -
- `engine_version` -
- `license_model` -
- `iops` -
- `db_instance_identifier` -
- `storage_type` -
- `ca_certificate_identifier` -
- `db_subnet_group_name` -
- `pending_cloud_watch_logs_exports` -
- `processor_features` -

**Returns** `AwsRdsDbPendingModifiedValues` object

`allocated_storage` :Optional[Integer]

`backup_retention_period` :Optional[Integer]

`ca_certificate_identifier` :Optional[NonEmptyString]

`db_instance_class` :Optional[NonEmptyString]

`db_instance_identifier` :Optional[NonEmptyString]

`db_subnet_group_name` :Optional[NonEmptyString]

`engine_version` :Optional[NonEmptyString]

`iops` :Optional[Integer]

`license_model` :Optional[NonEmptyString]

`master_user_password` :Optional[NonEmptyString]

`multi_az` :Optional[Boolean]

`pending_cloud_watch_logs_exports` :Optional[AwsRdsPendingCloudWatchLogsExports]

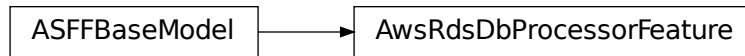
`port` :Optional[Integer]

`processor_features` :Optional[AwsRdsDbProcessorFeatures]

`storage_type` :Optional[NonEmptyString]

**class** `asff.generated.AwsRdsDbProcessorFeature`

Bases: `asff.generated.ASFFBaseModel`

**Parameters**

- **name** –
- **value** –

**Returns** AwsRdsDbProcessorFeature object

**name** :Optional[NonEmptyString]

**value** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsDbSnapshotDetails  
Bases: *asff.generated.ASFFBaseModel*

**Parameters**

- **db\_snapshot\_identifier** –
- **db\_instance\_identifier** –
- **snapshot\_create\_time** –
- **engine** –
- **allocated\_storage** –
- **status** –
- **port** –
- **availability\_zone** –
- **vpc\_id** –
- **instance\_create\_time** –
- **master\_username** –
- **engine\_version** –
- **license\_model** –
- **snapshot\_type** –
- **iops** –

- `option_group_name` –
- `percent_progress` –
- `source_region` –
- `source_db_snapshot_identifier` –
- `storage_type` –
- `tde_credential_arn` –
- `encrypted` –
- `kms_key_id` –
- `timezone` –
- `iam_database_authentication_enabled` –
- `processor_features` –
- `dbi_resource_id` –

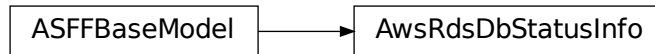
**Returns** `AwsRdsDbSnapshotDetails` object

```

allocated_storage :Optional[Integer]
availability_zone :Optional[NonEmptyString]
db_instance_identifier :Optional[NonEmptyString]
db_snapshot_identifier :Optional[NonEmptyString]
dbi_resource_id :Optional[NonEmptyString]
encrypted :Optional[Boolean]
engine :Optional[NonEmptyString]
engine_version :Optional[NonEmptyString]
iam_database_authentication_enabled :Optional[Boolean]
instance_create_time :Optional[Iso8601Timestamp]
iops :Optional[Integer]
kms_key_id :Optional[NonEmptyString]
license_model :Optional[NonEmptyString]
master_username :Optional[NonEmptyString]
option_group_name :Optional[NonEmptyString]
percent_progress :Optional[Integer]
port :Optional[Integer]
processor_features :Optional[AwsRdsDbProcessorFeatures]
snapshot_create_time :Optional[Iso8601Timestamp]
snapshot_type :Optional[NonEmptyString]
source_db_snapshot_identifier :Optional[NonEmptyString]
source_region :Optional[NonEmptyString]
status :Optional[NonEmptyString]

```

```
storage_type :Optional[NonEmptyString]
tde_credential_arn :Optional[NonEmptyString]
timezone :Optional[NonEmptyString]
vpc_id :Optional[NonEmptyString]
class asff.generated.AwsRdsDbStatusInfo
  Bases: asff.generated.ASFFBaseModel
```



Information about the status of a read replica.

#### Parameters

- **status\_type** – The type of status. For a read replica, the status type is read replication.
- **normal** – Whether the read replica instance is operating normally.
- **status** – The status of the read replica instance.
- **message** – If the read replica is currently in an error state, provides the error details.

**Returns** AwsRdsDbStatusInfo object

```
message :Optional[NonEmptyString]
normal :Optional[Boolean]
status :Optional[NonEmptyString]
status_type :Optional[NonEmptyString]
class asff.generated.AwsRdsDbSubnetGroup
  Bases: asff.generated.ASFFBaseModel
```



Information about the subnet group for the database instance.

#### Parameters

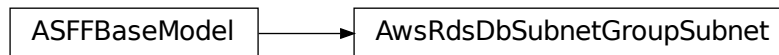
- **db\_subnet\_group\_name** – The name of the subnet group.
- **db\_subnet\_group\_description** – The description of the subnet group.
- **vpc\_id** – The VPC ID of the subnet group.
- **subnet\_group\_status** – The status of the subnet group.

- **subnets** – A list of subnets in the subnet group.
- **db\_subnet\_group\_arn** – The ARN of the subnet group.

**Returns** AwsRdsDbSubnetGroup object

```
db_subnet_group_arn :Optional[NonEmptyString]
db_subnet_group_description :Optional[NonEmptyString]
db_subnet_group_name :Optional[NonEmptyString]
subnet_group_status :Optional[NonEmptyString]
subnets :Optional[AwsRdsDbSubnetGroupSubnets]
vpc_id :Optional[NonEmptyString]
```

```
class asff.generated.AwsRdsDbSubnetGroupSubnet
    Bases: asff.generated.ASFFBaseModel
```



Information about a subnet in a subnet group.

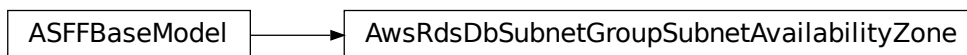
#### Parameters

- **subnet\_identifier** – The identifier of a subnet in the subnet group.
- **subnet\_availability\_zone** – Information about the Availability Zone for a subnet in the subnet group.
- **subnet\_status** – The status of a subnet in the subnet group.

**Returns** AwsRdsDbSubnetGroupSubnet object

```
subnet_availability_zone :Optional[AwsRdsDbSubnetGroupSubnetAvailabilityZone]
subnet_identifier :Optional[NonEmptyString]
subnet_status :Optional[NonEmptyString]
```

```
class asff.generated.AwsRdsDbSubnetGroupSubnetAvailabilityZone
    Bases: asff.generated.ASFFBaseModel
```



An Availability Zone for a subnet in a subnet group.

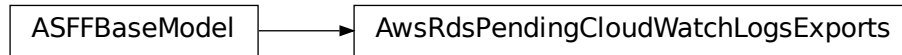
**Parameters** **name** – The name of the Availability Zone for a subnet in the subnet group.

**Returns** AwsRdsDbSubnetGroupSubnetAvailabilityZone object

**name** :Optional[NonEmptyString]

**class** asff.generated.AwsRdsPendingCloudWatchLogsExports

Bases: *asff.generated.ASFFBaseModel*



Identifies the log types to enable and disable.

**Parameters**

- **log\_types\_to\_enable** – A list of log types that are being enabled.
- **log\_types\_to\_disable** – A list of log types that are being disabled.

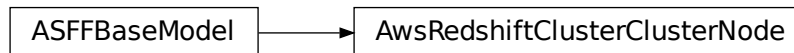
**Returns** AwsRdsPendingCloudWatchLogsExports object

**log\_types\_to\_disable** :Optional[StringList]

**log\_types\_to\_enable** :Optional[StringList]

**class** asff.generated.AwsRedshiftClusterClusterNode

Bases: *asff.generated.ASFFBaseModel*



A node in an Amazon Redshift cluster.

**Parameters**

- **node\_role** – The role of the node. A node might be a leader node or a compute node.
- **private\_ip\_address** – The private IP address of the node.
- **public\_ip\_address** – The public IP address of the node.

**Returns** AwsRedshiftClusterClusterNode object

**node\_role** :Optional[NonEmptyString]

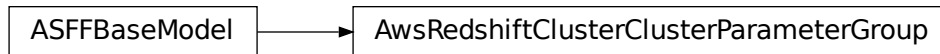
**private\_ip\_address** :Optional[NonEmptyString]

**public\_ip\_address** :Optional[NonEmptyString]

**class** asff.generated.AwsRedshiftClusterClusterParameterGroup

Bases: *asff.generated.ASFFBaseModel*





A cluster parameter group that is associated with an Amazon Redshift cluster.

#### Parameters

- **cluster\_parameter\_status\_list** – The list of parameter statuses.
- **parameter\_apply\_status** – The status of updates to the parameters.
- **parameter\_group\_name** – The name of the parameter group.

**Returns** AwsRedshiftClusterClusterParameterGroup object

**cluster\_parameter\_status\_list** :Optional[AwsRedshiftClusterClusterParameterStatusList]

**parameter\_apply\_status** :Optional[NonEmptyString]

**parameter\_group\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsRedshiftClusterClusterParameterStatus

Bases: *asff.generated.ASFFBaseModel*



The status of a parameter in a cluster parameter group for an Amazon Redshift cluster.

#### Parameters

- **parameter\_name** – The name of the parameter.
- **parameter\_apply\_status** – The status of the parameter. Indicates whether the parameter is in sync with the database, waiting for a cluster reboot, or encountered an error when it was applied. Valid values: in-sync | pending-reboot | applying | invalid-parameter | apply-deferred | apply-error | unknown-error
- **parameter\_apply\_error\_description** – The error that prevented the parameter from being applied to the database.

**Returns** AwsRedshiftClusterClusterParameterStatus object

**parameter\_apply\_error\_description** :Optional[NonEmptyString]

**parameter\_apply\_status** :Optional[NonEmptyString]

**parameter\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsRedshiftClusterClusterSecurityGroup

Bases: *asff.generated.ASFFBaseModel*



A security group that is associated with the cluster.

**Parameters**

- **cluster\_security\_group\_name** – The name of the cluster security group.
- **status** – The status of the cluster security group.

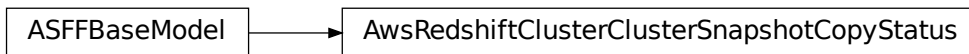
**Returns** AwsRedshiftClusterClusterSecurityGroup object

**cluster\_security\_group\_name** :Optional[NonEmptyString]

**status** :Optional[NonEmptyString]

**class** asff.generated.AwsRedshiftClusterClusterSnapshotCopyStatus

Bases: *asff.generated.ASFFBaseModel*



Information about a cross-Region snapshot copy.

**Parameters**

- **destination\_region** – The destination Region that snapshots are automatically copied to when cross-Region snapshot copy is enabled.
- **manual\_snapshot\_retention\_period** – The number of days that manual snapshots are retained in the destination region after they are copied from a source region. If the value is -1, then the manual snapshot is retained indefinitely. Valid values: Either -1 or an integer between 1 and 3,653
- **retention\_period** – The number of days to retain automated snapshots in the destination Region after they are copied from a source Region.
- **snapshot\_copy\_grant\_name** – The name of the snapshot copy grant.

**Returns** AwsRedshiftClusterClusterSnapshotCopyStatus object

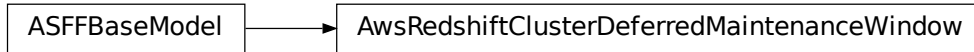
**destination\_region** :Optional[NonEmptyString]

**manual\_snapshot\_retention\_period** :Optional[Integer]

**retention\_period** :Optional[Integer]

**snapshot\_copy\_grant\_name** :Optional[NonEmptyString]

```
class asff.generated.AwsRedshiftClusterDeferredMaintenanceWindow
    Bases: asff.generated.ASFFBaseModel
```



A time windows during which maintenance was deferred for an Amazon Redshift cluster.

#### Parameters

- **defer\_maintenance\_end\_time** – The end of the time window for which maintenance was deferred. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **defer\_maintenance\_identifier** – The identifier of the maintenance window.
- **defer\_maintenance\_start\_time** – The start of the time window for which maintenance was deferred. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

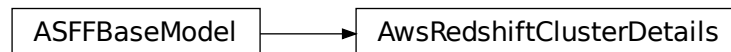
**Returns** `AwsRedshiftClusterDeferredMaintenanceWindow` object

**defer\_maintenance\_end\_time** :Optional[NonEmptyString]

**defer\_maintenance\_identifier** :Optional[NonEmptyString]

**defer\_maintenance\_start\_time** :Optional[NonEmptyString]

```
class asff.generated.AwsRedshiftClusterDetails
    Bases: asff.generated.ASFFBaseModel
```



Details about an Amazon Redshift cluster.

#### Parameters

- **allow\_version\_upgrade** – Indicates whether major version upgrades are applied automatically to the cluster during the maintenance window.
- **automated\_snapshot\_retention\_period** – The number of days that automatic cluster snapshots are retained.
- **availability\_zone** – The name of the Availability Zone in which the cluster is located.

- **cluster\_availability\_status** – The availability status of the cluster for queries. Possible values are the following: Available - The cluster is available for queries. Unavailable - The cluster is not available for queries. Maintenance - The cluster is intermittently available for queries due to maintenance activities. Modifying - The cluster is intermittently available for queries due to changes that modify the cluster. Failed - The cluster failed and is not available for queries.
- **cluster\_create\_time** – Indicates when the cluster was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **cluster\_identifier** – The unique identifier of the cluster.
- **cluster\_nodes** – The nodes in the cluster.
- **cluster\_parameter\_groups** – The list of cluster parameter groups that are associated with this cluster.
- **cluster\_public\_key** – The public key for the cluster.
- **cluster\_revision\_number** – The specific revision number of the database in the cluster.
- **cluster\_security\_groups** – A list of cluster security groups that are associated with the cluster.
- **cluster\_snapshot\_copy\_status** – Information about the destination Region and retention period for the cross-Region snapshot copy.
- **cluster\_status** – The current status of the cluster. Valid values: available | available, prep-for-resize | available, resize-cleanup | cancelling-resize | creating | deleting | final-snapshot | hardware-failure | incompatible-hsm | incompatible-network | incompatible-parameters | incompatible-restore | modifying | paused | rebooting | renaming | resizing | rotating-keys | storage-full | updating-hsm
- **cluster\_subnet\_group\_name** – The name of the subnet group that is associated with the cluster. This parameter is valid only when the cluster is in a VPC.
- **cluster\_version** – The version ID of the Amazon Redshift engine that runs on the cluster.
- **db\_name** – The name of the initial database that was created when the cluster was created. The same name is returned for the life of the cluster. If an initial database is not specified, a database named devdev is created by default.
- **deferred\_maintenance\_windows** – List of time windows during which maintenance was deferred.
- **elastic\_ip\_status** – Information about the status of the Elastic IP (EIP) address.
- **elastic\_resize\_number\_of\_node\_options** – The number of nodes that you can use the elastic resize method to resize the cluster to.
- **encrypted** – Indicates whether the data in the cluster is encrypted at rest.
- **endpoint** – The connection endpoint.
- **enhanced\_vpc\_routing** – Indicates whether to create the cluster with enhanced VPC routing enabled.
- **expected\_next\_snapshot\_schedule\_time** – Indicates when the next snapshot is expected to be taken. The cluster must have a valid snapshot schedule and have backups

enabled. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

- **expected\_next\_snapshot\_schedule\_time\_status** – The status of the next expected snapshot. Valid values: OnTrack | Pending
- **hsm\_status** – Information about whether the Amazon Redshift cluster finished applying any changes to hardware security module (HSM) settings that were specified in a modify cluster command.
- **iam\_roles** – A list of IAM roles that the cluster can use to access other AWS services.
- **kms\_key\_id** – The identifier of the AWS KMS encryption key that is used to encrypt data in the cluster.
- **maintenance\_track\_name** – The name of the maintenance track for the cluster.
- **manual\_snapshot\_retention\_period** – The default number of days to retain a manual snapshot. If the value is -1, the snapshot is retained indefinitely. This setting doesn't change the retention period of existing snapshots. Valid values: Either -1 or an integer between 1 and 3,653
- **master\_username** – The master user name for the cluster. This name is used to connect to the database that is specified in as the value of DBName.
- **next\_maintenance\_window\_start\_time** – Indicates the start of the next maintenance window. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **node\_type** – The node type for the nodes in the cluster.
- **number\_of\_nodes** – The number of compute nodes in the cluster.
- **pending\_actions** – A list of cluster operations that are waiting to start.
- **pending\_modified\_values** – A list of changes to the cluster that are currently pending.
- **preferred\_maintenance\_window** – The weekly time range, in Universal Coordinated Time (UTC), during which system maintenance can occur. Format: <day>:HH:MM-<day>:HH:MM For the day values, use mon | tue | wed | thu | fri | sat | sun For example, sun:09:32-sun:10:02
- **publicly\_accessible** – Whether the cluster can be accessed from a public network.
- **resize\_info** – Information about the resize operation for the cluster.
- **restore\_status** – Information about the status of a cluster restore action. Only applies to a cluster that was created by restoring a snapshot.
- **snapshot\_schedule\_identifier** – A unique identifier for the cluster snapshot schedule.
- **snapshot\_schedule\_state** – The current state of the cluster snapshot schedule. Valid values: MODIFYING | ACTIVE | FAILED
- **vpc\_id** – The identifier of the VPC that the cluster is in, if the cluster is in a VPC.
- **vpc\_security\_groups** – The list of VPC security groups that the cluster belongs to, if the cluster is in a VPC.

**Returns** AwsRedshiftClusterDetails object

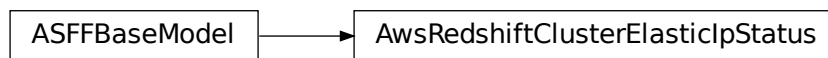
**allow\_version\_upgrade** :Optional[Boolean]

```
automated_snapshot_retention_period :Optional[Integer]
availability_zone :Optional[NonEmptyString]
cluster_availability_status :Optional[NonEmptyString]
cluster_create_time :Optional[Iso8601Timestamp]
cluster_identifier :Optional[NonEmptyString]
cluster_nodes :Optional[AwsRedshiftClusterClusterNodes]
cluster_parameter_groups :Optional[AwsRedshiftClusterClusterParameterGroups]
cluster_public_key :Optional[NonEmptyString]
cluster_revision_number :Optional[NonEmptyString]
cluster_security_groups :Optional[AwsRedshiftClusterClusterSecurityGroups]
cluster_snapshot_copy_status :Optional[AwsRedshiftClusterClusterSnapshotCopyStatus]
cluster_status :Optional[NonEmptyString]
cluster_subnet_group_name :Optional[NonEmptyString]
cluster_version :Optional[NonEmptyString]
db_name :Optional[NonEmptyString]
deferred_maintenance_windows :Optional[AwsRedshiftClusterDeferredMaintenanceWindows]
elastic_ip_status :Optional[AwsRedshiftClusterElasticIpStatus]
elastic_resize_number_of_node_options :Optional[NonEmptyString]
encrypted :Optional[Boolean]
endpoint :Optional[AwsRedshiftClusterEndpoint]
enhanced_vpc_routing :Optional[Boolean]
expected_next_snapshot_schedule_time :Optional[NonEmptyString]
expected_next_snapshot_schedule_time_status :Optional[NonEmptyString]
hsm_status :Optional[AwsRedshiftClusterHsmStatus]
iam_roles :Optional[AwsRedshiftClusterIamRoles]
kms_key_id :Optional[NonEmptyString]
maintenance_track_name :Optional[NonEmptyString]
manual_snapshot_retention_period :Optional[Integer]
master_username :Optional[NonEmptyString]
next_maintenance_window_start_time :Optional[NonEmptyString]
node_type :Optional[NonEmptyString]
number_of_nodes :Optional[Integer]
pending_actions :Optional[StringList]
pending_modified_values :Optional[AwsRedshiftClusterPendingModifiedValues]
preferred_maintenance_window :Optional[NonEmptyString]
publicly_accessible :Optional[Boolean]
```

```

resize_info :Optional[AwsRedshiftClusterResizeInfo]
restore_status :Optional[AwsRedshiftClusterRestoreStatus]
snapshot_schedule_identifier :Optional[NonEmptyString]
snapshot_schedule_state :Optional[NonEmptyString]
vpc_id :Optional[NonEmptyString]
vpc_security_groups :Optional[AwsRedshiftClusterVpcSecurityGroups]
class asff.generated.AwsRedshiftClusterElasticIpStatus
  Bases: asff.generated.ASFFBaseModel

```



The status of the elastic IP (EIP) address for an Amazon Redshift cluster.

#### Parameters

- **elastic\_ip** – The elastic IP address for the cluster.
- **status** – The status of the elastic IP address.

**Returns** AwsRedshiftClusterElasticIpStatus object

```

elastic_ip :Optional[NonEmptyString]
status :Optional[NonEmptyString]
class asff.generated.AwsRedshiftClusterEndpoint
  Bases: asff.generated.ASFFBaseModel

```



The connection endpoint for an Amazon Redshift cluster.

#### Parameters

- **address** – The DNS address of the cluster.
- **port** – The port that the database engine listens on.

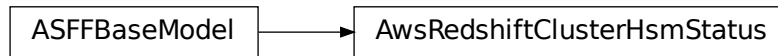
**Returns** AwsRedshiftClusterEndpoint object

```

address :Optional[NonEmptyString]
port :Optional[Integer]

```

```
class asff.generated.AwsRedshiftClusterHsmStatus
    Bases: asff.generated.ASFFBaseModel
```



Information about whether an Amazon Redshift cluster finished applying any hardware changes to security module (HSM) settings that were specified in a modify cluster command.

#### Parameters

- **hsm\_client\_certificate\_identifier** – The name of the HSM client certificate that the Amazon Redshift cluster uses to retrieve the data encryption keys that are stored in an HSM.
- **hsm\_configuration\_identifier** – The name of the HSM configuration that contains the information that the Amazon Redshift cluster can use to retrieve and store keys in an HSM.
- **status** – Indicates whether the Amazon Redshift cluster has finished applying any HSM settings changes specified in a modify cluster command. Type: String Valid values: active | applying

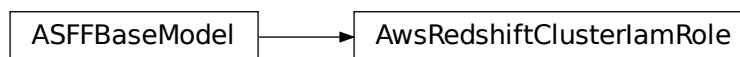
**Returns** AwsRedshiftClusterHsmStatus object

**hsm\_client\_certificate\_identifier** :Optional[NonEmptyString]

**hsm\_configuration\_identifier** :Optional[NonEmptyString]

**status** :Optional[NonEmptyString]

```
class asff.generated.AwsRedshiftClusterIamRole
    Bases: asff.generated.ASFFBaseModel
```



An IAM role that the cluster can use to access other AWS services.

#### Parameters

- **apply\_status** – The status of the IAM role’s association with the cluster. Valid values: in-sync | adding | removing
- **iam\_role\_arn** – The ARN of the IAM role.

**Returns** AwsRedshiftClusterIamRole object

**apply\_status** :Optional[NonEmptyString]



```

    iam_role_arn :Optional[NonEmptyString]
class asff.generated.AwsRedshiftClusterPendingModifiedValues
    Bases: asff.generated.ASFFBaseModel

```



Changes to the Amazon Redshift cluster that are currently pending.

#### Parameters

- **automated\_snapshot\_retention\_period** – The pending or in-progress change to the automated snapshot retention period.
- **cluster\_identifier** – The pending or in-progress change to the identifier for the cluster.
- **cluster\_type** – The pending or in-progress change to the cluster type.
- **cluster\_version** – The pending or in-progress change to the service version.
- **encryption\_type** – The encryption type for a cluster.
- **enhanced\_vpc\_routing** – Indicates whether to create the cluster with enhanced VPC routing enabled.
- **maintenance\_track\_name** – The name of the maintenance track that the cluster changes to during the next maintenance window.
- **master\_user\_password** – The pending or in-progress change to the master user password for the cluster.
- **node\_type** – The pending or in-progress change to the cluster’s node type.
- **number\_of\_nodes** – The pending or in-progress change to the number of nodes in the cluster.
- **publicly\_accessible** – The pending or in-progress change to whether the cluster can be connected to from the public network.

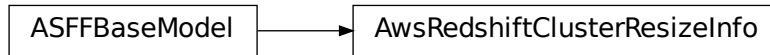
**Returns** AwsRedshiftClusterPendingModifiedValues object

```

automated_snapshot_retention_period :Optional[Integer]
cluster_identifier :Optional[NonEmptyString]
cluster_type :Optional[NonEmptyString]
cluster_version :Optional[NonEmptyString]
encryption_type :Optional[NonEmptyString]
enhanced_vpc_routing :Optional[Boolean]
maintenance_track_name :Optional[NonEmptyString]
master_user_password :Optional[NonEmptyString]
node_type :Optional[NonEmptyString]

```

```
    number_of_nodes :Optional[Integer]
    publicly_accessible :Optional[Boolean]
class asff.generated.AwsRedshiftClusterResizeInfo
    Bases: asff.generated.ASFFBaseModel
```



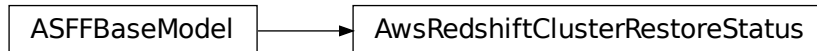
Information about the resize operation for the cluster.

#### Parameters

- **allow\_cancel\_resize** – Indicates whether the resize operation can be canceled.
- **resize\_type** – The type of resize operation. Valid values: ClassicResize

**Returns** AwsRedshiftClusterResizeInfo object

```
allow_cancel_resize :Optional[Boolean]
resize_type :Optional[NonEmptyString]
class asff.generated.AwsRedshiftClusterRestoreStatus
    Bases: asff.generated.ASFFBaseModel
```



Information about the status of a cluster restore action. It only applies if the cluster was created by restoring a snapshot.

#### Parameters

- **current\_restore\_rate\_in\_mega\_bytes\_per\_second** – The number of megabytes per second being transferred from the backup storage. Returns the average rate for a completed backup. This field is only updated when you restore to DC2 and DS2 node types.
- **elapsed\_time\_in\_seconds** – The amount of time an in-progress restore has been running, or the amount of time it took a completed restore to finish. This field is only updated when you restore to DC2 and DS2 node types.
- **estimated\_time\_to\_completion\_in\_seconds** – The estimate of the time remaining before the restore is complete. Returns 0 for a completed restore. This field is only updated when you restore to DC2 and DS2 node types.
- **progress\_in\_mega\_bytes** – The number of megabytes that were transferred from snapshot storage. This field is only updated when you restore to DC2 and DS2 node types.

- **snapshot\_size\_in\_mega\_bytes** – The size of the set of snapshot data that was used to restore the cluster. This field is only updated when you restore to DC2 and DS2 node types.
- **status** – The status of the restore action. Valid values: starting | restoring | completed | failed

**Returns** `AwsRedshiftClusterRestoreStatus` object

```
current_restore_rate_in_mega_bytes_per_second :Optional[Double]
elapsed_time_in_seconds :Optional[Long]
estimated_time_to_completion_in_seconds :Optional[Long]
progress_in_mega_bytes :Optional[Long]
snapshot_size_in_mega_bytes :Optional[Long]
status :Optional[NonEmptyString]
```

```
class asff.generated.AwsRedshiftClusterVpcSecurityGroup
    Bases: asff.generated.ASFFBaseModel
```



A VPC security group that the cluster belongs to, if the cluster is in a VPC.

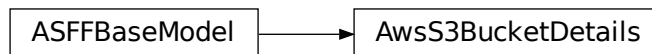
#### Parameters

- **status** – The status of the VPC security group.
- **vpc\_security\_group\_id** – The identifier of the VPC security group.

**Returns** `AwsRedshiftClusterVpcSecurityGroup` object

```
status :Optional[NonEmptyString]
vpc_security_group_id :Optional[NonEmptyString]
```

```
class asff.generated.AwsS3BucketDetails
    Bases: asff.generated.ASFFBaseModel
```



The details of an Amazon S3 bucket.

#### Parameters

- **owner\_id** – The canonical user ID of the owner of the S3 bucket.

- **owner\_name** – The display name of the owner of the S3 bucket.
- **created\_at** – Indicates when the S3 bucket was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **server\_side\_encryption\_configuration** – The encryption rules that are applied to the S3 bucket.

**Returns** AwsS3BucketDetails object

**created\_at** :Optional[Iso8601Timestamp]

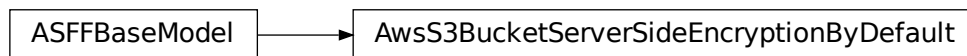
**owner\_id** :Optional[NonEmptyString]

**owner\_name** :Optional[NonEmptyString]

**server\_side\_encryption\_configuration** :Optional[AwsS3BucketServerSideEncryptionConfigur

**class** asff.generated.AwsS3BucketServerSideEncryptionByDefault

Bases: *asff.generated.ASFFBaseModel*



Specifies the default server-side encryption to apply to new objects in the bucket.

**Parameters**

- **sse\_algorithm** – Server-side encryption algorithm to use for the default encryption.
- **kms\_master\_key\_id** – AWS KMS customer master key (CMK) ID to use for the default encryption.

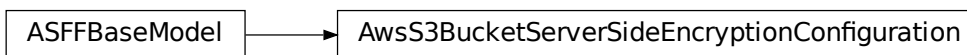
**Returns** AwsS3BucketServerSideEncryptionByDefault object

**kms\_master\_key\_id** :Optional[NonEmptyString]

**sse\_algorithm** :Optional[NonEmptyString]

**class** asff.generated.AwsS3BucketServerSideEncryptionConfiguration

Bases: *asff.generated.ASFFBaseModel*



The encryption configuration for the S3 bucket.

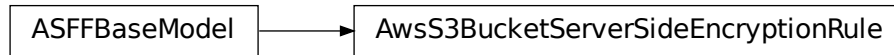
**Parameters** **rules** – The encryption rules that are applied to the S3 bucket.

**Returns** AwsS3BucketServerSideEncryptionConfiguration object

```

    rules :Optional[AwsS3BucketServerSideEncryptionRules]
class asff.generated.AwsS3BucketServerSideEncryptionRule
    Bases: asff.generated.ASFFBaseModel

```



An encryption rule to apply to the S3 bucket.

**Parameters** `apply_server_side_encryption_by_default` – Specifies the default server-side encryption to apply to new objects in the bucket. If a PUT object request doesn't specify any server-side encryption, this default encryption is applied.

**Returns** `AwsS3BucketServerSideEncryptionRule` object

```

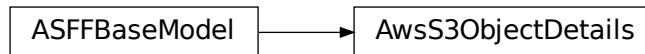
    apply_server_side_encryption_by_default :Optional[AwsS3BucketServerSideEncryptionByDef

```

```

class asff.generated.AwsS3ObjectDetails
    Bases: asff.generated.ASFFBaseModel

```



Details about an Amazon S3 object.

#### Parameters

- **last\_modified** – Indicates when the object was last modified. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **e\_tag** – The opaque identifier assigned by a web server to a specific version of a resource found at a URL.
- **version\_id** – The version of the object.
- **content\_type** – A standard MIME type describing the format of the object data.
- **server\_side\_encryption** – If the object is stored using server-side encryption, the value of the server-side encryption algorithm used when storing this object in Amazon S3.
- **ssekms\_key\_id** – The identifier of the AWS Key Management Service (AWS KMS) symmetric customer managed customer master key (CMK) that was used for the object.

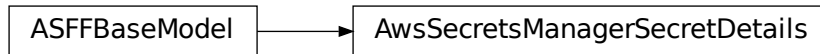
**Returns** `AwsS3ObjectDetails` object

```

    content_type :Optional[NonEmptyString]
    e_tag :Optional[NonEmptyString]

```

```
last_modified :Optional[Iso8601Timestamp]
server_side_encryption :Optional[NonEmptyString]
ssekms_key_id :Optional[NonEmptyString]
version_id :Optional[NonEmptyString]
class asff.generated.AwsSecretsManagerSecretDetails
  Bases: asff.generated.ASFFBaseModel
```



Details about an AWS Secrets Manager secret.

#### Parameters

- **rotation\_rules** – Defines the rotation schedule for the secret.
- **rotation\_occurred\_within\_frequency** – Whether the rotation occurred within the specified rotation frequency.
- **kms\_key\_id** – The ARN, Key ID, or alias of the AWS KMS customer master key (CMK) used to encrypt the SecretString or SecretBinary values for versions of this secret.
- **rotation\_enabled** – Whether rotation is enabled.
- **rotation\_lambda\_arn** – The ARN of the Lambda function that rotates the secret.
- **deleted** – Whether the secret is deleted.
- **name** – The name of the secret.
- **description** – The user-provided description of the secret.

**Returns** AwsSecretsManagerSecretDetails object

```
deleted :Optional[Boolean]
description :Optional[NonEmptyString]
kms_key_id :Optional[NonEmptyString]
name :Optional[NonEmptyString]
rotation_enabled :Optional[Boolean]
rotation_lambda_arn :Optional[NonEmptyString]
rotation_occurred_within_frequency :Optional[Boolean]
rotation_rules :Optional[AwsSecretsManagerSecretRotationRules]
class asff.generated.AwsSecretsManagerSecretRotationRules
  Bases: asff.generated.ASFFBaseModel
```



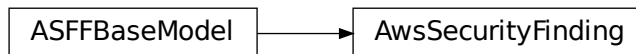
Defines the rotation schedule for the secret.

**Parameters** `automatically_after_days` – The number of days after the previous rotation to rotate the secret.

**Returns** `AwsSecretsManagerSecretRotationRules` object

`automatically_after_days` : `Optional[Integer]`

**class** `asff.generated.AwsSecurityFinding`  
 Bases: `asff.generated.ASFFBaseModel`



Provides consistent format for the contents of the Security Hub-aggregated findings. `AwsSecurityFinding` format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.

#### Parameters

- **schema\_version** – The schema version that a finding is formatted for.
- **id** – The security findings provider-specific identifier for a finding.
- **product\_arn** – The ARN generated by Security Hub that uniquely identifies a product that generates findings. This can be the ARN for a third-party product that is integrated with Security Hub, or the ARN for a custom integration.
- **generator\_id** – The identifier for the solution-specific component (a discrete unit of logic) that generated a finding. In various security-findings providers' solutions, this generator can be called a rule, a check, a detector, a plugin, etc.
- **aws\_account\_id** – The AWS account ID that a finding is generated in.
- **types** – One or more finding types in the format of namespace/category/classifier that classify a finding. Valid namespace values are: Software and Configuration Checks | TTPs | Effects | Unusual Behaviors | Sensitive Data Identifications
- **first\_observed\_at** – Indicates when the security-findings provider first observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

- **last\_observed\_at** – Indicates when the security-findings provider most recently observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **created\_at** – Indicates when the security-findings provider created the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **updated\_at** – Indicates when the security-findings provider last updated the finding record. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **severity** – A finding’s severity.
- **confidence** – A finding’s confidence. Confidence is defined as the likelihood that a finding accurately identifies the behavior or issue that it was intended to identify. Confidence is scored on a 0-100 basis using a ratio scale, where 0 means zero percent confidence and 100 means 100 percent confidence.
- **criticality** – The level of importance assigned to the resources associated with the finding. A score of 0 means that the underlying resources have no criticality, and a score of 100 is reserved for the most critical resources.
- **title** – A finding’s title. In this release, Title is a required property.
- **description** – A finding’s description. In this release, Description is a required property.
- **remediation** – A data type that describes the remediation options for a finding.
- **source\_url** – A URL that links to a page about the current finding in the security-findings provider’s solution.
- **product\_fields** – A data type where security-findings providers can include additional solution-specific details that aren’t part of the defined AwsSecurityFinding format.
- **user\_defined\_fields** – A list of name/value string pairs associated with the finding. These are custom, user-defined fields added to a finding.
- **malware** – A list of malware related to a finding.
- **network** – The details of network-related information about a finding.
- **network\_path** – Provides information about a network path that is relevant to a finding. Each entry under NetworkPath represents a component of that path.
- **process** – The details of process-related information about a finding.
- **threat\_intel\_indicators** – Threat intelligence details related to a finding.
- **resources** – A set of resource data types that describe the resources that the finding refers to.
- **compliance** – This data type is exclusive to findings that are generated as the result of a check run against a specific rule in a supported security standard, such as CIS AWS Foundations. Contains security standard-related finding details.
- **verification\_state** – Indicates the veracity of a finding.
- **workflow\_state** – The workflow state of a finding.
- **workflow** – Provides information about the status of the investigation into a finding.
- **record\_state** – The record state of a finding.

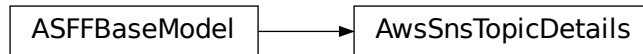


- **related\_findings** – A list of related findings.
- **note** – A user-defined note added to a finding.
- **vulnerabilities** – Provides a list of vulnerabilities associated with the findings.
- **patch\_summary** – Provides an overview of the patch compliance status for an instance against a selected compliance standard.

**Returns** AwsSecurityFinding object

```
aws_account_id :NonEmptyString
compliance :Optional[Compliance]
confidence :Optional[Integer]
created_at :Iso8601Timestamp
criticality :Optional[Integer]
description :NonEmptyString
first_observed_at :Optional[Iso8601Timestamp]
generator_id :NonEmptyString
id :NonEmptyString
last_observed_at :Optional[Iso8601Timestamp]
malware :Optional[MalwareList]
network :Optional[Network]
network_path :Optional[NetworkPathList]
note :Optional[Note]
patch_summary :Optional[PatchSummary]
process :Optional[ProcessDetails]
product_arn :NonEmptyString
product_fields :Optional[FieldMap]
record_state :Optional[RecordState]
related_findings :Optional[RelatedFindingList]
remediation :Optional[Remediation]
resources :ResourceList
schema_version :NonEmptyString
severity :Severity
source_url :Optional[NonEmptyString]
threat_intel_indicators :Optional[ThreatIntelIndicatorList]
title :NonEmptyString
types :TypeList
updated_at :Iso8601Timestamp
user_defined_fields :Optional[FieldMap]
```

```
verification_state :Optional[VerificationState]
vulnerabilities :Optional[VulnerabilityList]
workflow :Optional[Workflow]
workflow_state :Optional[WorkflowState]
class asff.generated.AwsSnsTopicDetails
  Bases: asff.generated.ASFFBaseModel
```



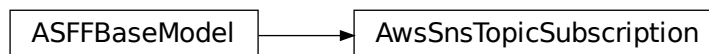
A wrapper type for the topic’s Amazon Resource Name (ARN).

#### Parameters

- **kms\_master\_key\_id** – The ID of an AWS managed customer master key (CMK) for Amazon SNS or a custom CMK.
- **subscription** – Subscription is an embedded property that describes the subscription endpoints of an Amazon SNS topic.
- **topic\_name** – The name of the topic.
- **owner** – The subscription’s owner.

**Returns** AwsSnsTopicDetails object

```
kms_master_key_id :Optional[NonEmptyString]
owner :Optional[NonEmptyString]
subscription :Optional[AwsSnsTopicSubscriptionList]
topic_name :Optional[NonEmptyString]
class asff.generated.AwsSnsTopicSubscription
  Bases: asff.generated.ASFFBaseModel
```



A wrapper type for the attributes of an Amazon SNS subscription.

#### Parameters

- **endpoint** – The subscription’s endpoint (format depends on the protocol).
- **protocol** – The subscription’s protocol.

**Returns** AwsSnsTopicSubscription object

**endpoint** :Optional[NonEmptyString]

**protocol** :Optional[NonEmptyString]

**class** asff.generated.AwsSqsQueueDetails

Bases: *asff.generated.ASFFBaseModel*



Data about a queue.

#### Parameters

- **kms\_data\_key\_reuse\_period\_seconds** – The length of time, in seconds, for which Amazon SQS can reuse a data key to encrypt or decrypt messages before calling AWS KMS again.
- **kms\_master\_key\_id** – The ID of an AWS managed customer master key (CMK) for Amazon SQS or a custom CMK.
- **queue\_name** – The name of the new queue.
- **dead\_letter\_target\_arn** – The Amazon Resource Name (ARN) of the dead-letter queue to which Amazon SQS moves messages after the value of maxReceiveCount is exceeded.

**Returns** AwsSqsQueueDetails object

**dead\_letter\_target\_arn** :Optional[NonEmptyString]

**kms\_data\_key\_reuse\_period\_seconds** :Optional[Integer]

**kms\_master\_key\_id** :Optional[NonEmptyString]

**queue\_name** :Optional[NonEmptyString]

**class** asff.generated.AwsWafWebAclDetails

Bases: *asff.generated.ASFFBaseModel*



Details about a WAF WebACL.

#### Parameters

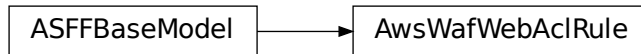
- **name** – A friendly name or description of the WebACL. You can't change the name of a WebACL after you create it.

- **default\_action** – The action to perform if none of the rules contained in the WebACL match.
- **rules** – An array that contains the action for each rule in a WebACL, the priority of the rule, and the ID of the rule.
- **web\_acl\_id** – A unique identifier for a WebACL.

**Returns** `AwsWafWebAclDetails` object

```
default_action :Optional[NonEmptyString]
name :Optional[NonEmptyString]
rules :Optional[AwsWafWebAclRuleList]
web_acl_id :Optional[NonEmptyString]

class asff.generated.AwsWafWebAclRule
    Bases: asff.generated.ASFFBaseModel
```



Details for a rule in a WAF WebACL.

#### Parameters

- **action** – Specifies the action that CloudFront or AWS WAF takes when a web request matches the conditions in the rule.
- **excluded\_rules** – Rules to exclude from a rule group.
- **override\_action** – Use the `OverrideAction` to test your `RuleGroup`. Any rule in a `RuleGroup` can potentially block a request. If you set the `OverrideAction` to `None`, the `RuleGroup` blocks a request if any individual rule in the `RuleGroup` matches the request and is configured to block that request. However, if you first want to test the `RuleGroup`, set the `OverrideAction` to `Count`. The `RuleGroup` then overrides any block action specified by individual rules contained within the group. Instead of blocking matching requests, those requests are counted. `ActivatedRuleOverrideAction` applies only when updating or adding a `RuleGroup` to a WebACL. In this case you do not use `ActivatedRuleAction`. For all other update requests, `ActivatedRuleAction` is used instead of `ActivatedRuleOverrideAction`.
- **priority** – Specifies the order in which the rules in a WebACL are evaluated. Rules with a lower value for `Priority` are evaluated before rules with a higher value. The value must be a unique integer. If you add multiple rules to a WebACL, the values do not need to be consecutive.
- **rule\_id** – The identifier for a rule.
- **type** – The rule type. Valid values: `REGULAR` | `RATE_BASED` | `GROUP` The default is `REGULAR`.

**Returns** `AwsWafWebAclRule` object

```
action :Optional[WafAction]
```

```

    excluded_rules :Optional[WafExcludedRuleList]
    override_action :Optional[WafOverrideAction]
    priority :Optional[Integer]
    rule_id :Optional[NonEmptyString]
    type :Optional[NonEmptyString]
class asff.generated.CidrBlockAssociation
    Bases: asff.generated.ASFFBaseModel

```



An IPv4 CIDR block association.

#### Parameters

- **association\_id** – The association ID for the IPv4 CIDR block.
- **cidr\_block** – The IPv4 CIDR block.
- **cidr\_block\_state** – Information about the state of the IPv4 CIDR block.

**Returns** CidrBlockAssociation object

```

association_id :Optional[NonEmptyString]
cidr_block :Optional[NonEmptyString]
cidr_block_state :Optional[NonEmptyString]
class asff.generated.Compliance
    Bases: asff.generated.ASFFBaseModel

```



Contains finding details that are specific to control-based findings. Only returned for findings generated from controls.

#### Parameters

- **status** – The result of a standards check. The valid values for Status are as follows. PASSED - Standards check passed for all evaluated resources. WARNING - Some information is missing or this check is not supported for your configuration. FAILED - Standards check failed for at least one evaluated resource. NOT\_AVAILABLE - Check could not be performed due to a service outage, API error, or because the result of the

AWS Config evaluation was NOT\_APPLICABLE. If the AWS Config evaluation result was NOT\_APPLICABLE, then after 3 days, Security Hub automatically archives the finding.

- **related\_requirements** – For a control, the industry or regulatory framework requirements that are related to the control. The check for that control is aligned with these requirements.
- **status\_reasons** – For findings generated from controls, a list of reasons behind the value of Status. For the list of status reason codes and their meanings, see Standards-related information in the ASFF in the AWS Security Hub User Guide.

**Returns** Compliance object

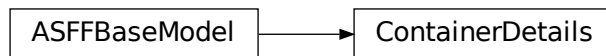
**related\_requirements** :Optional[RelatedRequirementsList]

**status** :Optional[ComplianceStatus]

**status\_reasons** :Optional[StatusReasonsList]

**class** asff.generated.ContainerDetails

Bases: *asff.generated.ASFFBaseModel*



Container details related to a finding.

#### Parameters

- **name** – The name of the container related to a finding.
- **image\_id** – The identifier of the image related to a finding.
- **image\_name** – The name of the image related to a finding.
- **launched\_at** – Indicates when the container started. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** ContainerDetails object

**image\_id** :Optional[NonEmptyString]

**image\_name** :Optional[NonEmptyString]

**launched\_at** :Optional[Iso8601Timestamp]

**name** :Optional[NonEmptyString]

**class** asff.generated.Cvss

Bases: *asff.generated.ASFFBaseModel*



CVSS scores from the advisory related to the vulnerability.

#### Parameters

- **version** – The version of CVSS for the CVSS score.
- **base\_score** – The base CVSS score.
- **base\_vector** – The base scoring vector for the CVSS score.

**Returns** Cvss object

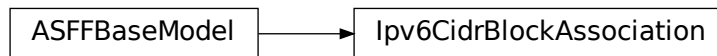
**base\_score** :Optional[Double]

**base\_vector** :Optional[NonEmptyString]

**version** :Optional[NonEmptyString]

**class** asff.generated.Ipv6CidrBlockAssociation

Bases: *asff.generated.ASFFBaseModel*



An IPV6 CIDR block association.

#### Parameters

- **association\_id** – The association ID for the IPv6 CIDR block.
- **ipv6\_cidr\_block** – The IPv6 CIDR block.
- **cidr\_block\_state** – Information about the state of the CIDR block.

**Returns** Ipv6CidrBlockAssociation object

**association\_id** :Optional[NonEmptyString]

**cidr\_block\_state** :Optional[NonEmptyString]

**ipv6\_cidr\_block** :Optional[NonEmptyString]

**class** asff.generated.LoadBalancerState

Bases: *asff.generated.ASFFBaseModel*



Information about the state of the load balancer.

**Parameters**

- **code** – The state code. The initial state of the load balancer is provisioning. After the load balancer is fully set up and ready to route traffic, its state is active. If the load balancer could not be set up, its state is failed.
- **reason** – A description of the state.

**Returns** LoadBalancerState object

**code** :Optional[NonEmptyString]

**reason** :Optional[NonEmptyString]

**class** asff.generated.Malware

Bases: *asff.generated.ASFFBaseModel*



A list of malware related to a finding.

**Parameters**

- **name** – The name of the malware that was observed.
- **type** – The type of the malware that was observed.
- **path** – The file system path of the malware that was observed.
- **state** – The state of the malware that was observed.

**Returns** Malware object

**name** :NonEmptyString

**path** :Optional[NonEmptyString]

**state** :Optional[MalwareState]

**type** :Optional[MalwareType]

**class** asff.generated.Network

Bases: *asff.generated.ASFFBaseModel*





The details of network-related information about a finding.

#### Parameters

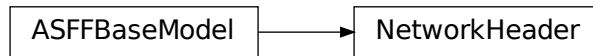
- **direction** – The direction of network traffic associated with a finding.
- **protocol** – The protocol of network-related information about a finding.
- **open\_port\_range** – The range of open ports that is present on the network.
- **source\_ip\_v4** – The source IPv4 address of network-related information about a finding.
- **source\_ip\_v6** – The source IPv6 address of network-related information about a finding.
- **source\_port** – The source port of network-related information about a finding.
- **source\_domain** – The source domain of network-related information about a finding.
- **source\_mac** – The source media access control (MAC) address of network-related information about a finding.
- **destination\_ip\_v4** – The destination IPv4 address of network-related information about a finding.
- **destination\_ip\_v6** – The destination IPv6 address of network-related information about a finding.
- **destination\_port** – The destination port of network-related information about a finding.
- **destination\_domain** – The destination domain of network-related information about a finding.

**Returns** Network object

```

destination_domain :Optional[NonEmptyString]
destination_ip_v4  :Optional[NonEmptyString]
destination_ip_v6  :Optional[NonEmptyString]
destination_port   :Optional[Integer]
direction          :Optional[NetworkDirection]
open_port_range    :Optional[PortRange]
protocol           :Optional[NonEmptyString]
source_domain      :Optional[NonEmptyString]
source_ip_v4       :Optional[NonEmptyString]
source_ip_v6       :Optional[NonEmptyString]
source_mac         :Optional[NonEmptyString]
source_port        :Optional[Integer]
  
```

```
class asff.generated.NetworkHeader
    Bases: asff.generated.ASFFBaseModel
```



Details about a network path component that occurs before or after the current component.

**Parameters**

- **protocol** – The protocol used for the component.
- **destination** – Information about the destination of the component.
- **source** – Information about the origin of the component.

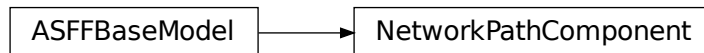
**Returns** NetworkHeader object

**destination** :Optional[NetworkPathComponentDetails]

**protocol** :Optional[NonEmptyString]

**source** :Optional[NetworkPathComponentDetails]

```
class asff.generated.NetworkPathComponent
    Bases: asff.generated.ASFFBaseModel
```



Information about a network path component.

**Parameters**

- **component\_id** – The identifier of a component in the network path.
- **component\_type** – The type of component.
- **egress** – Information about the component that comes after the current component in the network path.
- **ingress** – Information about the component that comes before the current node in the network path.

**Returns** NetworkPathComponent object

**component\_id** :Optional[NonEmptyString]

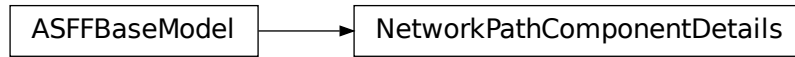
**component\_type** :Optional[NonEmptyString]

**egress** :Optional[NetworkHeader]

```

    ingress :Optional[NetworkHeader]
class asff.generated.NetworkPathComponentDetails
    Bases: asff.generated.ASFFBaseModel

```



Information about the destination of the next component in the network path.

#### Parameters

- **address** – The IP addresses of the destination.
- **port\_ranges** – A list of port ranges for the destination.

**Returns** NetworkPathComponentDetails object

```

address :Optional[StringList]
port_ranges :Optional[PortRangeList]
class asff.generated.Note
    Bases: asff.generated.ASFFBaseModel

```



A user-defined note added to a finding.

#### Parameters

- **text** – The text of a note.
- **updated\_by** – The principal that created a note.
- **updated\_at** – The timestamp of when the note was updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** Note object

```

text :NonEmptyString
updated_at :Iso8601Timestamp
updated_by :NonEmptyString
class asff.generated.PatchSummary
    Bases: asff.generated.ASFFBaseModel

```



Provides an overview of the patch compliance status for an instance against a selected compliance standard.

#### Parameters

- **id** – The identifier of the compliance standard that was used to determine the patch compliance status.
- **installed\_count** – The number of patches from the compliance standard that were installed successfully.
- **missing\_count** – The number of patches that are part of the compliance standard but are not installed. The count includes patches that failed to install.
- **failed\_count** – The number of patches from the compliance standard that failed to install.
- **installed\_other\_count** – The number of installed patches that are not part of the compliance standard.
- **installed\_rejected\_count** – The number of patches that are installed but are also on a list of patches that the customer rejected.
- **installed\_pending\_reboot** – The number of patches that were applied, but that require the instance to be rebooted in order to be marked as installed.
- **operation\_start\_time** – Indicates when the operation started. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **operation\_end\_time** – Indicates when the operation completed. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **reboot\_option** – The reboot option specified for the instance.
- **operation** – The type of patch operation performed. For Patch Manager, the values are SCAN and INSTALL.

**Returns** PatchSummary object

```
failed_count :Optional[Integer]
id :NonEmptyString
installed_count :Optional[Integer]
installed_other_count :Optional[Integer]
installed_pending_reboot :Optional[Integer]
installed_rejected_count :Optional[Integer]
missing_count :Optional[Integer]
operation :Optional[NonEmptyString]
```

```

    operation_end_time :Optional[Iso8601Timestamp]
    operation_start_time :Optional[Iso8601Timestamp]
    reboot_option :Optional[NonEmptyString]
class asff.generated.PortRange
    Bases: asff.generated.ASFFBaseModel

```



A range of ports.

#### Parameters

- **begin** – The first port in the port range.
- **end** – The last port in the port range.

**Returns** PortRange object

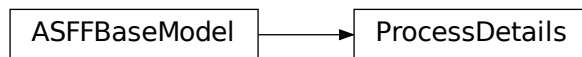
**begin** :Optional[Integer]

**end** :Optional[Integer]

```

class asff.generated.ProcessDetails
    Bases: asff.generated.ASFFBaseModel

```



The details of process-related information about a finding.

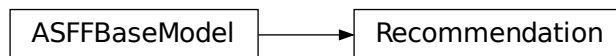
#### Parameters

- **name** – The name of the process.
- **path** – The path to the process executable.
- **pid** – The process ID.
- **parent\_pid** – The parent process ID.
- **launched\_at** – Indicates when the process was launched. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **terminated\_at** – Indicates when the process was terminated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** ProcessDetails object

```
launched_at :Optional[Iso8601Timestamp]
name :Optional[NonEmptyString]
parent_pid :Optional[Integer]
path :Optional[NonEmptyString]
pid :Optional[Integer]
terminated_at :Optional[Iso8601Timestamp]
```

```
class asff.generated.Recommendation
  Bases: asff.generated.ASFFBaseModel
```



A recommendation on how to remediate the issue identified in a finding.

**Parameters**

- **text** – Describes the recommended steps to take to remediate an issue identified in a finding.
- **url** – A URL to a page or site that contains information about how to remediate a finding.

**Returns** Recommendation object

```
text :Optional[NonEmptyString]
url :Optional[NonEmptyString]
```

```
class asff.generated.RelatedFinding
  Bases: asff.generated.ASFFBaseModel
```



Details about a related finding.

**Parameters**

- **product\_arn** – The ARN of the product that generated a related finding.
- **id** – The product-generated identifier for a related finding.

**Returns** RelatedFinding object

```
id :NonEmptyString
```

```

    product_arn :NonEmptyString
class asff.generated.Remediation
    Bases: asff.generated.ASFFBaseModel

```



Details about the remediation steps for a finding.

**Parameters** **recommendation** – A recommendation on the steps to take to remediate the issue identified by a finding.

**Returns** Remediation object

```

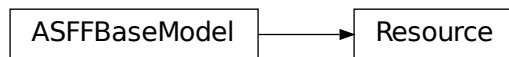
recommendation :Optional[Recommendation]

```

```

class asff.generated.Resource
    Bases: asff.generated.ASFFBaseModel

```



A resource related to a finding.

**Parameters**

- **type** – The type of the resource that details are provided for. If possible, set Type to one of the supported resource types. For example, if the resource is an EC2 instance, then set Type to `AwsEc2Instance`. If the resource does not match any of the provided types, then set Type to `Other`.
- **id** – The canonical identifier for the given resource type.
- **partition** – The canonical AWS partition name that the Region is assigned to.
- **region** – The canonical AWS external Region name where this resource is located.
- **resource\_role** –
- **tags** – A list of AWS tags associated with a resource at the time the finding was processed.
- **details** – Additional details about the resource related to a finding.

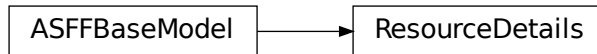
**Returns** Resource object

```

details :Optional[ResourceDetails]
id :NonEmptyString
partition :Optional[Partition]

```

```
region :Optional[NonEmptyString]
resource_role :Optional[NonEmptyString]
tags :Optional[FieldMap]
type :NonEmptyString
class asff.generated.ResourceDetails
  Bases: asff.generated.ASFFBaseModel
```



Additional details about a resource related to a finding. To provide the details, use the object that corresponds to the resource type. For example, if the resource type is `AwsEc2Instance`, then you use the `AwsEc2Instance` object to provide the details. If the type-specific object does not contain all of the fields you want to populate, then you use the `Other` object to populate those additional fields. You also use the `Other` object to populate the details when the selected type does not have a corresponding object.

#### Parameters

- **aws\_auto\_scaling\_auto\_scaling\_group** – Details for an autoscaling group.
- **aws\_code\_build\_project** – Details for an AWS CodeBuild project.
- **aws\_cloud\_front\_distribution** – Details about a CloudFront distribution.
- **aws\_ec2\_instance** – Details about an Amazon EC2 instance related to a finding.
- **aws\_ec2\_network\_interface** – Details for an Amazon EC2 network interface.
- **aws\_ec2\_security\_group** – Details for an EC2 security group.
- **aws\_ec2\_volume** – Details for an EC2 volume.
- **aws\_ec2\_vpc** – Details for an EC2 VPC.
- **aws\_ec2\_eip** – Details about an Elastic IP address.
- **aws\_elbv2\_load\_balancer** – Details about a load balancer.
- **aws\_elasticsearch\_domain** – Details for an Elasticsearch domain.
- **aws\_s3\_bucket** – Details about an Amazon S3 bucket related to a finding.
- **aws\_s3\_object** – Details about an Amazon S3 object related to a finding.
- **aws\_secrets\_manager\_secret** – Details about a Secrets Manager secret.
- **aws\_iam\_access\_key** – Details about an IAM access key related to a finding.
- **aws\_iam\_user** – Details about an IAM user.
- **aws\_iam\_policy** – Details about an IAM permissions policy.
- **aws\_api\_gateway\_v2\_stage** –
- **aws\_api\_gateway\_v2\_api** –
- **aws\_dynamo\_db\_table** – Details about a DynamoDB table.



- **aws\_api\_gateway\_stage** –
- **aws\_api\_gateway\_rest\_api** –
- **aws\_cloud\_trail\_trail** –
- **aws\_certificate\_manager\_certificate** –
- **aws\_redshift\_cluster** –
- **aws\_elb\_load\_balancer** –
- **aws\_iam\_group** –
- **aws\_iam\_role** – Details about an IAM role.
- **aws\_kms\_key** – Details about a KMS key.
- **aws\_lambda\_function** – Details about a Lambda function.
- **aws\_lambda\_layer\_version** – Details for a Lambda layer version.
- **aws\_rds\_db\_instance** – Details about an Amazon RDS database instance.
- **aws\_sns\_topic** – Details about an SNS topic.
- **aws\_sqs\_queue** – Details about an SQS queue.
- **aws\_waf\_web\_acl** – Details for a WAF WebACL.
- **aws\_rds\_db\_snapshot** – Details about an Amazon RDS database snapshot.
- **aws\_rds\_db\_cluster\_snapshot** – Details about an Amazon RDS database cluster snapshot.
- **aws\_rds\_db\_cluster** – Details about an Amazon RDS database cluster.
- **container** – Details about a container resource related to a finding.
- **other** – Details about a resource that are not available in a type-specific details object. Use the Other object in the following cases. The type-specific object does not contain all of the fields that you want to populate. In this case, first use the type-specific object to populate those fields. Use the Other object to populate the fields that are missing from the type-specific object. The resource type does not have a corresponding object. This includes resources for which the type is Other.

**Returns** ResourceDetails object

```
aws_api_gateway_rest_api :Optional[AwsApiGatewayRestApiDetails]
aws_api_gateway_stage :Optional[AwsApiGatewayStageDetails]
aws_api_gateway_v2_api :Optional[AwsApiGatewayV2ApiDetails]
aws_api_gateway_v2_stage :Optional[AwsApiGatewayV2StageDetails]
aws_auto_scaling_auto_scaling_group :Optional[AwsAutoScalingAutoScalingGroupDetails]
aws_certificate_manager_certificate :Optional[AwsCertificateManagerCertificateDetails]
aws_cloud_front_distribution :Optional[AwsCloudFrontDistributionDetails]
aws_cloud_trail_trail :Optional[AwsCloudTrailTrailDetails]
aws_code_build_project :Optional[AwsCodeBuildProjectDetails]
aws_dynamo_db_table :Optional[AwsDynamoDbTableDetails]
aws_ec2_eip :Optional[AwsEc2EipDetails]
```

```
aws_ec2_instance :Optional[AwsEc2InstanceDetails]
aws_ec2_network_interface :Optional[AwsEc2NetworkInterfaceDetails]
aws_ec2_security_group :Optional[AwsEc2SecurityGroupDetails]
aws_ec2_volume :Optional[AwsEc2VolumeDetails]
aws_ec2_vpc :Optional[AwsEc2VpcDetails]
aws_elasticsearch_domain :Optional[AwsElasticsearchDomainDetails]
aws_elb_load_balancer :Optional[AwsElbLoadBalancerDetails]
aws_elbv2_load_balancer :Optional[AwsElbv2LoadBalancerDetails]
aws_iam_access_key :Optional[AwsIamAccessKeyDetails]
aws_iam_group :Optional[AwsIamGroupDetails]
aws_iam_policy :Optional[AwsIamPolicyDetails]
aws_iam_role :Optional[AwsIamRoleDetails]
aws_iam_user :Optional[AwsIamUserDetails]
aws_kms_key :Optional[AwsKmsKeyDetails]
aws_lambda_function :Optional[AwsLambdaFunctionDetails]
aws_lambda_layer_version :Optional[AwsLambdaLayerVersionDetails]
aws_rds_db_cluster :Optional[AwsRdsDbClusterDetails]
aws_rds_db_cluster_snapshot :Optional[AwsRdsDbClusterSnapshotDetails]
aws_rds_db_instance :Optional[AwsRdsDbInstanceDetails]
aws_rds_db_snapshot :Optional[AwsRdsDbSnapshotDetails]
aws_redshift_cluster :Optional[AwsRedshiftClusterDetails]
aws_s3_bucket :Optional[AwsS3BucketDetails]
aws_s3_object :Optional[AwsS3ObjectDetails]
aws_secrets_manager_secret :Optional[AwsSecretsManagerSecretDetails]
aws_sns_topic :Optional[AwsSnsTopicDetails]
aws_sqs_queue :Optional[AwsSqsQueueDetails]
aws_waf_web_acl :Optional[AwsWafWebAclDetails]
container :Optional[ContainerDetails]
other :Optional[FieldMap]

class asff.generated.Severity
    Bases: asff.generated.ASFFBaseModel
```



The severity of the finding. The finding provider can provide the initial severity. The finding provider can only update the severity if it has not been updated using BatchUpdateFindings. The finding must have either Label or Normalized populated. If only one of these attributes is populated, then Security Hub automatically populates the other one. If neither attribute is populated, then the finding is invalid. Label is the preferred attribute.

#### Parameters

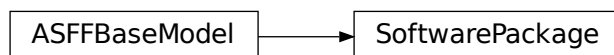
- **product** – Deprecated. This attribute is being deprecated. Instead of providing Product, provide Original. The native severity as defined by the AWS service or integrated partner product that generated the finding.
- **label** – The severity value of the finding. The allowed values are the following. INFORMATIONAL - No issue was found. LOW - The issue does not require action on its own. MEDIUM - The issue must be addressed but not urgently. HIGH - The issue must be addressed as a priority. CRITICAL - The issue must be remediated immediately to avoid it escalating. If you provide Normalized and do not provide Label, then Label is set automatically as follows. 0 - INFORMATIONAL 1–39 - LOW 40–69 - MEDIUM 70–89 - HIGH 90–100 - CRITICAL
- **normalized** – Deprecated. The normalized severity of a finding. This attribute is being deprecated. Instead of providing Normalized, provide Label. If you provide Label and do not provide Normalized, then Normalized is set automatically as follows. INFORMATIONAL - 0 LOW - 1 MEDIUM - 40 HIGH - 70 CRITICAL - 90
- **original** – The native severity from the finding product that generated the finding.

**Returns** Severity object

```

label :Optional[SeverityLabel]
normalized :Optional[Integer]
original :Optional[NonEmptyString]
product :Optional[Double]

class asff.generated.SoftwarePackage
  Bases: asff.generated.ASFFBaseModel
  
```



Information about a software package.

#### Parameters

- **name** – The name of the software package.
- **version** – The version of the software package.
- **epoch** – The epoch of the software package.
- **release** – The release of the software package.
- **architecture** – The architecture used for the software package.

**Returns** SoftwarePackage object

**architecture** :Optional[NonEmptyString]

**epoch** :Optional[NonEmptyString]

**name** :Optional[NonEmptyString]

**release** :Optional[NonEmptyString]

**version** :Optional[NonEmptyString]

**class** asff.generated.StatusReason

Bases: *asff.generated.ASFFBaseModel*



Provides additional context for the value of Compliance.Status.

#### Parameters

- **reason\_code** – A code that represents a reason for the control status. For the list of status reason codes and their meanings, see Standards-related information in the ASFF in the AWS Security Hub User Guide.
- **description** – The corresponding description for the status reason code.

**Returns** StatusReason object

**description** :Optional[NonEmptyString]

**reason\_code** :NonEmptyString

**class** asff.generated.ThreatIntelIndicator

Bases: *asff.generated.ASFFBaseModel*



Details about the threat intelligence related to a finding.

**Parameters**

- **type** – The type of threat intelligence indicator.
- **value** – The value of a threat intelligence indicator.
- **category** – The category of a threat intelligence indicator.
- **last\_observed\_at** – Indicates when the most recent instance of a threat intelligence indicator was observed. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **source** – The source of the threat intelligence indicator.
- **source\_url** – The URL to the page or site where you can get more information about the threat intelligence indicator.

**Returns** ThreatIntelIndicator object

**category** :Optional[ThreatIntelIndicatorCategory]

**last\_observed\_at** :Optional[Iso8601Timestamp]

**source** :Optional[NonEmptyString]

**source\_url** :Optional[NonEmptyString]

**type** :Optional[ThreatIntelIndicatorType]

**value** :Optional[NonEmptyString]

**class** asff.generated.Vulnerability

Bases: *asff.generated.ASFFBaseModel*



A vulnerability associated with a finding.

**Parameters**

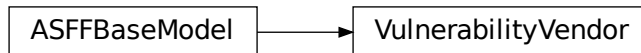
- **id** – The identifier of the vulnerability.
- **vulnerable\_packages** – List of software packages that have the vulnerability.
- **cvss** – CVSS scores from the advisory related to the vulnerability.
- **related\_vulnerabilities** – List of vulnerabilities that are related to this vulnerability.
- **vendor** – Information about the vendor that generates the vulnerability report.
- **reference\_urls** – A list of URLs that provide additional information about the vulnerability.

**Returns** Vulnerability object

**cvss** :Optional[CvssList]

```
id :NonEmptyString
reference_urls :Optional[StringList]
related_vulnerabilities :Optional[StringList]
vendor :Optional[VulnerabilityVendor]
vulnerable_packages :Optional[SoftwarePackageList]

class asff.generated.VulnerabilityVendor
  Bases: asff.generated.ASFFBaseModel
```



A vendor that generates a vulnerability report.

#### Parameters

- **name** – The name of the vendor.
- **url** – The URL of the vulnerability advisory.
- **vendor\_severity** – The severity that the vendor assigned to the vulnerability.
- **vendor\_created\_at** – Indicates when the vulnerability advisory was created. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **vendor\_updated\_at** – Indicates when the vulnerability advisory was last updated. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.

**Returns** VulnerabilityVendor object

```
name :NonEmptyString
url :Optional[NonEmptyString]
vendor_created_at :Optional[Iso8601Timestamp]
vendor_severity :Optional[NonEmptyString]
vendor_updated_at :Optional[Iso8601Timestamp]

class asff.generated.WafAction
  Bases: asff.generated.ASFFBaseModel
```



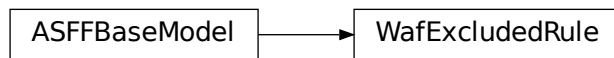
Details about the action that CloudFront or AWS WAF takes when a web request matches the conditions in the rule.

**Parameters** **type** – Specifies how you want AWS WAF to respond to requests that match the settings in a rule. Valid settings include the following: ALLOW - AWS WAF allows requests BLOCK - AWS WAF blocks requests COUNT - AWS WAF increments a counter of the requests that match all of the conditions in the rule. AWS WAF then continues to inspect the web request based on the remaining rules in the web ACL. You can't specify COUNT for the default action for a WebACL.

**Returns** WafAction object

**type** :Optional[NonEmptyString]

**class** asff.generated.WafExcludedRule  
Bases: *asff.generated.ASFFBaseModel*



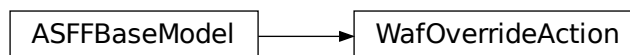
Details about a rule to exclude from a rule group.

**Parameters** **rule\_id** – The unique identifier for the rule to exclude from the rule group.

**Returns** WafExcludedRule object

**rule\_id** :Optional[NonEmptyString]

**class** asff.generated.WafOverrideAction  
Bases: *asff.generated.ASFFBaseModel*



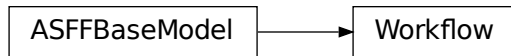
Details about an override action for a rule.

**Parameters** **type** – COUNT overrides the action specified by the individual rule within a Rule-Group . If set to NONE, the rule's action takes place.

**Returns** WafOverrideAction object

**type** :Optional[NonEmptyString]

**class** asff.generated.Workflow  
Bases: *asff.generated.ASFFBaseModel*



Provides information about the status of the investigation into a finding.

**Parameters** **status** – The status of the investigation into the finding. The allowed values are the following. **NEW** - The initial state of a finding, before it is reviewed. **NOTIFIED** - Indicates that you notified the resource owner about the security issue. Used when the initial reviewer is not the resource owner, and needs intervention from the resource owner. **SUPPRESSED** - The finding will not be reviewed again and will not be acted upon. **RESOLVED** - The finding was reviewed and remediated and is now considered resolved.

**Returns** Workflow object

**status** :Optional[WorkflowStatus]

## 5.1.2 Package Contents

### Classes

---

*AmazonSecurityFinding*

Provides consistent format for the contents of the Security Hub-aggregated findings. AwsSecurityFinding format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.

---

**exception** `asff.ValidationError(msg)`

Bases: `ValueError`

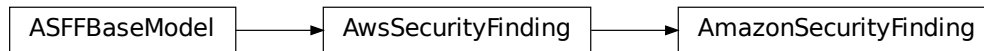
```
graph TD; ValidationError[ValidationError]
```

Inappropriate argument value (of correct type).

**class** `asff.AmazonSecurityFinding(**data)`

Bases: `asff.generated.AwsSecurityFinding`





Provides consistent format for the contents of the Security Hub-aggregated findings. `AwsSecurityFinding` format enables you to share findings between AWS security services and third-party solutions, and security standards checks. A finding is a potential security issue generated either by AWS services (Amazon GuardDuty, Amazon Inspector, and Amazon Macie) or by the integrated third-party solutions and standards checks.

#### Parameters

- **schema\_version** – The schema version that a finding is formatted for.
- **id** – The security findings provider-specific identifier for a finding.
- **product\_arn** – The ARN generated by Security Hub that uniquely identifies a product that generates findings. This can be the ARN for a third-party product that is integrated with Security Hub, or the ARN for a custom integration.
- **generator\_id** – The identifier for the solution-specific component (a discrete unit of logic) that generated a finding. In various security-findings providers' solutions, this generator can be called a rule, a check, a detector, a plugin, etc.
- **aws\_account\_id** – The AWS account ID that a finding is generated in.
- **types** – One or more finding types in the format of namespace/category/classifier that classify a finding. Valid namespace values are: Software and Configuration Checks | TTPs | Effects | Unusual Behaviors | Sensitive Data Identifications
- **first\_observed\_at** – Indicates when the security-findings provider first observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **last\_observed\_at** – Indicates when the security-findings provider most recently observed the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **created\_at** – Indicates when the security-findings provider created the potential security issue that a finding captured. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **updated\_at** – Indicates when the security-findings provider last updated the finding record. Uses the date-time format specified in RFC 3339 section 5.6, Internet Date/Time Format. The value cannot contain spaces. For example, 2020-03-22T13:22:13.933Z.
- **severity** – A finding's severity.
- **confidence** – A finding's confidence. Confidence is defined as the likelihood that a finding accurately identifies the behavior or issue that it was intended to identify. Confidence is scored on a 0-100 basis using a ratio scale, where 0 means zero percent confidence and 100 means 100 percent confidence.

- **criticality** – The level of importance assigned to the resources associated with the finding. A score of 0 means that the underlying resources have no criticality, and a score of 100 is reserved for the most critical resources.
- **title** – A finding's title. In this release, Title is a required property.
- **description** – A finding's description. In this release, Description is a required property.
- **remediation** – A data type that describes the remediation options for a finding.
- **source\_url** – A URL that links to a page about the current finding in the security-findings provider's solution.
- **product\_fields** – A data type where security-findings providers can include additional solution-specific details that aren't part of the defined AwsSecurityFinding format.
- **user\_defined\_fields** – A list of name/value string pairs associated with the finding. These are custom, user-defined fields added to a finding.
- **malware** – A list of malware related to a finding.
- **network** – The details of network-related information about a finding.
- **network\_path** – Provides information about a network path that is relevant to a finding. Each entry under NetworkPath represents a component of that path.
- **process** – The details of process-related information about a finding.
- **threat\_intel\_indicators** – Threat intelligence details related to a finding.
- **resources** – A set of resource data types that describe the resources that the finding refers to.
- **compliance** – This data type is exclusive to findings that are generated as the result of a check run against a specific rule in a supported security standard, such as CIS AWS Foundations. Contains security standard-related finding details.
- **verification\_state** – Indicates the veracity of a finding.
- **workflow\_state** – The workflow state of a finding.
- **workflow** – Provides information about the status of the investigation into a finding.
- **record\_state** – The record state of a finding.
- **related\_findings** – A list of related findings.
- **note** – A user-defined note added to a finding.
- **vulnerabilities** – Provides a list of vulnerabilities associated with the findings.
- **patch\_summary** – Provides an overview of the patch compliance status for an instance against a selected compliance standard.

**Returns** AwsSecurityFinding object

**static calculate\_finding\_id** (*aws\_account\_id: str, region: str, product\_name: str, title: str*)

→ str  
Calculate predictable unique finding ID based on immutable finding attributes. The finding ID is calculated as a SHA256 hash of the string consisting of the following attributes: - aws\_account\_id - region - product\_name - title

```
finding_id = SHA256(aws_account_id + region + product_name + title)
```

In the future, the list of attributes used for calculating hashes might be extended, but the primary purpose is to have a set of attributes that are unique, yet easy to remember, so the finding ID could be calculated easily and found by this library.

**Parameters**

- **aws\_account\_id** – The AWS account ID that the finding applies to.
- **region** – AWS region where the finding was found
- **product\_name** – Product name that generated the finding
- **title** – A finding's title.

**Returns** A predictable unique finding ID

**classmethod from\_dict** (*cls, data*) → *AmazonSecurityFinding*

Construct the finding from a dictionary.

**Parameters** **data** – Dictionary holding finding data

**Returns** A finding object

**classmethod from\_json** (*cls, data: str*) → *AmazonSecurityFinding*

Construct the finding from a JSON string.

**Parameters** **data** – JSON string with finding data

**Returns** A finding object

**classmethod from\_kwargs** (*cls, aws\_account\_id: str, types: TypeList, title: NonEmptyString, description: NonEmptyString, resources: Optional[List[Any]] = None, id: Optional[str] = None, schema\_version: str = DEFAULT\_SCHEMA\_VERSION, severity: str = DEFAULT\_SEVERITY, product\_name: Optional[str] = DEFAULT\_PRODUCT\_NAME, product\_version: Optional[str] = DEFAULT\_PRODUCT\_VERSION, region: str = DEFAULT\_REGION, record\_state: str = DEFAULT\_RECORD\_STATE, workflow\_status: str = DEFAULT\_WORKFLOW\_STATUS, generator\_id: Optional[str] = None, created\_at: Optional[str] = None, updated\_at: Optional[str] = None, \*\*kwargs*)

Construct the finding from keyword arguments.

**Parameters**

- **aws\_account\_id** – The AWS account ID that the finding applies to.
- **types** – Finding type that classifies the finding
- **title** – A finding's title.
- **description** – A finding's description.
- **resources** – A set of resource data types that describe the resources that the finding refers to.
- **id** – The product-specific identifier for a finding.
- **schema\_version** – The schema version that a finding is formatted for
- **severity** – A finding's severity.
- **product\_name** – Product name that generated the finding
- **product\_version** – Product version that generated the finding
- **region** – AWS region where the finding was found
- **record\_state** – The record state of a finding.

- **workflow\_status** – Provides information about the status of the investigation into a finding.
- **generator\_id** – The identifier for the solution-specific component that generated a finding.
- **created\_at** – Indicates when the potential security issue captured by a finding was created.
- **updated\_at** – Indicates when the finding provider last updated the finding record.
- **kwargs** – Additional keyword arguments, suitable for passing fields such as notes, user\_defined\_fields etc

**Returns** A finding object

**to\_dict** (*self*) → Dict[str, Any]

Return a dict representation of the finding.

**Returns** A dict representation of the finding

**to\_json** (*self*) → str

Return a JSON representation of the finding.

**Returns** JSON representation of the finding

**INDEX**

- genindex



## PYTHON MODULE INDEX

### a

- `asff`, [13](#)
- `asff.constants`, [13](#)
- `asff.exceptions`, [13](#)
- `asff.finding`, [14](#)
- `asff.generated`, [18](#)





## A

- `access_key_id` (*asff.generated.AwsIamAccessKeyDetails* attribute), 82
- `access_log` (*asff.generated.AwsElbLoadBalancerAttributes* attribute), 74
- `access_log_settings` (*asff.generated.AwsApiGatewayStageDetails* attribute), 32
- `access_log_settings` (*asff.generated.AwsApiGatewayV2StageDetails* attribute), 35
- `access_policies` (*asff.generated.AwsElasticsearchDomainDetails* attribute), 70
- `account_id` (*asff.generated.AwsIamAccessKeyDetails* attribute), 82
- `account_id` (*asff.generated.AwsIamAccessKeySessionContextSessionIssuer* attribute), 84
- `action` (*asff.generated.AwsWafWebAclRule* attribute), 136
- `activity_stream_status` (*asff.generated.AwsRdsDbClusterDetails* attribute), 99
- `address` (*asff.generated.AwsRdsDbInstanceEndpoint* attribute), 109
- `address` (*asff.generated.AwsRedshiftClusterEndpoint* attribute), 123
- `address` (*asff.generated.NetworkPathComponentDetails* attribute), 143
- `alias_generator` (*asff.generated.ASFFBaseModel.Config* attribute), 27
- `allocated_storage` (*asff.generated.AwsRdsDbClusterDetails* attribute), 99
- `allocated_storage` (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 102
- `allocated_storage` (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107
- `allocated_storage` (*asff.generated.AwsRdsDbPendingModifiedValues* attribute), 111
- `allocated_storage` (*asff.generated.AwsRdsDbSnapshotDetails* attribute), 113
- `allocation_id` (*asff.generated.AwsEc2EipDetails* attribute), 61
- `allow_cancel_resize` (*asff.generated.AwsRedshiftClusterResizeInfo* attribute), 126
- `allow_credentials` (*asff.generated.AwsCorsConfiguration* attribute), 52
- `allow_headers` (*asff.generated.AwsCorsConfiguration* attribute), 52
- `allow_methods` (*asff.generated.AwsCorsConfiguration* attribute), 52
- `allow_origins` (*asff.generated.AwsCorsConfiguration* attribute), 52
- `allow_population_by_field_name` (*asff.generated.ASFFBaseModel.Config* attribute), 27
- `allow_version_upgrade` (*asff.generated.AwsRedshiftClusterDetails* attribute), 121
- `AmazonSecurityFinding` (class in *asff*), 156
- `AmazonSecurityFinding` (class in *asff.finding*), 14
- `api_endpoint` (*asff.generated.AwsApiGatewayV2ApiDetails* attribute), 33
- `api_gateway_managed` (*asff.generated.AwsApiGatewayV2StageDetails* attribute), 35
- `api_id` (*asff.generated.AwsApiGatewayV2ApiDetails* attribute), 33
- `api_key_selection_expression` (*asff.generated.AwsApiGatewayV2ApiDetails* attribute), 33
- `api_key_source` (*asff.generated.AwsApiGatewayRestApiDetails* attribute), 31
- `app_cookie_stickiness_policies` (*asff.generated.AwsElbLoadBalancerPolicies* attribute), 80
- `apply_server_side_encryption_by_default` (*asff.generated.AwsS3BucketServerSideEncryptionRule*

*attribute*), 129  
 apply\_status (*asff.generated.AwsRedshiftClusterIamRole attribute*), 124  
 architecture (*asff.generated.SoftwarePackage attribute*), 152  
 arn (*asff.generated.AwsIamAccessKeySessionContextSessionIssuer attribute*), 84  
 arn (*asff.generated.AwsIamInstanceProfile attribute*), 86  
 arn (*asff.generated.AwsIamInstanceProfileRole attribute*), 87  
 arn (*asff.generated.AwsLambdaFunctionLayer attribute*), 95  
 asff  
     module, 13  
 asff.constants  
     module, 13  
 asff.exceptions  
     module, 13  
 asff.finding  
     module, 14  
 asff.generated  
     module, 18  
 ASFFBaseModel (*class in asff.generated*), 27  
 ASFFBaseModel.Config (*class in asff.generated*), 27  
 associated\_roles (*asff.generated.AwsRdsDbClusterDetails attribute*), 99  
 associated\_roles (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 association\_id (*asff.generated.AwsEc2EipDetails attribute*), 61  
 association\_id (*asff.generated.CidrBlockAssociation attribute*), 137  
 association\_id (*asff.generated.Ipv6CidrBlockAssociation attribute*), 139  
 assume\_role\_policy\_document  
     (*asff.generated.AwsIamInstanceProfileRole attribute*), 87  
 assume\_role\_policy\_document  
     (*asff.generated.AwsIamRoleDetails attribute*), 89  
 attach\_time (*asff.generated.AwsEc2NetworkInterfaceAttachment attribute*), 63  
 attach\_time (*asff.generated.AwsEc2VolumeAttachment attribute*), 68  
 attached\_managed\_policies  
     (*asff.generated.AwsIamGroupDetails attribute*), 85  
 attached\_managed\_policies  
     (*asff.generated.AwsIamRoleDetails attribute*), 89  
 attached\_managed\_policies  
     (*asff.generated.AwsIamUserDetails attribute*), 91  
 attachment (*asff.generated.AwsEc2NetworkInterfaceDetails attribute*), 64  
 attachment\_count (*asff.generated.AwsIamPolicyDetails attribute*), 88  
 attachment\_id (*asff.generated.AwsEc2NetworkInterfaceAttachment attribute*), 63  
 attachments (*asff.generated.AwsEc2VolumeDetails attribute*), 69  
 attribute\_definitions  
     (*asff.generated.AwsDynamoDbTableDetails attribute*), 54  
 attribute\_name (*asff.generated.AwsDynamoDbTableAttributeDefinition attribute*), 53  
 attribute\_name (*asff.generated.AwsDynamoDbTableKeySchema attribute*), 56  
 attribute\_type (*asff.generated.AwsDynamoDbTableAttributeDefinition attribute*), 53  
 attributes (*asff.generated.AwsIamAccessKeySessionContext attribute*), 83  
 auto\_deploy (*asff.generated.AwsApiGatewayV2StageDetails attribute*), 35  
 auto\_minor\_version\_upgrade  
     (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 automated\_snapshot\_retention\_period  
     (*asff.generated.AwsRedshiftClusterDetails attribute*), 121  
 automated\_snapshot\_retention\_period  
     (*asff.generated.AwsRedshiftClusterPendingModifiedValues attribute*), 125  
 automatically\_after\_days  
     (*asff.generated.AwsSecretsManagerSecretRotationRules attribute*), 131  
 availability\_zone  
     (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 availability\_zone  
     (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 availability\_zone  
     (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 availability\_zones  
     (*asff.generated.AwsElasticsearchDomainVPCOptions attribute*), 72  
 availability\_zones  
     (*asff.generated.AwsElbLoadBalancerDetails attribute*), 77  
 availability\_zones  
     (*asff.generated.AwsElbv2LoadBalancerDetails attribute*), 81  
 availability\_zones  
     (*asff.generated.AwsRdsDbClusterDetails attribute*), 99

availability_zones ( <i>asff.generated.AwsRdsDbClusterSnapshotDetails</i> <i>attribute</i> ), 102	aws_elb_load_balancer ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
AvailabilityZone ( <i>class in asff.generated</i> ), 27	aws_elbv2_load_balancer ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
AvailabilityZones ( <i>in module asff.generated</i> ), 24	aws_iam_access_key ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_account_id ( <i>asff.generated.AwsKmsKeyDetails</i> <i>attribute</i> ), 92	aws_iam_group ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_account_id ( <i>asff.generated.AwsSecurityFinding</i> <i>attribute</i> ), 133	aws_iam_policy ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_api_gateway_rest_api ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_iam_role ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_api_gateway_stage ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_iam_user ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_api_gateway_v2_api ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_kms_key ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_api_gateway_v2_stage ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_lambda_function ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_auto_scaling_auto_scaling_group ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_lambda_layer_version ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_certificate_manager_certificate ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_rds_db_cluster ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_cloud_front_distribution ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_rds_db_cluster_snapshot ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_cloud_trail_trail ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_rds_db_instance ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_code_build_project ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_rds_db_snapshot ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_dynamo_db_table ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_redshift_cluster ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_eip ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_s3_bucket ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_instance ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 149	aws_s3_object ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_network_interface ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150	aws_secrets_manager_secret ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_security_group ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150	aws_sns_topic ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_volume ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150	aws_sqs_queue ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_ec2_vpc ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150	aws_waf_web_acl ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150
aws_elasticsearch_domain ( <i>asff.generated.ResourceDetails</i> <i>attribute</i> ), 150	AwsApiGatewayAccessLogSettings ( <i>class in</i>

<i>asff.generated</i> ), 28			( <i>class in asff.generated</i> ), 44
AwsApiGatewayCanarySettings	( <i>class in asff.generated</i> ), 28		AwsCloudFrontDistributionOriginGroupFailover
			( <i>class in asff.generated</i> ), 45
AwsApiGatewayEndpointConfiguration	( <i>class in asff.generated</i> ), 29		AwsCloudFrontDistributionOriginGroupFailoverStatus
			( <i>class in asff.generated</i> ), 45
AwsApiGatewayMethodSettings	( <i>class in asff.generated</i> ), 29		AwsCloudFrontDistributionOriginGroupFailoverStatus
			( <i>in module asff.generated</i> ), 24
AwsApiGatewayMethodSettingsList	( <i>in module asff.generated</i> ), 24		AwsCloudFrontDistributionOriginGroups
			( <i>class in asff.generated</i> ), 45
AwsApiGatewayRestApiDetails	( <i>class in asff.generated</i> ), 30		AwsCloudFrontDistributionOriginGroupsItemList
			( <i>in module asff.generated</i> ), 24
AwsApiGatewayStageDetails	( <i>class in asff.generated</i> ), 31		AwsCloudFrontDistributionOriginItem
			( <i>class in asff.generated</i> ), 46
AwsApiGatewayV2ApiDetails	( <i>class in asff.generated</i> ), 32		AwsCloudFrontDistributionOriginItemList
			( <i>in module asff.generated</i> ), 24
AwsApiGatewayV2RouteSettings	( <i>class in asff.generated</i> ), 33		AwsCloudFrontDistributionOrigins
			( <i>class in asff.generated</i> ), 47
AwsApiGatewayV2StageDetails	( <i>class in asff.generated</i> ), 34		AwsCloudFrontDistributionOriginsS3OriginConfig
			( <i>class in asff.generated</i> ), 46
AwsAutoScalingAutoScalingGroupDetails	( <i>class in asff.generated</i> ), 35		AwsCloudTrailTrailDetails
			( <i>class in asff.generated</i> ), 47
AwsCertificateManagerCertificateDetails	( <i>class in asff.generated</i> ), 36		AwsCodeBuildProjectDetails
			( <i>class in asff.generated</i> ), 48
AwsCertificateManagerCertificateDomainValidationRecord	( <i>class in asff.generated</i> ), 38		AwsCodeBuildProjectEnvironment
			( <i>class in asff.generated</i> ), 49
AwsCertificateManagerCertificateDomainValidationRecordList	( <i>in module asff.generated</i> ), 24		AwsCodeBuildProjectEnvironmentRegistryCredential
			( <i>class in asff.generated</i> ), 50
AwsCertificateManagerCertificateExtendedKeyUsage	( <i>class in asff.generated</i> ), 39		AwsCodeBuildProjectSource
			( <i>class in asff.generated</i> ), 50
AwsCertificateManagerCertificateExtendedKeyUsageList	( <i>in module asff.generated</i> ), 24		AwsCodeBuildProjectVpcConfig
			( <i>class in asff.generated</i> ), 51
AwsCertificateManagerCertificateKeyUsage	( <i>class in asff.generated</i> ), 40		AwsCorsConfiguration
			( <i>class in asff.generated</i> ), 52
AwsCertificateManagerCertificateKeyUsageList	( <i>in module asff.generated</i> ), 24		AwsDynamoDbTableAttributeDefinition
			( <i>class in asff.generated</i> ), 52
AwsCertificateManagerCertificateOptions	( <i>class in asff.generated</i> ), 40		AwsDynamoDbTableAttributeDefinitionList
			( <i>in module asff.generated</i> ), 24
AwsCertificateManagerCertificateRenewalSummary	( <i>class in asff.generated</i> ), 40		AwsDynamoDbTableBillingModeSummary
			( <i>class in asff.generated</i> ), 53
AwsCertificateManagerCertificateResourceArn	( <i>class in asff.generated</i> ), 41		AwsDynamoDbTableDetails
			( <i>class in asff.generated</i> ), 53
AwsCloudFrontDistributionCacheBehavior	( <i>class in asff.generated</i> ), 41		AwsDynamoDbTableGlobalSecondaryIndex
			( <i>class in asff.generated</i> ), 55
AwsCloudFrontDistributionCacheBehaviors	( <i>class in asff.generated</i> ), 42		AwsDynamoDbTableGlobalSecondaryIndexList
			( <i>in module asff.generated</i> ), 24
AwsCloudFrontDistributionCacheBehaviorsInvalidation	( <i>in module asff.generated</i> ), 24		AwsDynamoDbTableKeySchema
			( <i>class in asff.generated</i> ), 55
AwsCloudFrontDistributionDefaultCacheBehavior	( <i>class in asff.generated</i> ), 42		AwsDynamoDbTableKeySchemaList
			( <i>in module asff.generated</i> ), 24
AwsCloudFrontDistributionDetails	( <i>class in asff.generated</i> ), 43		AwsDynamoDbTableLocalSecondaryIndex
			( <i>class in asff.generated</i> ), 56
AwsCloudFrontDistributionLogging	( <i>class in asff.generated</i> ), 44		AwsDynamoDbTableLocalSecondaryIndexList
			( <i>in module asff.generated</i> ), 24
AwsCloudFrontDistributionOriginGroup			AwsDynamoDbTableProjection
			( <i>class in asff.generated</i> ), 56

- asff.generated*), 56
- AwsDynamoDbTableProvisionedThroughput  
(*class in asff.generated*), 57
- AwsDynamoDbTableProvisionedThroughputOverview  
(*class in asff.generated*), 58
- AwsDynamoDbTableReplica (*class in asff.generated*), 58
- AwsDynamoDbTableReplicaGlobalSecondaryIndex  
(*class in asff.generated*), 59
- AwsDynamoDbTableReplicaGlobalSecondaryIndexList  
(*in module asff.generated*), 24
- AwsDynamoDbTableReplicaList (*in module asff.generated*), 25
- AwsDynamoDbTableRestoreSummary (*class in asff.generated*), 59
- AwsDynamoDbTableSseDescription (*class in asff.generated*), 60
- AwsDynamoDbTableStreamSpecification  
(*class in asff.generated*), 60
- AwsEc2EipDetails (*class in asff.generated*), 61
- AwsEc2InstanceDetails (*class in asff.generated*), 62
- AwsEc2NetworkInterfaceAttachment (*class in asff.generated*), 62
- AwsEc2NetworkInterfaceDetails (*class in asff.generated*), 63
- AwsEc2NetworkInterfaceSecurityGroup  
(*class in asff.generated*), 64
- AwsEc2NetworkInterfaceSecurityGroupList  
(*in module asff.generated*), 25
- AwsEc2SecurityGroupDetails (*class in asff.generated*), 64
- AwsEc2SecurityGroupIpPermission (*class in asff.generated*), 65
- AwsEc2SecurityGroupIpPermissionList (*in module asff.generated*), 25
- AwsEc2SecurityGroupIpRange (*class in asff.generated*), 66
- AwsEc2SecurityGroupIpRangeList (*in module asff.generated*), 25
- AwsEc2SecurityGroupIpv6Range (*class in asff.generated*), 66
- AwsEc2SecurityGroupIpv6RangeList (*in module asff.generated*), 25
- AwsEc2SecurityGroupPrefixListId (*class in asff.generated*), 66
- AwsEc2SecurityGroupPrefixListIdList (*in module asff.generated*), 25
- AwsEc2SecurityGroupUserIdGroupPair (*class in asff.generated*), 67
- AwsEc2SecurityGroupUserIdGroupPairList  
(*in module asff.generated*), 25
- AwsEc2VolumeAttachment (*class in asff.generated*), 67
- AwsEc2VolumeAttachmentList (*in module asff.generated*), 25
- AwsEc2VolumeDetails (*class in asff.generated*), 68
- AwsEc2VpcDetails (*class in asff.generated*), 69
- AwsElasticsearchDomainDetails (*class in asff.generated*), 69
- AwsElasticsearchDomainDomainEndpointOptions  
(*class in asff.generated*), 70
- AwsElasticsearchDomainEncryptionAtRestOptions  
(*class in asff.generated*), 71
- AwsElasticsearchDomainNodeToNodeEncryptionOptions  
(*class in asff.generated*), 71
- AwsElasticsearchDomainVPCOptions (*class in asff.generated*), 72
- AwsElbAppCookieStickinessPolicies (*in module asff.generated*), 25
- AwsElbAppCookieStickinessPolicy (*class in asff.generated*), 72
- AwsElbLbCookieStickinessPolicies (*in module asff.generated*), 25
- AwsElbLbCookieStickinessPolicy (*class in asff.generated*), 73
- AwsElbLoadBalancerAccessLog (*class in asff.generated*), 73
- AwsElbLoadBalancerAttributes (*class in asff.generated*), 74
- AwsElbLoadBalancerBackendServerDescription  
(*class in asff.generated*), 74
- AwsElbLoadBalancerBackendServerDescriptions  
(*in module asff.generated*), 25
- AwsElbLoadBalancerConnectionDraining  
(*class in asff.generated*), 75
- AwsElbLoadBalancerConnectionSettings  
(*class in asff.generated*), 75
- AwsElbLoadBalancerCrossZoneLoadBalancing  
(*class in asff.generated*), 76
- AwsElbLoadBalancerDetails (*class in asff.generated*), 76
- AwsElbLoadBalancerHealthCheck (*class in asff.generated*), 77
- AwsElbLoadBalancerInstance (*class in asff.generated*), 78
- AwsElbLoadBalancerInstances (*in module asff.generated*), 25
- AwsElbLoadBalancerListener (*class in asff.generated*), 79
- AwsElbLoadBalancerListenerDescription  
(*class in asff.generated*), 79
- AwsElbLoadBalancerListenerDescriptions  
(*in module asff.generated*), 25
- AwsElbLoadBalancerPolicies (*class in asff.generated*), 80
- AwsElbLoadBalancerSourceSecurityGroup  
(*class in asff.generated*), 80



AwsElbv2LoadBalancerDetails	(class in <i>asff.generated</i> ), 80	AwsLambdaFunctionLayer	(class in <i>asff.generated</i> ), 95
AwsIamAccessKeyDetails	(class in <i>asff.generated</i> ), 81	AwsLambdaFunctionLayerList	(in module <i>asff.generated</i> ), 25
AwsIamAccessKeySessionContext	(class in <i>asff.generated</i> ), 82	AwsLambdaFunctionTracingConfig	(class in <i>asff.generated</i> ), 95
AwsIamAccessKeySessionContextAttributes	(class in <i>asff.generated</i> ), 83	AwsLambdaFunctionVpcConfig	(class in <i>asff.generated</i> ), 96
AwsIamAccessKeySessionContextSessionIssuer	(class in <i>asff.generated</i> ), 83	AwsLambdaLayerVersionDetails	(class in <i>asff.generated</i> ), 96
AwsIamAccessKeyStatus	(in module <i>asff.generated</i> ), 25	AwsLambdaLayerVersionNumber	(in module <i>asff.generated</i> ), 25
AwsIamAttachedManagedPolicy	(class in <i>asff.generated</i> ), 84	AwsRdsDbClusterAssociatedRole	(class in <i>asff.generated</i> ), 97
AwsIamAttachedManagedPolicyList	(in module <i>asff.generated</i> ), 25	AwsRdsDbClusterAssociatedRoles	(in module <i>asff.generated</i> ), 25
AwsIamGroupDetails	(class in <i>asff.generated</i> ), 84	AwsRdsDbClusterDetails	(class in <i>asff.generated</i> ), 97
AwsIamGroupPolicy	(class in <i>asff.generated</i> ), 85	AwsRdsDbClusterMember	(class in <i>asff.generated</i> ), 100
AwsIamGroupPolicyList	(in module <i>asff.generated</i> ), 25	AwsRdsDbClusterMembers	(in module <i>asff.generated</i> ), 25
AwsIamInstanceProfile	(class in <i>asff.generated</i> ), 85	AwsRdsDbClusterOptionGroupMembership	(class in <i>asff.generated</i> ), 101
AwsIamInstanceProfileList	(in module <i>asff.generated</i> ), 25	AwsRdsDbClusterOptionGroupMemberships	(in module <i>asff.generated</i> ), 25
AwsIamInstanceProfileRole	(class in <i>asff.generated</i> ), 86	AwsRdsDbClusterSnapshotDetails	(class in <i>asff.generated</i> ), 101
AwsIamInstanceProfileRoles	(in module <i>asff.generated</i> ), 25	AwsRdsDbDomainMembership	(class in <i>asff.generated</i> ), 103
AwsIamPermissionsBoundary	(class in <i>asff.generated</i> ), 87	AwsRdsDbDomainMemberships	(in module <i>asff.generated</i> ), 25
AwsIamPolicyDetails	(class in <i>asff.generated</i> ), 87	AwsRdsDbInstanceAssociatedRole	(class in <i>asff.generated</i> ), 103
AwsIamPolicyVersion	(class in <i>asff.generated</i> ), 88	AwsRdsDbInstanceAssociatedRoles	(in module <i>asff.generated</i> ), 25
AwsIamPolicyVersionList	(in module <i>asff.generated</i> ), 25	AwsRdsDbInstanceDetails	(class in <i>asff.generated</i> ), 104
AwsIamRoleAssumeRolePolicyDocument	(in module <i>asff.generated</i> ), 25	AwsRdsDbInstanceEndpoint	(class in <i>asff.generated</i> ), 108
AwsIamRoleDetails	(class in <i>asff.generated</i> ), 89	AwsRdsDbInstanceVpcSecurityGroup	(class in <i>asff.generated</i> ), 109
AwsIamRolePolicy	(class in <i>asff.generated</i> ), 90	AwsRdsDbInstanceVpcSecurityGroups	(in module <i>asff.generated</i> ), 25
AwsIamRolePolicyList	(in module <i>asff.generated</i> ), 25	AwsRdsDbOptionGroupMembership	(class in <i>asff.generated</i> ), 109
AwsIamUserDetails	(class in <i>asff.generated</i> ), 90	AwsRdsDbOptionGroupMemberships	(in module <i>asff.generated</i> ), 25
AwsIamUserPolicy	(class in <i>asff.generated</i> ), 91	AwsRdsDbParameterGroup	(class in <i>asff.generated</i> ), 110
AwsIamUserPolicyList	(in module <i>asff.generated</i> ), 25	AwsRdsDbParameterGroups	(in module <i>asff.generated</i> ), 25
AwsKmsKeyDetails	(class in <i>asff.generated</i> ), 91	AwsRdsDbPendingModifiedValues	(class in <i>asff.generated</i> ), 95
AwsLambdaFunctionCode	(class in <i>asff.generated</i> ), 92		
AwsLambdaFunctionDeadLetterConfig	(class in <i>asff.generated</i> ), 93		
AwsLambdaFunctionDetails	(class in <i>asff.generated</i> ), 93		
AwsLambdaFunctionEnvironment	(class in <i>asff.generated</i> ), 94		
AwsLambdaFunctionEnvironmentError	(class in <i>asff.generated</i> ), 95		

<a href="#">asff.generated</a> ), 110	<a href="#">AwsRdsDbProcessorFeature</a> (class in <a href="#">asff.generated</a> ), 111	<a href="#">AwsRedshiftClusterPendingModifiedValues</a> (class in <a href="#">asff.generated</a> ), 125
<a href="#">asff.generated</a> ), 25	<a href="#">AwsRdsDbProcessorFeatures</a> (in module <a href="#">asff.generated</a> ), 25	<a href="#">AwsRedshiftClusterResizeInfo</a> (class in <a href="#">asff.generated</a> ), 126
<a href="#">asff.generated</a> ), 112	<a href="#">AwsRdsDbSnapshotDetails</a> (class in <a href="#">asff.generated</a> ), 112	<a href="#">AwsRedshiftClusterRestoreStatus</a> (class in <a href="#">asff.generated</a> ), 126
<a href="#">asff.generated</a> ), 114	<a href="#">AwsRdsDbStatusInfo</a> (class in <a href="#">asff.generated</a> ), 114	<a href="#">AwsRedshiftClusterVpcSecurityGroup</a> (class in <a href="#">asff.generated</a> ), 127
<a href="#">asff.generated</a> ), 25	<a href="#">AwsRdsDbStatusInfos</a> (in module <a href="#">asff.generated</a> ), 25	<a href="#">AwsRedshiftClusterVpcSecurityGroups</a> (in module <a href="#">asff.generated</a> ), 26
<a href="#">asff.generated</a> ), 114	<a href="#">AwsRdsDbSubnetGroup</a> (class in <a href="#">asff.generated</a> ), 114	<a href="#">AwsS3BucketDetails</a> (class in <a href="#">asff.generated</a> ), 127
<a href="#">asff.generated</a> ), 115	<a href="#">AwsRdsDbSubnetGroupSubnet</a> (class in <a href="#">asff.generated</a> ), 115	<a href="#">AwsS3BucketServerSideEncryptionByDefault</a> (class in <a href="#">asff.generated</a> ), 128
<a href="#">asff.generated</a> ), 115	<a href="#">AwsRdsDbSubnetGroupSubnetAvailabilityZone</a> (class in <a href="#">asff.generated</a> ), 115	<a href="#">AwsS3BucketServerSideEncryptionConfiguration</a> (class in <a href="#">asff.generated</a> ), 128
<a href="#">asff.generated</a> ), 25	<a href="#">AwsRdsDbSubnetGroupSubnets</a> (in module <a href="#">asff.generated</a> ), 25	<a href="#">AwsS3BucketServerSideEncryptionRule</a> (class in <a href="#">asff.generated</a> ), 129
<a href="#">asff.generated</a> ), 116	<a href="#">AwsRdsPendingCloudWatchLogsExports</a> (class in <a href="#">asff.generated</a> ), 116	<a href="#">AwsS3BucketServerSideEncryptionRules</a> (in module <a href="#">asff.generated</a> ), 26
<a href="#">asff.generated</a> ), 116	<a href="#">AwsRedshiftClusterClusterNode</a> (class in <a href="#">asff.generated</a> ), 116	<a href="#">AwsS3ObjectDetails</a> (class in <a href="#">asff.generated</a> ), 129
<a href="#">asff.generated</a> ), 25	<a href="#">AwsRedshiftClusterClusterNodes</a> (in module <a href="#">asff.generated</a> ), 25	<a href="#">AwsSecretsManagerSecretDetails</a> (class in <a href="#">asff.generated</a> ), 130
<a href="#">asff.generated</a> ), 116	<a href="#">AwsRedshiftClusterClusterParameterGroup</a> (class in <a href="#">asff.generated</a> ), 116	<a href="#">AwsSecretsManagerSecretRotationRules</a> (class in <a href="#">asff.generated</a> ), 130
<a href="#">asff.generated</a> ), 26	<a href="#">AwsRedshiftClusterClusterParameterGroups</a> (in module <a href="#">asff.generated</a> ), 26	<a href="#">AwsSecurityFinding</a> (class in <a href="#">asff.generated</a> ), 131
<a href="#">asff.generated</a> ), 117	<a href="#">AwsRedshiftClusterClusterParameterStatus</a> (class in <a href="#">asff.generated</a> ), 117	<a href="#">AwsSnsTopicDetails</a> (class in <a href="#">asff.generated</a> ), 134
<a href="#">asff.generated</a> ), 26	<a href="#">AwsRedshiftClusterClusterParameterStatus</a> (in module <a href="#">asff.generated</a> ), 26	<a href="#">AwsSnsTopicSubscription</a> (class in <a href="#">asff.generated</a> ), 134
<a href="#">asff.generated</a> ), 135	<a href="#">AwsRedshiftClusterClusterSecurityGroup</a> (class in <a href="#">asff.generated</a> ), 117	<a href="#">AwsSnsTopicSubscriptionList</a> (in module <a href="#">asff.generated</a> ), 26
<a href="#">asff.generated</a> ), 135	<a href="#">AwsRedshiftClusterClusterSecurityGroups</a> (in module <a href="#">asff.generated</a> ), 26	<a href="#">AwsSqsQueueDetails</a> (class in <a href="#">asff.generated</a> ), 135
<a href="#">asff.generated</a> ), 118	<a href="#">AwsRedshiftClusterClusterSnapshotCopyStatus</a> (class in <a href="#">asff.generated</a> ), 118	<a href="#">AwsWafWebAclDetails</a> (class in <a href="#">asff.generated</a> ), 135
<a href="#">asff.generated</a> ), 118	<a href="#">AwsRedshiftClusterDeferredMaintenanceWindows</a> (class in <a href="#">asff.generated</a> ), 118	<a href="#">AwsWafWebAclRule</a> (class in <a href="#">asff.generated</a> ), 136
<a href="#">asff.generated</a> ), 26	<a href="#">AwsRedshiftClusterDeferredMaintenanceWindows</a> (in module <a href="#">asff.generated</a> ), 26	<a href="#">AwsWafWebAclRuleList</a> (in module <a href="#">asff.generated</a> ), 26
<a href="#">asff.generated</a> ), 119	<a href="#">AwsRedshiftClusterDetails</a> (class in <a href="#">asff.generated</a> ), 119	
<a href="#">asff.generated</a> ), 123	<a href="#">AwsRedshiftClusterElasticIpStatus</a> (class in <a href="#">asff.generated</a> ), 123	
<a href="#">asff.generated</a> ), 123	<a href="#">AwsRedshiftClusterEndpoint</a> (class in <a href="#">asff.generated</a> ), 123	
<a href="#">asff.generated</a> ), 123	<a href="#">AwsRedshiftClusterHsmStatus</a> (class in <a href="#">asff.generated</a> ), 123	
<a href="#">asff.generated</a> ), 124	<a href="#">AwsRedshiftClusterIamRole</a> (class in <a href="#">asff.generated</a> ), 124	
<a href="#">asff.generated</a> ), 26	<a href="#">AwsRedshiftClusterIamRoles</a> (in module <a href="#">asff.generated</a> ), 26	

begin (*asff.generated.PortRange attribute*), 145  
 billing\_mode (*asff.generated.AwsDynamoDbTableBillingModeSummary attribute*), 53  
 billing\_mode\_summary (*asff.generated.AwsDynamoDbTableDetails attribute*), 54  
 binary\_media\_types (*asff.generated.AwsApiGatewayRestApiDetails attribute*), 31  
 Boolean (*in module asff.generated*), 26  
 bucket (*asff.generated.AwsCloudFrontDistributionLogging attribute*), 44

## C

ca\_certificate\_identifier (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 ca\_certificate\_identifier (*asff.generated.AwsRdsDbPendingModifiedValues attribute*), 111  
 cache\_behaviors (*asff.generated.AwsCloudFrontDistributionDetails attribute*), 43  
 cache\_cluster\_enabled (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 cache\_cluster\_size (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 cache\_cluster\_status (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 cache\_data\_encrypted (*asff.generated.AwsApiGatewayMethodSettings attribute*), 30  
 cache\_ttl\_in\_seconds (*asff.generated.AwsApiGatewayMethodSettings attribute*), 30  
 caching\_enabled (*asff.generated.AwsApiGatewayMethodSettings attribute*), 30  
 calculate\_finding\_id() (*asff.AmazonSecurityFinding static method*), 158  
 calculate\_finding\_id() (*asff.finding.AmazonSecurityFinding static method*), 16  
 canary\_settings (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 canonical\_hosted\_zone\_id (*asff.generated.AwsElbv2LoadBalancerDetails attribute*), 81  
 canonical\_hosted\_zone\_name (*asff.generated.AwsElbLoadBalancerDetails attribute*), 77  
 canonical\_hosted\_zone\_name\_id (*asff.generated.AwsElbLoadBalancerDetails attribute*), 77  
 category (*asff.generated.ThreatIntelIndicator attribute*), 153  
 certificate (*asff.generated.AwsCodeBuildProjectEnvironment attribute*), 50  
 certificate\_authority\_arn (*asff.generated.AwsCertificateManagerCertificateDetails attribute*), 38  
 certificate\_transparency\_logging\_preference (*asff.generated.AwsCertificateManagerCertificateOptions attribute*), 40  
 character\_set\_name (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 cidr\_block (*asff.generated.CidrBlockAssociation attribute*), 137  
 cidr\_block\_association\_set (*asff.generated.AwsEc2VpcDetails attribute*), 69  
 cidr\_block\_state (*asff.generated.CidrBlockAssociation attribute*), 137  
 cidr\_block\_state (*asff.generated.Ipv6CidrBlockAssociation attribute*), 139  
 cidr\_ip (*asff.generated.AwsEc2SecurityGroupIpRange attribute*), 66  
 cidr\_ipv6 (*asff.generated.AwsEc2SecurityGroupIpv6Range attribute*), 66  
 CidrBlockAssociation (*class in asff.generated*), 137  
 CidrBlockAssociationList (*in module asff.generated*), 26  
 client\_certificate\_id (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 cloud\_watch\_logs\_log\_group\_arn (*asff.generated.AwsCloudTrailTrailDetails attribute*), 48  
 cloud\_watch\_logs\_role\_arn (*asff.generated.AwsCloudTrailTrailDetails attribute*), 48  
 cluster\_availability\_status (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 cluster\_create\_time (*asff.generated.AwsRdsDbClusterDetails attribute*), 99  
 cluster\_create\_time (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 102  
 cluster\_create\_time (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 cluster\_identifier (*asff.generated.AwsRdsDbClusterDetails attribute*), 99



(*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_identifier  
 (*asff.generated.AwsRedshiftClusterPendingModifiedValues*  
*attribute*), 125  
 cluster\_nodes (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_parameter\_groups  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_parameter\_status\_list  
 (*asff.generated.AwsRedshiftClusterClusterParametersGroup*  
*attribute*), 117  
 cluster\_public\_key  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_revision\_number  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_security\_group\_name  
 (*asff.generated.AwsRedshiftClusterClusterSecurityGroup*  
*attribute*), 118  
 cluster\_security\_groups  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_snapshot\_copy\_status  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_status (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_subnet\_group\_name  
 (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_type (*asff.generated.AwsRedshiftClusterPendingModifiedValues*  
*attribute*), 125  
 cluster\_version (*asff.generated.AwsRedshiftClusterDetails*  
*attribute*), 122  
 cluster\_version (*asff.generated.AwsRedshiftClusterPendingModifiedValues*  
*attribute*), 125  
 code (*asff.generated.AwsLambdaFunctionDetails*  
*attribute*), 94  
 code (*asff.generated.LoadBalancerState* *attribute*), 140  
 code\_sha256 (*asff.generated.AwsLambdaFunctionDetails*  
*attribute*), 94  
 code\_size (*asff.generated.AwsLambdaFunctionLayer*  
*attribute*), 95  
 compatible\_runtimes  
 (*asff.generated.AwsLambdaLayerVersionDetails*  
*attribute*), 97  
 compliance (*asff.generated.AwsSecurityFinding* *attribute*), 133  
 Compliance (*class in asff.generated*), 137  
 ComplianceStatus (*in module asff.generated*), 26  
 component\_id (*asff.generated.NetworkPathComponent*  
*attribute*), 142  
 component\_type (*asff.generated.NetworkPathComponent*  
*attribute*), 142  
 confidence (*asff.generated.AwsSecurityFinding* *attribute*), 133  
 connection\_draining  
 (*asff.generated.AwsElbLoadBalancerAttributes*  
*attribute*), 74  
 connection\_settings  
 (*asff.generated.AwsElbLoadBalancerAttributes*  
*attribute*), 74  
 container (*asff.generated.ResourceDetails* *attribute*),  
 150  
 ContainerDetails (*class in asff.generated*), 138  
 content\_type (*asff.generated.AwsS3ObjectDetails*  
*attribute*), 129  
 cookie\_expiration\_period  
 (*asff.generated.AwsElbLbCookieStickinessPolicy*  
*attribute*), 73  
 cookie\_name (*asff.generated.AwsElbAppCookieStickinessPolicy*  
*attribute*), 73  
 copy\_tags\_to\_snapshot  
 (*asff.generated.AwsRdsDbClusterDetails*  
*attribute*), 99  
 copy\_tags\_to\_snapshot  
 (*asff.generated.AwsRdsDbInstanceDetails*  
*attribute*), 107  
 cors\_configuration  
 (*asff.generated.AwsApiGatewayV2ApiDetails*  
*attribute*), 33  
 create\_date (*asff.generated.AwsIamGroupDetails* *attribute*), 85  
 create\_date (*asff.generated.AwsIamInstanceProfile*  
*attribute*), 86  
 create\_date (*asff.generated.AwsIamInstanceProfileRole*  
*attribute*), 87  
 create\_date (*asff.generated.AwsIamPolicyDetails* *attribute*), 88  
 create\_date (*asff.generated.AwsIamPolicyVersion* *attribute*), 89  
 create\_date (*asff.generated.AwsIamRoleDetails* *attribute*), 89  
 create\_date (*asff.generated.AwsIamUserDetails* *attribute*), 91  
 create\_time (*asff.generated.AwsEc2VolumeDetails*  
*attribute*), 69  
 created\_at (*asff.generated.AwsCertificateManagerCertificateDetails*  
*attribute*), 38  
 created\_at (*asff.generated.AwsIamAccessKeyDetails*  
*attribute*), 82  
 created\_at (*asff.generated.AwsS3BucketDetails* *attribute*), 128  
 created\_at (*asff.generated.AwsSecurityFinding* *attribute*), 133

created\_date (*asff.generated.AwsApiGatewayRestApiDetails* attribute), 31  
 created\_date (*asff.generated.AwsApiGatewayStageDetails* attribute), 32  
 created\_date (*asff.generated.AwsApiGatewayV2ApiDetails* attribute), 33  
 created\_date (*asff.generated.AwsApiGatewayV2StageDetails* attribute), 35  
 created\_date (*asff.generated.AwsLambdaLayerVersionDetails* attribute), 97  
 created\_time (*asff.generated.AwsAutoScalingAutoScalingGroupDetails* attribute), 36  
 created\_time (*asff.generated.AwsElbLoadBalancerDetails* attribute), 77  
 created\_time (*asff.generated.AwsElbv2LoadBalancerDetails* attribute), 81  
 creation\_date (*asff.generated.AwsIamAccessKeySessionContextAttributes* attribute), 83  
 creation\_date (*asff.generated.AwsKmsKeyDetails* attribute), 92  
 creation\_date\_time (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 credential (*asff.generated.AwsCodeBuildProjectEnvironmentRegistryCredentials* attribute), 50  
 credential\_provider (*asff.generated.AwsCodeBuildProjectEnvironmentRegistryCredentials* attribute), 50  
 criticality (*asff.generated.AwsSecurityFinding* attribute), 133  
 cross\_account\_clone (*asff.generated.AwsRdsDbClusterDetails* attribute), 99  
 cross\_zone\_load\_balancing (*asff.generated.AwsElbLoadBalancerAttributes* attribute), 74  
 current\_restore\_rate\_in\_mega\_bytes\_per\_second (*asff.generated.AwsRedshiftClusterRestoreStatus* attribute), 127  
 custom\_endpoints (*asff.generated.AwsRdsDbClusterDetails* attribute), 99  
 cvss (*asff.generated.Vulnerability* attribute), 153  
 Cvss (class in *asff.generated*), 138  
 CvssList (in module *asff.generated*), 26

**D**

data\_trace\_enabled (*asff.generated.AwsApiGatewayMethodSettings* attribute), 30  
 data\_trace\_enabled (*asff.generated.AwsApiGatewayV2RouteSettings* attribute), 34  
 database\_name (*asff.generated.AwsRdsDbClusterDetails* attribute), 99

cluster\_identifier (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 db\_cluster\_identifier (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 102  
 cluster\_identifier (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 db\_cluster\_members (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 db\_cluster\_option\_group\_memberships (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 db\_cluster\_option\_group\_name (*asff.generated.AwsRdsDbClusterOptionGroupMembership* attribute), 101  
 db\_cluster\_parameter\_group (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 db\_cluster\_parameter\_group\_status (*asff.generated.AwsRdsDbClusterMember* attribute), 101  
 db\_cluster\_resource\_id (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 db\_cluster\_snapshot\_identifier (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 102  
 db\_instance\_class (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 db\_instance\_class (*asff.generated.AwsRdsDbPendingModifiedValues* attribute), 111  
 db\_instance\_identifier (*asff.generated.AwsRdsDbClusterMember* attribute), 101  
 db\_instance\_identifier (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 db\_instance\_identifier (*asff.generated.AwsRdsDbPendingModifiedValues* attribute), 111  
 db\_instance\_identifier (*asff.generated.AwsRdsDbSnapshotDetails* attribute), 113  
 db\_instance\_port (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 db\_instance\_status (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 db\_name (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107

<i>tribute</i> ), 107	DEFAULT_RECORD_STATE (in module <i>asff.constants</i> ), 13
db_name ( <i>asff.generated.AwsRedshiftClusterDetails</i> attribute), 122	DEFAULT_REGION (in module <i>asff.constants</i> ), 13
db_parameter_group_name ( <i>asff.generated.AwsRdsDbParameterGroup</i> attribute), 110	default_root_object ( <i>asff.generated.AwsCloudFrontDistributionDetails</i> attribute), 43
db_parameter_groups ( <i>asff.generated.AwsRdsDbInstanceDetails</i> attribute), 107	default_route_settings ( <i>asff.generated.AwsApiGatewayV2StageDetails</i> attribute), 35
db_security_groups ( <i>asff.generated.AwsRdsDbInstanceDetails</i> attribute), 107	DEFAULT_SCHEMA_VERSION (in module <i>asff.constants</i> ), 13
db_snapshot_identifier ( <i>asff.generated.AwsRdsDbSnapshotDetails</i> attribute), 113	DEFAULT_SEVERITY (in module <i>asff.constants</i> ), 13
db_subnet_group ( <i>asff.generated.AwsRdsDbClusterDetails</i> attribute), 100	default_version_id ( <i>asff.generated.AwsIamPolicyDetails</i> attribute), 88
db_subnet_group ( <i>asff.generated.AwsRdsDbInstanceDetails</i> attribute), 107	DEFAULT_WORKFLOW_STATUS (in module <i>asff.constants</i> ), 13
db_subnet_group_arn ( <i>asff.generated.AwsRdsDbSubnetGroup</i> attribute), 115	defer_maintenance_end_time ( <i>asff.generated.AwsRedshiftClusterDeferredMaintenanceWindow</i> attribute), 119
db_subnet_group_description ( <i>asff.generated.AwsRdsDbSubnetGroup</i> attribute), 115	defer_maintenance_identifier ( <i>asff.generated.AwsRedshiftClusterDeferredMaintenanceWindow</i> attribute), 119
db_subnet_group_name ( <i>asff.generated.AwsRdsDbPendingModifiedValues</i> attribute), 111	defer_maintenance_start_time ( <i>asff.generated.AwsRedshiftClusterDeferredMaintenanceWindow</i> attribute), 119
db_subnet_group_name ( <i>asff.generated.AwsRdsDbSubnetGroup</i> attribute), 115	deferred_maintenance_windows ( <i>asff.generated.AwsRedshiftClusterDetails</i> attribute), 122
dbi_resource_id ( <i>asff.generated.AwsRdsDbInstanceDetails</i> attribute), 107	delete_on_termination ( <i>asff.generated.AwsEc2NetworkInterfaceAttachment</i> attribute), 63
dbi_resource_id ( <i>asff.generated.AwsRdsDbSnapshotDetails</i> attribute), 113	delete_on_termination ( <i>asff.generated.AwsEc2VolumeAttachment</i> attribute), 68
dead_letter_config ( <i>asff.generated.AwsLambdaFunctionDetails</i> attribute), 94	deleted ( <i>asff.generated.AwsSecretsManagerSecretDetails</i> attribute), 130
dead_letter_target_arn ( <i>asff.generated.AwsSqsQueueDetails</i> attribute), 135	deletion_protection ( <i>asff.generated.AwsRdsDbClusterDetails</i> attribute), 100
default_action ( <i>asff.generated.AwsWafWebAclDetails</i> attribute), 136	deletion_protection ( <i>asff.generated.AwsRdsDbInstanceDetails</i> attribute), 107
default_cache_behavior ( <i>asff.generated.AwsCloudFrontDistributionDetails</i> attribute), 43	deployment_id ( <i>asff.generated.AwsApiGatewayCanarySettings</i> attribute), 29
DEFAULT_GENERATOR_ID (in module <i>asff.constants</i> ), 13	deployment_id ( <i>asff.generated.AwsApiGatewayStageDetails</i> attribute), 32
DEFAULT_PRODUCT_ARN_FMT (in module <i>asff.constants</i> ), 13	deployment_id ( <i>asff.generated.AwsApiGatewayV2StageDetails</i> attribute), 35
DEFAULT_PRODUCT_NAME (in module <i>asff.constants</i> ), 13	description ( <i>asff.generated.AwsApiGatewayRestApiDetails</i> attribute), 31
DEFAULT_PRODUCT_VERSION (in module <i>asff.constants</i> ), 13	description ( <i>asff.generated.AwsApiGatewayStageDetails</i> attribute), 32
	description ( <i>asff.generated.AwsApiGatewayV2ApiDetails</i>

attribute), 33  
 description (asff.generated.AwsApiGatewayV2StageDetails attribute), 35  
 description (asff.generated.AwsIamPolicyDetails attribute), 88  
 description (asff.generated.AwsKmsKeyDetails attribute), 92  
 description (asff.generated.AwsSecretsManagerSecretDetails attribute), 130  
 description (asff.generated.AwsSecurityFinding attribute), 133  
 description (asff.generated.StatusReason attribute), 152  
 destination (asff.generated.NetworkHeader attribute), 142  
 destination\_arn (asff.generated.AwsApiGatewayAccessLogSettings attribute), 28  
 destination\_domain (asff.generated.Network attribute), 141  
 destination\_ip\_v4 (asff.generated.Network attribute), 141  
 destination\_ip\_v6 (asff.generated.Network attribute), 141  
 destination\_port (asff.generated.Network attribute), 141  
 destination\_region (asff.generated.AwsRedshiftClusterClusterSnapshotCopyStatus attribute), 118  
 detailed\_metrics\_enabled (asff.generated.AwsApiGatewayV2RouteSettings attribute), 34  
 details (asff.generated.Resource attribute), 147  
 device\_index (asff.generated.AwsEc2NetworkInterfaceAttachment attribute), 63  
 dhcp\_options\_id (asff.generated.AwsEc2VpcDetails attribute), 69  
 direction (asff.generated.Network attribute), 141  
 dns\_name (asff.generated.AwsElbLoadBalancerDetails attribute), 77  
 dns\_name (asff.generated.AwsElbv2LoadBalancerDetails attribute), 81  
 documentation\_version (asff.generated.AwsApiGatewayStageDetails attribute), 32  
 domain (asff.generated.AwsEc2EipDetails attribute), 61  
 domain (asff.generated.AwsRdsDbDomainMembership attribute), 103  
 domain\_endpoint\_options (asff.generated.AwsElasticsearchDomainDetails attribute), 70  
 domain\_id (asff.generated.AwsElasticsearchDomainDetails attribute), 70  
 domain\_memberships (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 domain\_memberships (asff.generated.AwsRdsDbInstanceDetails attribute), 107  
 domain\_name (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 domain\_name (asff.generated.AwsCertificateManagerCertificateDomainDetails attribute), 39  
 domain\_name (asff.generated.AwsCloudFrontDistributionDetails attribute), 43  
 domain\_name (asff.generated.AwsCloudFrontDistributionOriginItem attribute), 46  
 domain\_name (asff.generated.AwsElasticsearchDomainDetails attribute), 70  
 domain\_validation\_options (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 domain\_validation\_options (asff.generated.AwsCertificateManagerCertificateRenewalSummary attribute), 41  
 Double (in module asff.generated), 26

## E

e\_tag (asff.generated.AwsCloudFrontDistributionDetails attribute), 43  
 e\_tag (asff.generated.AwsS3ObjectDetails attribute), 119  
 egress (asff.generated.NetworkPathComponent attribute), 142  
 elapsed\_time\_in\_seconds (asff.generated.AwsRedshiftClusterRestoreStatus attribute), 127  
 elastic\_ip (asff.generated.AwsRedshiftClusterElasticIpStatus attribute), 123  
 elastic\_ip\_status (asff.generated.AwsRedshiftClusterDetails attribute), 122  
 elastic\_resize\_number\_of\_node\_options (asff.generated.AwsRedshiftClusterDetails attribute), 122  
 elasticsearch\_version (asff.generated.AwsElasticsearchDomainDetails attribute), 70  
 emit\_interval (asff.generated.AwsElbLoadBalancerAccessLog attribute), 74  
 enabled (asff.generated.AwsCloudFrontDistributionLogging attribute), 44  
 enabled (asff.generated.AwsElasticsearchDomainEncryptionAtRestOptions attribute), 71  
 enabled (asff.generated.AwsElasticsearchDomainNodeToNodeEncryptionOptions attribute), 72  
 enabled (asff.generated.AwsElbLoadBalancerAccessLog attribute), 74



enabled (*asff.generated.AwsElbLoadBalancerConnectionDraining attribute*), 102  
     *attribute*), 75  
 enabled (*asff.generated.AwsElbLoadBalancerCrossZoneLoadBalancing attribute*), 107  
     *attribute*), 76  
 enabled\_cloud\_watch\_logs\_exports  
     (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 enabled\_cloud\_watch\_logs\_exports  
     (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 encrypted (*asff.generated.AwsEc2VolumeDetails attribute*), 69  
 encrypted (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 encrypted (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 encryption\_at\_rest\_options  
     (*asff.generated.AwsElasticsearchDomainDetails attribute*), 70  
 encryption\_key (*asff.generated.AwsCodeBuildProjectDetails attribute*), 49  
 encryption\_type (*asff.generated.AwsRedshiftClusterPendingModifiedValues attribute*), 125  
 end (*asff.generated.PortRange attribute*), 145  
 endpoint (*asff.generated.AwsElasticsearchDomainDetails attribute*), 70  
 endpoint (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 endpoint (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 endpoint (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 endpoint (*asff.generated.AwsSnsTopicSubscription attribute*), 135  
 endpoint\_configuration  
     (*asff.generated.AwsApiGatewayRestApiDetails attribute*), 31  
 endpoints (*asff.generated.AwsElasticsearchDomainDetails attribute*), 70  
 enforce\_https (*asff.generated.AwsElasticsearchDomainDetails attribute*), 71  
 engine (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 engine (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 102  
 engine (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 engine (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 engine\_mode (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 engine\_version (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 engine\_version (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 102  
     *engine\_version* (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
     *engine\_version* (*asff.generated.AwsRdsDbPendingModifiedValues attribute*), 111  
     *engine\_version* (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 enhanced\_monitoring\_resource\_arn  
     (*asff.generated.AwsRdsDbInstanceDetails attribute*), 107  
 enhanced\_vpc\_routing  
     (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 enhanced\_vpc\_routing  
     (*asff.generated.AwsRedshiftClusterPendingModifiedValues attribute*), 125  
 environment (*asff.generated.AwsCodeBuildProjectDetails attribute*), 49  
 environment (*asff.generated.AwsLambdaFunctionDetails attribute*), 94  
 epoch (*asff.generated.SoftwarePackage attribute*), 152  
 environment (*asff.generated.AwsLambdaFunctionEnvironment attribute*), 95  
 error\_code (*asff.generated.AwsLambdaFunctionEnvironmentError attribute*), 95  
 estimated\_time\_to\_completion\_in\_seconds  
     (*asff.generated.AwsRedshiftClusterRestoreStatus attribute*), 127  
 excluded\_rules (*asff.generated.AwsWafWebAclRule attribute*), 136  
 expected\_next\_snapshot\_schedule\_time  
     (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 expected\_next\_snapshot\_schedule\_time\_status  
     (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 expose\_headers (*asff.generated.AwsCorsConfiguration attribute*), 52  
 extended\_key\_usages  
     (*asff.generated.AwsCertificateManagerCertificateDetails attribute*), 38  
 failover\_criteria  
     (*asff.generated.AwsCloudFrontDistributionOriginGroup attribute*), 45  
 failure\_reason (*asff.generated.AwsCertificateManagerCertificateDetails attribute*), 38  
 feature\_name (*asff.generated.AwsRdsDbInstanceAssociatedRole attribute*), 104  
 FieldMap (in module *asff.generated*), 26  
 first\_observed\_at

## F

(*asff.generated.AwsSecurityFinding* attribute), 133  
 format (*asff.generated.AwsApiGatewayAccessLogSettings* group\_name (*asff.generated.AwsIamGroupDetails* attribute), 28  
 fqdn (*asff.generated.AwsRdsDbDomainMembership* attribute), 103  
 from\_dict() (*asff.AmazonSecurityFinding* class method), 159  
 from\_dict() (*asff.finding.AmazonSecurityFinding* class method), 16  
 from\_json() (*asff.AmazonSecurityFinding* class method), 159  
 from\_json() (*asff.finding.AmazonSecurityFinding* class method), 16  
 from\_kwargs() (*asff.AmazonSecurityFinding* class method), 159  
 from\_kwargs() (*asff.finding.AmazonSecurityFinding* class method), 16  
 from\_port (*asff.generated.AwsEc2SecurityGroupIpPermission* attribute), 65  
 function\_name (*asff.generated.AwsLambdaFunctionDetails* attribute), 94

## G

generator\_id (*asff.generated.AwsSecurityFinding* attribute), 133  
 git\_clone\_depth (*asff.generated.AwsCodeBuildProjectSource* attribute), 51  
 global\_secondary\_indexes (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 global\_secondary\_indexes (*asff.generated.AwsDynamoDbTableReplica* attribute), 58  
 global\_table\_version (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 group\_id (*asff.generated.AwsEc2NetworkInterfaceSecurityGroup* attribute), 64  
 group\_id (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 group\_id (*asff.generated.AwsEc2SecurityGroupUserIdGroupPair* attribute), 67  
 group\_id (*asff.generated.AwsIamGroupDetails* attribute), 85  
 group\_list (*asff.generated.AwsIamUserDetails* attribute), 91  
 group\_name (*asff.generated.AwsEc2NetworkInterfaceSecurityGroup* attribute), 64  
 group\_name (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 group\_name (*asff.generated.AwsEc2SecurityGroupUserIdGroupPair* attribute), 67

## H

handler (*asff.generated.AwsLambdaFunctionDetails* attribute), 94  
 has\_custom\_event\_selectors (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
 health\_check (*asff.generated.AwsElbLoadBalancerDetails* attribute), 77  
 health\_check\_grace\_period (*asff.generated.AwsAutoScalingAutoScalingGroupDetails* attribute), 36  
 health\_check\_type (*asff.generated.AwsAutoScalingAutoScalingGroupDetails* attribute), 36  
 healthy\_threshold (*asff.generated.AwsElbLoadBalancerHealthCheck* attribute), 78  
 home\_region (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
 hosted\_zone\_id (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 hosted\_zone\_id (*asff.generated.AwsRdsDbInstanceEndpoint* attribute), 109  
 hsm\_client\_certificate\_identifier (*asff.generated.AwsRedshiftClusterHsmStatus* attribute), 124  
 hsm\_configuration\_identifier (*asff.generated.AwsRedshiftClusterHsmStatus* attribute), 124  
 hsm\_status (*asff.generated.AwsRedshiftClusterDetails* attribute), 122  
 http\_endpoint\_enabled (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 http\_method (*asff.generated.AwsApiGatewayMethodSettings* attribute), 30

## I

iam\_database\_authentication\_enabled (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 iam\_database\_authentication\_enabled (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 102  
 iam\_database\_authentication\_enabled (*asff.generated.AwsRdsDbInstanceDetails* attribute), 102

attribute), 107  
 iam\_database\_authentication\_enabled (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 iam\_instance\_profile\_arn (asff.generated.AwsEc2InstanceDetails attribute), 62  
 iam\_role\_arn (asff.generated.AwsRedshiftClusterIamRole attribute), 124  
 iam\_role\_name (asff.generated.AwsRdsDbDomainMembership attribute), 103  
 iam\_roles (asff.generated.AwsRedshiftClusterDetails attribute), 122  
 id (asff.generated.AwsApiGatewayRestApiDetails attribute), 31  
 id (asff.generated.AwsCloudFrontDistributionOriginItem attribute), 46  
 id (asff.generated.AwsSecurityFinding attribute), 133  
 id (asff.generated.PatchSummary attribute), 144  
 id (asff.generated.RelatedFinding attribute), 146  
 id (asff.generated.Resource attribute), 147  
 id (asff.generated.Vulnerability attribute), 153  
 idle\_timeout (asff.generated.AwsElbLoadBalancerConnectionSettings attribute), 76  
 image\_id (asff.generated.AwsEc2InstanceDetails attribute), 62  
 image\_id (asff.generated.ContainerDetails attribute), 138  
 image\_name (asff.generated.ContainerDetails attribute), 138  
 image\_pull\_credentials\_type (asff.generated.AwsCodeBuildProjectEnvironment attribute), 50  
 imported\_at (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 in\_use\_by (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 inaccessible\_encryption\_date\_time (asff.generated.AwsDynamoDbTableSseDescription attribute), 60  
 include\_cookies (asff.generated.AwsCloudFrontDistributionLogging attribute), 44  
 include\_global\_service\_events (asff.generated.AwsCloudTrailTrailDetails attribute), 48  
 index\_arn (asff.generated.AwsDynamoDbTableGlobalSecondaryIndex attribute), 55  
 index\_arn (asff.generated.AwsDynamoDbTableLocalSecondaryIndex attribute), 56  
 index\_name (asff.generated.AwsDynamoDbTableGlobalSecondaryIndex attribute), 55  
 index\_name (asff.generated.AwsDynamoDbTableLocalSecondaryIndex attribute), 56  
 index\_name (asff.generated.AwsDynamoDbTableReplicaGlobalSecondaryIndex attribute), 59  
 index\_size\_bytes (asff.generated.AwsDynamoDbTableGlobalSecondaryIndex attribute), 55  
 index\_status (asff.generated.AwsDynamoDbTableGlobalSecondaryIndex attribute), 55  
 ingress (asff.generated.NetworkPathComponent attribute), 142  
 insecure\_ssl (asff.generated.AwsCodeBuildProjectSource attribute), 51  
 installed\_count (asff.generated.PatchSummary attribute), 144  
 installed\_other\_count (asff.generated.PatchSummary attribute), 144  
 installed\_pending\_reboot (asff.generated.PatchSummary attribute), 144  
 installed\_rejected\_count (asff.generated.PatchSummary attribute), 144  
 instance\_create\_time (asff.generated.AwsRdsDbInstanceDetails attribute), 107  
 instance\_create\_time (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 instance\_id (asff.generated.AwsEc2EipDetails attribute), 61  
 instance\_id (asff.generated.AwsEc2NetworkInterfaceAttachment attribute), 63  
 instance\_id (asff.generated.AwsEc2VolumeAttachment attribute), 68  
 instance\_id (asff.generated.AwsElbLoadBalancerInstance attribute), 78  
 instance\_owner\_id (asff.generated.AwsEc2NetworkInterfaceAttachment attribute), 63  
 instance\_port (asff.generated.AwsElbLoadBalancerBackendServerDetail attribute), 75  
 instance\_port (asff.generated.AwsElbLoadBalancerListener attribute), 79  
 instance\_profile\_id (asff.generated.AwsIamInstanceProfile attribute), 86  
 instance\_profile\_list (asff.generated.AwsIamRoleDetails attribute), 89  
 instance\_profile\_name (asff.generated.AwsIamInstanceProfile attribute), 86  
 instance\_protocol (asff.generated.AwsElbLoadBalancerListener attribute), 79  
 instance\_protocol (asff.generated.AwsElbLoadBalancerDetails attribute), 79

attribute), 77  
 Integer (in module *asff.generated*), 26  
 interval (*asff.generated.AwsElbLoadBalancerHealthCheck* attribute), 78  
 iops (*asff.generated.AwsRdsDbInstanceDetails* attribute), 107  
 iops (*asff.generated.AwsRdsDbPendingModifiedValues* attribute), 111  
 iops (*asff.generated.AwsRdsDbSnapshotDetails* attribute), 113  
 ip\_address\_type (*asff.generated.AwsElbv2LoadBalancerDetails* attribute), 45  
 ip\_permissions (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 ip\_permissions\_egress (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 ip\_protocol (*asff.generated.AwsEc2SecurityGroupIpPermission* attribute), 65  
 ip\_ranges (*asff.generated.AwsEc2SecurityGroupIpPermission* attribute), 66  
 ip\_v4\_addresses (*asff.generated.AwsEc2InstanceDetails* attribute), 62  
 ip\_v6\_addresses (*asff.generated.AwsEc2InstanceDetails* attribute), 62  
 ipv6\_cidr\_block (*asff.generated.Ipv6CidrBlockAssociation* attribute), 139  
 ipv6\_cidr\_block\_association\_set (*asff.generated.AwsEc2VpcDetails* attribute), 69  
 ipv6\_ranges (*asff.generated.AwsEc2SecurityGroupIpPermission* attribute), 66  
 Ipv6CidrBlockAssociation (class in *asff.generated*), 139  
 Ipv6CidrBlockAssociationList (in module *asff.generated*), 26  
 is\_attachable (*asff.generated.AwsIamPolicyDetails* attribute), 88  
 is\_cluster\_writer (*asff.generated.AwsRdsDbClusterMember* attribute), 101  
 is\_default\_version (*asff.generated.AwsIamPolicyVersion* attribute), 89  
 is\_multi\_region\_trail (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
 is\_organization\_trail (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
 ISO8601\_REGEX (in module *asff.constants*), 13  
 ISO8601\_REGEX (in module *asff.generated*), 26  
 Iso8601Timestamp (in module *asff.generated*), 26  
 issued\_at (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 issuer (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 item\_count (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 item\_count (*asff.generated.AwsDynamoDbTableGlobalSecondaryIndex* attribute), 55  
 items (*asff.generated.AwsCloudFrontDistributionCacheBehaviors* attribute), 42  
 items (*asff.generated.AwsCloudFrontDistributionOriginGroupFailoverStatus* attribute), 46  
 items (*asff.generated.AwsCloudFrontDistributionOriginGroups* attribute), 46  
 items (*asff.generated.AwsCloudFrontDistributionOrigins* attribute), 47

## K

key\_algorithm (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 key\_id (*asff.generated.AwsKmsKeyDetails* attribute), 92  
 key\_manager (*asff.generated.AwsKmsKeyDetails* attribute), 92  
 key\_name (*asff.generated.AwsEc2InstanceDetails* attribute), 62  
 key\_schema (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 key\_schema (*asff.generated.AwsDynamoDbTableGlobalSecondaryIndex* attribute), 55  
 key\_schema (*asff.generated.AwsDynamoDbTableLocalSecondaryIndex* attribute), 56  
 key\_state (*asff.generated.AwsKmsKeyDetails* attribute), 92  
 key\_type (*asff.generated.AwsDynamoDbTableKeySchema* attribute), 56  
 key\_usages (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 kms\_data\_key\_reuse\_period\_seconds (*asff.generated.AwsSqsQueueDetails* attribute), 135  
 kms\_key\_arn (*asff.generated.AwsLambdaFunctionDetails* attribute), 94  
 kms\_key\_id (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
 kms\_key\_id (*asff.generated.AwsEc2VolumeDetails* attribute), 69  
 kms\_key\_id (*asff.generated.AwsElasticsearchDomainEncryptionAtRestOptions* attribute), 71  
 kms\_key\_id (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 kms\_key\_id (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 102  
 kms\_key\_id (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108



kms_key_id (asff.generated.AwsRdsDbSnapshotDetails attribute), 113	(asff.generated.AwsRdsDbInstanceDetails attribute), 108
kms_key_id (asff.generated.AwsRedshiftClusterDetails attribute), 122	latest_stream_arn (asff.generated.AwsDynamoDbTableDetails attribute), 54
kms_key_id (asff.generated.AwsSecretsManagerSecretDetails attribute), 130	latest_stream_label (asff.generated.AwsDynamoDbTableDetails attribute), 54
kms_master_key_arn (asff.generated.AwsDynamoDbTableSseDescription attribute), 60	launch_configuration_name (asff.generated.AwsAutoScalingAutoScalingGroupDetails attribute), 36
kms_master_key_id (asff.generated.AwsDynamoDbTableReplica attribute), 58	launched_at (asff.generated.AwsEc2InstanceDetails attribute), 62
kms_master_key_id (asff.generated.AwsS3BucketServerSideEncryptionByDefault attribute), 128	launched_at (asff.generated.ContainerDetails attribute), 138
kms_master_key_id (asff.generated.AwsSnsTopicDetails attribute), 134	launched_at (asff.generated.ProcessDetails attribute), 146
kms_master_key_id (asff.generated.AwsSqsQueueDetails attribute), 135	layers (asff.generated.AwsLambdaFunctionDetails attribute), 94
<b>L</b>	lb_cookie_stickiness_policies (asff.generated.AwsElbLoadBalancerPolicies attribute), 80
label (asff.generated.Severity attribute), 151	license_model (asff.generated.AwsRdsDbClusterSnapshotDetails attribute), 102
last_decrease_date_time (asff.generated.AwsDynamoDbTableProvisionedThroughput attribute), 57	license_model (asff.generated.AwsRdsDbInstanceDetails attribute), 108
last_deployment_status_message (asff.generated.AwsApiGatewayV2StageDetails attribute), 35	license_model (asff.generated.AwsRdsDbPendingModifiedValues attribute), 111
last_increase_date_time (asff.generated.AwsDynamoDbTableProvisionedThroughput attribute), 57	license_model (asff.generated.AwsRdsDbSnapshotDetails attribute), 113
last_modified (asff.generated.AwsLambdaFunctionDetails attribute), 94	listener (asff.generated.AwsElbLoadBalancerListenerDescription attribute), 80
last_modified (asff.generated.AwsS3ObjectDetails attribute), 129	listener_descriptions (asff.generated.AwsElbLoadBalancerDetails attribute), 77
last_modified_time (asff.generated.AwsCloudFrontDistributionDetails attribute), 43	listener_endpoint (asff.generated.AwsRdsDbInstanceDetails attribute), 108
last_observed_at (asff.generated.AwsSecurityFinding attribute), 133	load_balancer_attributes (asff.generated.AwsElbLoadBalancerDetails attribute), 77
last_observed_at (asff.generated.ThreatIntelIndicator attribute), 153	load_balancer_name (asff.generated.AwsElbLoadBalancerDetails attribute), 77
last_update_to_pay_per_request_date_time (asff.generated.AwsDynamoDbTableBillingModeSummary attribute), 53	load_balancer_names (asff.generated.AwsAutoScalingAutoScalingGroupDetails attribute), 36
last_updated_date (asff.generated.AwsApiGatewayStageDetails attribute), 32	load_balancer_port (asff.generated.AwsElbLoadBalancerListener attribute), 79
last_updated_date (asff.generated.AwsApiGatewayV2StageDetails attribute), 35	LoadBalancerState (class in asff.generated), 139
latest_restorable_time	local_secondary_indexes (asff.generated.AwsDynamoDbTableDetails attribute), 54

location (*asff.generated.AwsCodeBuildProjectSource attribute*), 51  
 log\_file\_validation\_enabled (*asff.generated.AwsCloudTrailTrailDetails attribute*), 48  
 log\_types\_to\_disable (*asff.generated.AwsRdsPendingCloudWatchLogsExports attribute*), 116  
 log\_types\_to\_enable (*asff.generated.AwsRdsPendingCloudWatchLogsExports attribute*), 116  
 logging (*asff.generated.AwsCloudFrontDistributionDetails attribute*), 44  
 logging\_level (*asff.generated.AwsApiGatewayMethodSettings attribute*), 30  
 logging\_level (*asff.generated.AwsApiGatewayV2RouteSettings attribute*), 34  
 Long (in module *asff.generated*), 26

## M

maintenance\_track\_name (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 maintenance\_track\_name (*asff.generated.AwsRedshiftClusterPendingModifiedValues attribute*), 125  
 malware (*asff.generated.AwsSecurityFinding attribute*), 133  
 Malware (class in *asff.generated*), 140  
 MalwareList (in module *asff.generated*), 26  
 MalwareState (in module *asff.generated*), 26  
 MalwareType (in module *asff.generated*), 26  
 manual\_snapshot\_retention\_period (*asff.generated.AwsRedshiftClusterClusterSnapshotCopyStatus attribute*), 118  
 manual\_snapshot\_retention\_period (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 master\_arn (*asff.generated.AwsLambdaFunctionDetails attribute*), 94  
 master\_user\_password (*asff.generated.AwsRdsDbPendingModifiedValues attribute*), 111  
 master\_user\_password (*asff.generated.AwsRedshiftClusterPendingModifiedValues attribute*), 125  
 master\_username (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 master\_username (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 102  
 master\_username (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 master\_username (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 master\_username (*asff.generated.AwsRedshiftClusterDetails attribute*), 122  
 max\_age (*asff.generated.AwsCorsConfiguration attribute*), 52  
 max\_allocated\_storage (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 max\_session\_duration (*asff.generated.AwsIamRoleDetails attribute*), 90  
 memory\_size (*asff.generated.AwsLambdaFunctionDetails attribute*), 94  
 message (*asff.generated.AwsLambdaFunctionEnvironmentError attribute*), 95  
 message (*asff.generated.AwsRdsDbStatusInfo attribute*), 114  
 method\_settings (*asff.generated.AwsApiGatewayStageDetails attribute*), 32  
 metrics\_enabled (*asff.generated.AwsApiGatewayMethodSettings attribute*), 30  
 mfa\_authenticated (*asff.generated.AwsIamAccessKeySessionContextAttributes attribute*), 83  
 minimum\_compression\_size (*asff.generated.AwsApiGatewayRestApiDetails attribute*), 31  
 missing\_count (*asff.generated.PatchSummary attribute*), 144  
 mode (*asff.generated.AwsLambdaFunctionTracingConfig attribute*), 96  
 module  
     *asff*, 13  
     *asff.constants*, 13  
     *asff.exceptions*, 13  
     *asff.finding*, 14  
     *asff.generated*, 18  
 monitoring\_interval (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 monitoring\_role\_arn (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 multi\_az (*asff.generated.AwsRdsDbClusterDetails attribute*), 100  
 multi\_az (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 multi\_az (*asff.generated.AwsRdsDbPendingModifiedValues attribute*), 111

## N

n (*asff.generated.AwsApiGatewayRestApiDetails attribute*), 31  
 n (*asff.generated.AwsApiGatewayV2ApiDetails attribute*), 33

name (*asff.generated.AwsCertificateManagerCertificateExtendedKeyUsage* attribute), 70  
     attribute), 40      node\_type (*asff.generated.AwsRedshiftClusterDetails*  
 name (*asff.generated.AwsCertificateManagerCertificateKeyUsage* attribute), 122  
     attribute), 40      node\_type (*asff.generated.AwsRedshiftClusterPendingModifiedValues*  
 name (*asff.generated.AwsCertificateManagerCertificateResourceRecordSet* attribute), 125  
     attribute), 41      non\_key\_attributes  
 name (*asff.generated.AwsCloudTrailTrailDetails* attribute), 48  
     (*asff.generated.AwsDynamoDbTableProjection*  
     attribute), 57  
 name (*asff.generated.AwsCodeBuildProjectDetails* attribute), 49  
     NonEmptyString (in module *asff.generated*), 26  
     NonEmptyStringList (in module *asff.generated*), 26  
 name (*asff.generated.AwsRdsDbProcessorFeature* attribute), 112  
     normal (*asff.generated.AwsRdsDbStatusInfo* attribute),  
     114  
 name (*asff.generated.AwsRdsDbSubnetGroupSubnetAvailabilityZone* attribute), 116  
     normalized (*asff.generated.Severity* attribute), 151  
 name (*asff.generated.AwsSecretsManagerSecretDetails* attribute), 130  
     not\_after (*asff.generated.AwsCertificateManagerCertificateDetails*  
     attribute), 38  
 name (*asff.generated.AwsWafWebAclDetails* attribute), 136  
     not\_before (*asff.generated.AwsCertificateManagerCertificateDetails*  
     attribute), 38  
     note (*asff.generated.AwsSecurityFinding* attribute), 133  
     Note (class in *asff.generated*), 143  
 name (*asff.generated.ContainerDetails* attribute), 138  
     number\_of\_decreases\_today  
     (*asff.generated.AwsDynamoDbTableProvisionedThroughput*  
     attribute), 57  
 name (*asff.generated.Malware* attribute), 140  
     number\_of\_nodes (*asff.generated.AwsRedshiftClusterDetails*  
     attribute), 122  
 name (*asff.generated.ProcessDetails* attribute), 146  
     number\_of\_nodes (*asff.generated.AwsRedshiftClusterPendingModified*  
     attribute), 125  
 name (*asff.generated.SoftwarePackage* attribute), 152  
 name (*asff.generated.VulnerabilityVendor* attribute), 154  
 network (*asff.generated.AwsSecurityFinding* attribute), 133  
 Network (class in *asff.generated*), 140  
 network\_border\_group  
     (*asff.generated.AwsEc2EipDetails* attribute),  
     61  
 network\_interface\_id  
     (*asff.generated.AwsEc2EipDetails* attribute),  
     61  
 network\_interface\_id  
     (*asff.generated.AwsEc2NetworkInterfaceDetails*  
     attribute), 64  
 network\_interface\_owner\_id  
     (*asff.generated.AwsEc2EipDetails* attribute),  
     61  
 network\_path (*asff.generated.AwsSecurityFinding* attribute), 133  
 NetworkDirection (in module *asff.generated*), 26  
 NetworkHeader (class in *asff.generated*), 141  
 NetworkPathComponent (class in *asff.generated*), 142  
 NetworkPathComponentDetails (class in *asff.generated*), 143  
 NetworkPathList (in module *asff.generated*), 26  
 next\_maintenance\_window\_start\_time  
     (*asff.generated.AwsRedshiftClusterDetails*  
     attribute), 122  
 node\_role (*asff.generated.AwsRedshiftClusterClusterNode* attribute), 116  
 node\_to\_node\_encryption\_options  
     (*asff.generated.AwsElasticsearchDomainDetails*

## O

o\_id (*asff.generated.AwsCertificateManagerCertificateExtendedKeyUsage* attribute), 40  
 open\_port\_range (*asff.generated.Network* attribute), 141  
 operation (*asff.generated.PatchSummary* attribute), 144  
 operation\_end\_time  
     (*asff.generated.PatchSummary* attribute),  
     144  
 operation\_start\_time  
     (*asff.generated.PatchSummary* attribute),  
     145  
 option\_group\_memberships  
     (*asff.generated.AwsRdsDbInstanceDetails*  
     attribute), 108  
 option\_group\_name  
     (*asff.generated.AwsRdsDbOptionGroupMembership*  
     attribute), 110  
 option\_group\_name  
     (*asff.generated.AwsRdsDbSnapshotDetails*  
     attribute), 113  
 options (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 origin (*asff.generated.AwsKmsKeyDetails* attribute), 92

origin\_access\_identity (*asff.generated.AwsCloudFrontDistributionOriginS3OriginDetails* attribute), 47  
 origin\_groups (*asff.generated.AwsCloudFrontDistributionDetails* attribute), 44  
 origin\_path (*asff.generated.AwsCloudFrontDistributionOriginDetails* attribute), 46  
 original (*asff.generated.Severity* attribute), 151  
 origins (*asff.generated.AwsCloudFrontDistributionDetails* attribute), 44  
 other (*asff.generated.ResourceDetails* attribute), 150  
 other\_policies (*asff.generated.AwsElbLoadBalancerPolicies* attribute), 80  
 override\_action (*asff.generated.AwsWafWebAclRule* attribute), 137  
 owner (*asff.generated.AwsSnsTopicDetails* attribute), 134  
 owner\_alias (*asff.generated.AwsElbLoadBalancerSourceSecurityGroup* attribute), 80  
 owner\_id (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 owner\_id (*asff.generated.AwsS3BucketDetails* attribute), 128  
 owner\_name (*asff.generated.AwsS3BucketDetails* attribute), 128  
**P**  
 parameter\_apply\_error\_description (*asff.generated.AwsRedshiftClusterClusterParameterStatus* attribute), 117  
 parameter\_apply\_status (*asff.generated.AwsRdsDbParameterGroup* attribute), 110  
 parameter\_apply\_status (*asff.generated.AwsRedshiftClusterClusterParameterGroup* attribute), 117  
 parameter\_apply\_status (*asff.generated.AwsRedshiftClusterClusterParameterStatus* attribute), 117  
 parameter\_group\_name (*asff.generated.AwsRedshiftClusterClusterParameterGroup* attribute), 117  
 parameter\_name (*asff.generated.AwsRedshiftClusterClusterParameterStatus* attribute), 117  
 parent\_pid (*asff.generated.ProcessDetails* attribute), 146  
 partition (*asff.generated.Resource* attribute), 147  
 Partition (in module *asff.generated*), 26  
 patch\_summary (*asff.generated.AwsSecurityFinding* attribute), 133  
 PatchSummary (class in *asff.generated*), 143  
 path (*asff.generated.AwsIamGroupDetails* attribute), 85  
 path (*asff.generated.AwsIamInstanceProfile* attribute), 86  
 path (*asff.generated.AwsIamInstanceProfileRole* attribute), 87  
 path (*asff.generated.AwsIamPolicyDetails* attribute), 88  
 path (*asff.generated.AwsIamRoleDetails* attribute), 90  
 path (*asff.generated.AwsIamUserDetails* attribute), 91  
 path (*asff.generated.Malware* attribute), 140  
 path (*asff.generated.ProcessDetails* attribute), 146  
 peering\_status (*asff.generated.AwsEc2SecurityGroupUserIdGroupPairs* attribute), 67  
 pending\_actions (*asff.generated.AwsRedshiftClusterDetails* attribute), 122  
 pending\_cloud\_watch\_logs\_exports (*asff.generated.AwsRdsDbPendingModifiedValues* attribute), 111  
 pending\_modified\_values (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 pending\_modified\_values (*asff.generated.AwsRedshiftClusterDetails* attribute), 122  
 percent\_progress (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 103  
 percent\_progress (*asff.generated.AwsRdsDbSnapshotDetails* attribute), 113  
 percent\_traffic (*asff.generated.AwsApiGatewayCanarySettings* attribute), 29  
 performance\_insights\_enabled (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 performance\_insights\_kms\_key\_id (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 performance\_insights\_retention\_period (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 permissions\_boundary (*asff.generated.AwsIamRoleDetails* attribute), 90  
 permissions\_boundary (*asff.generated.AwsIamUserDetails* attribute), 91  
 permissions\_boundary\_arn (*asff.generated.AwsIamPermissionsBoundary* attribute), 87  
 permissions\_boundary\_type (*asff.generated.AwsIamPermissionsBoundary* attribute), 87  
 permissions\_boundary\_usage\_count (*asff.generated.AwsIamPolicyDetails* attribute), 88  
 pid (*asff.generated.ProcessDetails* attribute), 146  
 policies (*asff.generated.AwsElbLoadBalancerDetails* attribute), 77  
 policy\_arn (*asff.generated.AwsIamAttachedManagedPolicy* attribute), 86



attribute), 84  
 policy\_id (asff.generated.AwsIamPolicyDetails attribute), 88  
 policy\_name (asff.generated.AwsElbAppCookieStickinessPolicy attribute), 73  
 policy\_name (asff.generated.AwsElbLbCookieStickinessPolicy attribute), 73  
 policy\_name (asff.generated.AwsIamAttachedManagedPolicy attribute), 84  
 policy\_name (asff.generated.AwsIamGroupPolicy attribute), 85  
 policy\_name (asff.generated.AwsIamPolicyDetails attribute), 88  
 policy\_name (asff.generated.AwsIamRolePolicy attribute), 90  
 policy\_name (asff.generated.AwsIamUserPolicy attribute), 91  
 policy\_names (asff.generated.AwsElbLoadBalancerBackendServers attribute), 75  
 policy\_names (asff.generated.AwsElbLoadBalancerListenerDescription attribute), 80  
 policy\_version\_list (asff.generated.AwsIamPolicyDetails attribute), 88  
 port (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 port (asff.generated.AwsRdsDbClusterSnapshotDetails attribute), 103  
 port (asff.generated.AwsRdsDbInstanceEndpoint attribute), 109  
 port (asff.generated.AwsRdsDbPendingModifiedValues attribute), 111  
 port (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 port (asff.generated.AwsRedshiftClusterEndpoint attribute), 123  
 port\_ranges (asff.generated.NetworkPathComponentDetails attribute), 143  
 PortRange (class in asff.generated), 145  
 PortRangeList (in module asff.generated), 26  
 preferred\_backup\_window (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 preferred\_backup\_window (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 preferred\_maintenance\_window (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 preferred\_maintenance\_window (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 preferred\_maintenance\_window (asff.generated.AwsRedshiftClusterDetails attribute), 122  
 prefix (asff.generated.AwsCloudFrontDistributionLogging attribute), 44  
 prefix\_list\_id (asff.generated.AwsEc2SecurityGroupPrefixListId attribute), 67  
 prefix\_list\_ids (asff.generated.AwsEc2SecurityGroupIpPermissions attribute), 66  
 principal\_id (asff.generated.AwsIamAccessKeyDetails attribute), 82  
 principal\_id (asff.generated.AwsIamAccessKeySessionContextSession attribute), 84  
 principal\_name (asff.generated.AwsIamAccessKeyDetails attribute), 82  
 principal\_type (asff.generated.AwsIamAccessKeyDetails attribute), 82  
 priority (asff.generated.AwsWafWebAclRule attribute), 137  
 PrivateServerDescription (asff.generated.AwsEc2EipDetails attribute), 116  
 private\_ip\_address (asff.generated.AwsRedshiftClusterClusterNode attribute), 116  
 process (asff.generated.AwsSecurityFinding attribute), 133  
 ProcessDetails (class in asff.generated), 145  
 processor\_features (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 processor\_features (asff.generated.AwsRdsDbPendingModifiedValues attribute), 111  
 processor\_features (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 product (asff.generated.Severity attribute), 151  
 product\_arn (asff.generated.AwsSecurityFinding attribute), 133  
 product\_arn (asff.generated.RelatedFinding attribute), 146  
 product\_fields (asff.generated.AwsSecurityFinding attribute), 133  
 progress\_in\_mega\_bytes (asff.generated.AwsRedshiftClusterRestoreStatus attribute), 127  
 projection (asff.generated.AwsDynamoDbTableGlobalSecondaryIndex attribute), 55  
 projection (asff.generated.AwsDynamoDbTableLocalSecondaryIndex attribute), 56  
 projection\_type (asff.generated.AwsDynamoDbTableProjection attribute), 57  
 promotion\_tier (asff.generated.AwsRdsDbClusterMember attribute), 101  
 promotion\_tier (asff.generated.AwsRdsDbInstanceDetails attribute), 122

attribute), 108  
 protocol (*asff.generated.AwsElbLoadBalancerListener* attribute), 79  
 protocol (*asff.generated.AwsSnsTopicSubscription* attribute), 135  
 protocol (*asff.generated.Network* attribute), 141  
 protocol (*asff.generated.NetworkHeader* attribute), 142  
 protocol\_type (*asff.generated.AwsApiGatewayV2ApiDetails* attribute), 33  
 provisioned\_throughput (*asff.generated.AwsDynamoDbTableDetails* attribute), 54  
 provisioned\_throughput (*asff.generated.AwsDynamoDbTableGlobalSecondaryIndex* attribute), 55  
 provisioned\_throughput\_override (*asff.generated.AwsDynamoDbTableReplica* attribute), 58  
 provisioned\_throughput\_override (*asff.generated.AwsDynamoDbTableReplicaGlobalSecondaryIndex* attribute), 59  
 public\_ip (*asff.generated.AwsEc2EipDetails* attribute), 61  
 public\_ip\_address (*asff.generated.AwsRedshiftClusterClusterNode* attribute), 116  
 public\_ipv4\_pool (*asff.generated.AwsEc2EipDetails* attribute), 61  
 publicly\_accessible (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 publicly\_accessible (*asff.generated.AwsRedshiftClusterDetails* attribute), 122  
 publicly\_accessible (*asff.generated.AwsRedshiftClusterPendingModification* attribute), 126

## Q

quantity (*asff.generated.AwsCloudFrontDistributionOriginGroupPathPatternStatusCodes* attribute), 45  
 queue\_name (*asff.generated.AwsSqsQueueDetails* attribute), 135

## R

read\_capacity\_units (*asff.generated.AwsDynamoDbTableProvisionedThroughput* attribute), 58  
 read\_capacity\_units (*asff.generated.AwsDynamoDbTableProvisionedThroughputOverride* attribute), 58  
 read\_replica\_db\_cluster\_identifiers (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 read\_replica\_db\_instance\_identifiers (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 read\_replica\_identifiers (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 read\_replica\_source\_db\_instance\_identifier (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 reader\_endpoint (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 reason (*asff.generated.LoadBalancerState* attribute), 140  
 reason\_code (*asff.generated.StatusReason* attribute), 152  
 reboot\_option (*asff.generated.PatchSummary* attribute), 145  
 recommendation (*asff.generated.Remediation* attribute), 147  
 Recommendation (class in *asff.generated*), 146  
 record\_state (*asff.generated.AwsSecurityFinding* attribute), 133  
 RecordState (in module *asff.generated*), 26  
 reference\_urls (*asff.generated.Vulnerability* attribute), 154  
 region (*asff.generated.Resource* attribute), 147  
 region\_name (*asff.generated.AwsDynamoDbTableReplica* attribute), 58  
 registry\_credential (*asff.generated.AwsCodeBuildProjectEnvironment* attribute), 50  
 related\_findings (*asff.generated.AwsSecurityFinding* attribute), 133  
 related\_requirements (*asff.generated.Compliance* attribute), 138  
 related\_vulnerabilities (*asff.generated.Vulnerability* attribute), 154  
 RelatedFinding (class in *asff.generated*), 146  
 RelatedFindingList (in module *asff.generated*), 26  
 RelatedRequirementsList (in module *asff.generated*), 26  
 release (*asff.generated.SoftwarePackage* attribute), 152  
 remediation (*asff.generated.AwsSecurityFinding* attribute), 133  
 Remediation (class in *asff.generated*), 147  
 renewal\_eligibility (*asff.generated.AwsCertificateManagerCertificateDetails* attribute), 38  
 renewal\_status (*asff.generated.AwsCertificateManagerCertificateRenewalOverride* attribute), 41  
 renewal\_status\_reason (*asff.generated.AwsCertificateManagerCertificateRenewalSummary* attribute), 41

attribute), 41  
 renewal\_summary (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 replica\_status (asff.generated.AwsDynamoDbTableReplica attribute), 58  
 replica\_status\_description (asff.generated.AwsDynamoDbTableReplica attribute), 59  
 replicas (asff.generated.AwsDynamoDbTableDetails attribute), 54  
 require\_authorization\_for\_cache\_control (asff.generated.AwsApiGatewayMethodSettings attribute), 30  
 resize\_info (asff.generated.AwsRedshiftClusterDetails attribute), 122  
 resize\_type (asff.generated.AwsRedshiftClusterResizeInfo attribute), 126  
 Resource (class in asff.generated), 147  
 resource\_path (asff.generated.AwsApiGatewayMethodSettings attribute), 30  
 resource\_record (asff.generated.AwsCertificateManagerCertificateDetails attribute), 39  
 resource\_role (asff.generated.Resource attribute), 148  
 ResourceDetails (class in asff.generated), 148  
 ResourceList (in module asff.generated), 26  
 resources (asff.generated.AwsSecurityFinding attribute), 133  
 restore\_date\_time (asff.generated.AwsDynamoDbTableRestoreSummary attribute), 59  
 restore\_in\_progress (asff.generated.AwsDynamoDbTableRestoreSummary attribute), 59  
 restore\_status (asff.generated.AwsRedshiftClusterDetails attribute), 123  
 restore\_summary (asff.generated.AwsDynamoDbTableDetails attribute), 54  
 retention\_period (asff.generated.AwsRedshiftClusterSnapshotCopyStatus attribute), 118  
 revision\_id (asff.generated.AwsLambdaFunctionDetails attribute), 94  
 role (asff.generated.AwsLambdaFunctionDetails attribute), 94  
 role\_arn (asff.generated.AwsRdsDbClusterAssociatedRole attribute), 97  
 role\_arn (asff.generated.AwsRdsDbInstanceAssociatedRole attribute), 104  
 role\_id (asff.generated.AwsIamInstanceProfileRole attribute), 87  
 role\_id (asff.generated.AwsIamRoleDetails attribute), 90  
 role\_name (asff.generated.AwsIamInstanceProfileRole attribute), 87  
 role\_name (asff.generated.AwsIamRoleDetails attribute), 90  
 role\_policy\_list (asff.generated.AwsIamRoleDetails attribute), 90  
 roles (asff.generated.AwsIamInstanceProfile attribute), 86  
 rotation\_enabled (asff.generated.AwsSecretsManagerSecretDetails attribute), 130  
 rotation\_lambda\_arn (asff.generated.AwsSecretsManagerSecretDetails attribute), 130  
 rotation\_occurred\_within\_frequency (asff.generated.AwsSecretsManagerSecretDetails attribute), 130  
 rotation\_rules (asff.generated.AwsSecretsManagerSecretDetails attribute), 130  
 route\_selection\_expression (asff.generated.AwsApiGatewayV2ApiDetails attribute), 33  
 route\_settings (asff.generated.AwsApiGatewayV2StageDetails attribute), 33  
 rule\_id (asff.generated.AwsWafWebAclRule attribute), 137  
 rule\_id (asff.generated.WafExcludedRule attribute), 155  
 rules (asff.generated.AwsS3BucketServerSideEncryptionConfiguration attribute), 128  
 rules (asff.generated.AwsWafWebAclDetails attribute), 136  
 runtime (asff.generated.AwsLambdaFunctionDetails attribute), 94  
 s3\_bucket (asff.generated.AwsLambdaFunctionCode attribute), 92  
 s3\_bucket\_name (asff.generated.AwsCloudTrailTrailDetails attribute), 48  
 s3\_bucket\_name (asff.generated.AwsElbLoadBalancerAccessLog attribute), 74  
 s3\_bucket\_prefix (asff.generated.AwsElbLoadBalancerAccessLog attribute), 74  
 s3\_key (asff.generated.AwsLambdaFunctionCode attribute), 92  
 s3\_key\_prefix (asff.generated.AwsCloudTrailTrailDetails attribute), 48  
 s3\_object\_version (asff.generated.AwsLambdaFunctionCode attribute), 92  
 s3\_origin\_config (asff.generated.AwsCloudFrontDistributionOriginDetails attribute), 46  
 schema\_version (asff.generated.AwsSecurityFinding attribute), 133  
 scheme (asff.generated.AwsElbLoadBalancerDetails attribute), 77

scheme (*asff.generated.AwsElbv2LoadBalancerDetails attribute*), 81  
 secondary\_availability\_zone (*asff.generated.AwsRdsDbInstanceDetails attribute*), 108  
 security\_group\_ids (*asff.generated.AwsCodeBuildProjectVpcConfig attribute*), 52  
 security\_group\_ids (*asff.generated.AwsElasticsearchDomainVPCOptions attribute*), 72  
 security\_group\_ids (*asff.generated.AwsLambdaFunctionVpcConfig attribute*), 96  
 security\_groups (*asff.generated.AwsEc2NetworkInterfaceDetail attribute*), 64  
 security\_groups (*asff.generated.AwsElbLoadBalancerDetails attribute*), 77  
 security\_groups (*asff.generated.AwsElbv2LoadBalancerDetails attribute*), 81  
 SecurityGroups (in module *asff.generated*), 26  
 serial (*asff.generated.AwsCertificateManagerCertificateDetails attribute*), 38  
 server\_side\_encryption (*asff.generated.AwsS3ObjectDetails attribute*), 130  
 server\_side\_encryption\_configuration (*asff.generated.AwsS3BucketDetails attribute*), 128  
 service\_role (*asff.generated.AwsCodeBuildProjectDetails attribute*), 49  
 session\_context (*asff.generated.AwsIamAccessKeyDetails attribute*), 82  
 session\_issuer (*asff.generated.AwsIamAccessKeySessionContext attribute*), 83  
 severity (*asff.generated.AwsSecurityFinding attribute*), 133  
 Severity (class in *asff.generated*), 150  
 SeverityLabel (in module *asff.generated*), 26  
 signature\_algorithm (*asff.generated.AwsCertificateManagerCertificateDetails attribute*), 38  
 size (*asff.generated.AwsEc2VolumeDetails attribute*), 69  
 SizeBytes (in module *asff.generated*), 26  
 snapshot\_copy\_grant\_name (*asff.generated.AwsRedshiftClusterClusterSnapshotCopyStatus attribute*), 118  
 snapshot\_create\_time (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 103  
 snapshot\_create\_time (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 snapshot\_id (*asff.generated.AwsEc2VolumeDetails attribute*), 69  
 snapshot\_schedule\_identifier (*asff.generated.AwsRedshiftClusterDetails attribute*), 123  
 snapshot\_schedule\_state (*asff.generated.AwsRedshiftClusterDetails attribute*), 123  
 snapshot\_size\_in\_mega\_bytes (*asff.generated.AwsRedshiftClusterRestoreStatus attribute*), 127  
 snapshot\_type (*asff.generated.AwsRdsDbClusterSnapshotDetails attribute*), 103  
 snapshot\_type (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 sns\_topic\_arn (*asff.generated.AwsCloudTrailTrailDetails attribute*), 48  
 sns\_topic\_name (*asff.generated.AwsCloudTrailTrailDetails attribute*), 48  
 SoftwarePackage (class in *asff.generated*), 151  
 SoftwarePackageList (in module *asff.generated*), 27  
 source (*asff.generated.AwsCodeBuildProjectDetails attribute*), 49  
 source (*asff.generated.NetworkHeader attribute*), 142  
 source (*asff.generated.ThreatIntelIndicator attribute*), 153  
 source\_backup\_arn (*asff.generated.AwsDynamoDbTableRestoreSummary attribute*), 59  
 source\_db\_snapshot\_identifier (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 source\_ip\_v4 (*asff.generated.AwsEc2NetworkInterfaceDetails attribute*), 64  
 source\_ip\_v6 (*asff.generated.AwsEc2NetworkInterfaceDetails attribute*), 64  
 source\_mac (*asff.generated.AwsEc2NetworkInterfaceDetails attribute*), 64  
 source\_port (*asff.generated.AwsEc2NetworkInterfaceDetails attribute*), 64  
 source\_region (*asff.generated.AwsRdsDbSnapshotDetails attribute*), 113  
 source\_security\_group (*asff.generated.AwsElbLoadBalancerDetails attribute*), 77  
 source\_table\_arn (*asff.generated.AwsDynamoDbTableRestoreSummary attribute*), 60  
 source\_url (*asff.generated.AwsSecurityFinding attribute*), 133  
 source\_url (*asff.generated.ThreatIntelIndicator attribute*), 153  
 sse\_algorithm (*asff.generated.AwsS3BucketServerSideEncryptionByDe*



attribute), 128  
 sse\_description (asff.generated.AwsDynamoDbTableDetails attribute), 54  
 sse\_type (asff.generated.AwsDynamoDbTableSseDescription attribute), 60  
 ssekms\_key\_id (asff.generated.AwsS3ObjectDetails attribute), 130  
 ssl\_certificate\_id (asff.generated.AwsElbLoadBalancerListener attribute), 79  
 stage\_name (asff.generated.AwsApiGatewayStageDetails attribute), 32  
 stage\_name (asff.generated.AwsApiGatewayV2StageDetails attribute), 35  
 stage\_variable\_overrides (asff.generated.AwsApiGatewayCanarySettings attribute), 29  
 stage\_variables (asff.generated.AwsApiGatewayV2StageDetails attribute), 35  
 state (asff.generated.AwsEc2VpcDetails attribute), 69  
 state (asff.generated.AwsElbv2LoadBalancerDetails attribute), 81  
 state (asff.generated.Malware attribute), 140  
 status (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 status (asff.generated.AwsCloudFrontDistributionDetails attribute), 44  
 status (asff.generated.AwsDynamoDbTableSseDescription attribute), 60  
 status (asff.generated.AwsEc2NetworkInterfaceAttachment attribute), 63  
 status (asff.generated.AwsEc2VolumeAttachment attribute), 68  
 status (asff.generated.AwsEc2VolumeDetails attribute), 69  
 status (asff.generated.AwsIamAccessKeyDetails attribute), 82  
 status (asff.generated.AwsRdsDbClusterAssociatedRole attribute), 97  
 status (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 status (asff.generated.AwsRdsDbClusterOptionGroupMembership attribute), 101  
 status (asff.generated.AwsRdsDbClusterSnapshotDetails attribute), 103  
 status (asff.generated.AwsRdsDbDomainMembership attribute), 103  
 status (asff.generated.AwsRdsDbInstanceAssociatedRole attribute), 104  
 status (asff.generated.AwsRdsDbInstanceVpcSecurityGroup attribute), 109  
 status (asff.generated.AwsRdsDbOptionGroupMembership attribute), 110  
 status (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 status (asff.generated.AwsRdsDbStatusInfo attribute), 114  
 status (asff.generated.AwsRedshiftClusterClusterSecurityGroup attribute), 118  
 status (asff.generated.AwsRedshiftClusterElasticIpStatus attribute), 123  
 status (asff.generated.AwsRedshiftClusterHsmStatus attribute), 124  
 status (asff.generated.AwsRedshiftClusterRestoreStatus attribute), 127  
 status (asff.generated.AwsRedshiftClusterVpcSecurityGroup attribute), 127  
 status (asff.generated.Compliance attribute), 138  
 status (asff.generated.Workflow attribute), 156  
 status\_codes (asff.generated.AwsCloudFrontDistributionOriginGroup attribute), 45  
 status\_infos (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 status\_reasons (asff.generated.Compliance attribute), 138  
 status\_type (asff.generated.AwsRdsDbStatusInfo attribute), 114  
 StatusReason (class in asff.generated), 152  
 StatusReasonsList (in module asff.generated), 27  
 storage\_encrypted (asff.generated.AwsRdsDbClusterDetails attribute), 100  
 storage\_encrypted (asff.generated.AwsRdsDbClusterSnapshotDetails attribute), 103  
 storage\_encrypted (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 storage\_type (asff.generated.AwsRdsDbInstanceDetails attribute), 108  
 storage\_type (asff.generated.AwsRdsDbPendingModifiedValues attribute), 111  
 storage\_type (asff.generated.AwsRdsDbSnapshotDetails attribute), 113  
 stream\_enabled (asff.generated.AwsDynamoDbTableStreamSpecification attribute), 60  
 stream\_specification (asff.generated.AwsDynamoDbTableDetails attribute), 54  
 stream\_view\_type (asff.generated.AwsDynamoDbTableStreamSpecification attribute), 61  
 StringList (in module asff.generated), 27  
 subject (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 subject\_alternative\_names (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38  
 subnet\_availability\_zone

<code>(asff.generated.AwsRdsDbSubnetGroupSubnet attribute), 115</code>	<code>ThreatIntelIndicator (class in asff.generated), 152</code>
<code>subnet_group_status (asff.generated.AwsRdsDbSubnetGroup attribute), 115</code>	<code>ThreatIntelIndicatorCategory (in module asff.generated), 27</code>
<code>subnet_id (asff.generated.AvailabilityZone attribute), 28</code>	<code>ThreatIntelIndicatorList (in module asff.generated), 27</code>
<code>subnet_id (asff.generated.AwsEc2InstanceDetails attribute), 62</code>	<code>ThreatIntelIndicatorType (in module asff.generated), 27</code>
<code>subnet_identifier (asff.generated.AwsRdsDbSubnetGroupSubnet attribute), 115</code>	<code>throttling_burst_limit (asff.generated.AwsApiGatewayMethodSettings attribute), 30</code>
<code>subnet_ids (asff.generated.AwsElasticsearchDomainVPCOptions attribute), 72</code>	<code>throttling_burst_limit (asff.generated.AwsApiGatewayV2RouteSettings attribute), 34</code>
<code>subnet_ids (asff.generated.AwsLambdaFunctionVpcConfig attribute), 96</code>	<code>throttling_rate_limit (asff.generated.AwsApiGatewayMethodSettings attribute), 30</code>
<code>subnet_status (asff.generated.AwsRdsDbSubnetGroupSubnet attribute), 115</code>	<code>throttling_rate_limit (asff.generated.AwsApiGatewayV2RouteSettings attribute), 34</code>
<code>subnets (asff.generated.AwsCodeBuildProjectVpcConfig attribute), 52</code>	<code>timeout (asff.generated.AwsElbLoadBalancerConnectionDraining attribute), 75</code>
<code>subnets (asff.generated.AwsElbLoadBalancerDetails attribute), 77</code>	<code>timeout (asff.generated.AwsElbLoadBalancerHealthCheck attribute), 78</code>
<code>subnets (asff.generated.AwsRdsDbSubnetGroup attribute), 115</code>	<code>timeout (asff.generated.AwsLambdaFunctionDetails attribute), 94</code>
<code>subscription (asff.generated.AwsSnsTopicDetails attribute), 134</code>	<code>timezone (asff.generated.AwsRdsDbInstanceDetails attribute), 108</code>
<b>T</b>	<code>timezone (asff.generated.AwsRdsDbSnapshotDetails attribute), 114</code>
<code>table_id (asff.generated.AwsDynamoDbTableDetails attribute), 54</code>	<code>title (asff.generated.AwsSecurityFinding attribute), 133</code>
<code>table_name (asff.generated.AwsDynamoDbTableDetails attribute), 55</code>	<code>trust_policy (asff.generated.AwsElasticsearchDomainDomainEndpointOptions attribute), 71</code>
<code>table_size_bytes (asff.generated.AwsDynamoDbTableDetails attribute), 55</code>	<code>to_dict() (asff.AmazonSecurityFinding method), 160</code>
<code>table_status (asff.generated.AwsDynamoDbTableDetails attribute), 55</code>	<code>to_dict() (asff.finding.AmazonSecurityFinding method), 17</code>
<code>tags (asff.generated.Resource attribute), 148</code>	<code>to_json() (asff.AmazonSecurityFinding method), 160</code>
<code>target (asff.generated.AwsElbLoadBalancerHealthCheck attribute), 78</code>	<code>to_json() (asff.finding.AmazonSecurityFinding method), 17</code>
<code>target_arn (asff.generated.AwsLambdaFunctionDeadLetterConfig attribute), 93</code>	<code>to_port (asff.generated.AwsEc2SecurityGroupIpPermission attribute), 66</code>
<code>tde_credential_arn (asff.generated.AwsRdsDbInstanceDetails attribute), 108</code>	<code>topic_name (asff.generated.AwsSnsTopicDetails attribute), 134</code>
<code>tde_credential_arn (asff.generated.AwsRdsDbSnapshotDetails attribute), 114</code>	<code>tracing_config (asff.generated.AwsLambdaFunctionDetails attribute), 94</code>
<code>terminated_at (asff.generated.ProcessDetails attribute), 146</code>	<code>tracing_enabled (asff.generated.AwsApiGatewayStageDetails attribute), 32</code>
<code>text (asff.generated.Note attribute), 143</code>	<code>trail_arn (asff.generated.AwsCloudTrailTrailDetails attribute), 48</code>
<code>text (asff.generated.Recommendation attribute), 146</code>	<code>type (asff.generated.AwsCertificateManagerCertificateDetails attribute), 38</code>
<code>threat_intel_indicators (asff.generated.AwsSecurityFinding attribute), 133</code>	<code>type (asff.generated.AwsCertificateManagerCertificateResourceRecord</code>

attribute), 41  
 type (asff.generated.AwsCodeBuildProjectEnvironment attribute), 50  
 type (asff.generated.AwsCodeBuildProjectSource attribute), 51  
 type (asff.generated.AwsEc2InstanceDetails attribute), 62  
 type (asff.generated.AwsElbv2LoadBalancerDetails attribute), 81  
 type (asff.generated.AwsIamAccessKeySessionContextSessionIssuer attribute), 84  
 type (asff.generated.AwsWafWebAclRule attribute), 137  
 type (asff.generated.Malware attribute), 140  
 type (asff.generated.Resource attribute), 148  
 type (asff.generated.ThreatIntelIndicator attribute), 153  
 type (asff.generated.WafAction attribute), 155  
 type (asff.generated.WafOverrideAction attribute), 155  
 TypeList (in module asff.generated), 27  
 types (asff.generated.AwsApiGatewayEndpointConfiguration attribute), 29  
 types (asff.generated.AwsSecurityFinding attribute), 133

## U

unauthorized\_cache\_control\_header\_strategy (asff.generated.AwsApiGatewayMethodSettings attribute), 30  
 unhealthy\_threshold (asff.generated.AwsElbLoadBalancerHealthCheck attribute), 78  
 update\_date (asff.generated.AwsIamPolicyDetails attribute), 88  
 updated\_at (asff.generated.AwsCertificateManagerCertificateRenewalSettings attribute), 41  
 updated\_at (asff.generated.AwsSecurityFinding attribute), 133  
 updated\_at (asff.generated.Note attribute), 143  
 updated\_by (asff.generated.Note attribute), 143  
 url (asff.generated.Recommendation attribute), 146  
 url (asff.generated.VulnerabilityVendor attribute), 154  
 use\_stage\_cache (asff.generated.AwsApiGatewayCanarySettings attribute), 29  
 user\_defined\_fields (asff.generated.AwsSecurityFinding attribute), 133  
 user\_id (asff.generated.AwsEc2SecurityGroupUserIdGroupPair attribute), 67  
 user\_id (asff.generated.AwsIamUserDetails attribute), 91  
 user\_id\_group\_pairs (asff.generated.AwsEc2SecurityGroupIpPermission attribute), 66  
 user\_name (asff.generated.AwsIamAccessKeyDetails attribute), 82  
 user\_name (asff.generated.AwsIamAccessKeySessionContextSessionIssuer attribute), 84  
 user\_name (asff.generated.AwsIamUserDetails attribute), 91  
 user\_policy\_list (asff.generated.AwsIamUserDetails attribute), 91

## V

validate\_assignment (asff.generated.ASFFBaseModel.Config attribute), 27  
 validation\_domain (asff.generated.AwsCertificateManagerCertificateDomainValidation attribute), 39  
 validation\_emails (asff.generated.AwsCertificateManagerCertificateDomainValidation attribute), 39  
 validation\_method (asff.generated.AwsCertificateManagerCertificateDomainValidation attribute), 39  
 validation\_status (asff.generated.AwsCertificateManagerCertificateDomainValidation attribute), 39  
 ValidationError, 13, 156  
 value (asff.generated.AwsCertificateManagerCertificateResourceRecord attribute), 41  
 value (asff.generated.AwsRdsDbProcessorFeature attribute), 112  
 value (asff.generated.ThreatIntelIndicator attribute), 153  
 variables (asff.generated.AwsApiGatewayStageDetails attribute), 32  
 version (asff.generated.AwsLambdaFunctionEnvironment attribute), 95  
 vendor (asff.generated.Vulnerability attribute), 154  
 vendor\_created\_at (asff.generated.VulnerabilityVendor attribute), 154  
 vendor\_severity (asff.generated.VulnerabilityVendor attribute), 154  
 vendor\_updated\_at (asff.generated.VulnerabilityVendor attribute), 154  
 verification\_state (asff.generated.AwsSecurityFinding attribute), 133  
 VerificationState (in module asff.generated), 27  
 version (asff.generated.AwsApiGatewayRestApiDetails attribute), 31  
 version (asff.generated.AwsApiGatewayV2ApiDetails attribute), 33  
 version (asff.generated.AwsLambdaFunctionDetails attribute), 94

version (*asff.generated.AwsLambdaLayerVersionDetails* attribute), 97  
 version (*asff.generated.Cvss* attribute), 139  
 version (*asff.generated.SoftwarePackage* attribute), 152  
 version\_id (*asff.generated.AwsIamPolicyVersion* attribute), 89  
 version\_id (*asff.generated.AwsS3ObjectDetails* attribute), 130  
 viewer\_protocol\_policy (*asff.generated.AwsCloudFrontDistributionCacheBehavior* attribute), 42  
 viewer\_protocol\_policy (*asff.generated.AwsCloudFrontDistributionDefaultCacheBehavior* attribute), 43  
 vpc\_config (*asff.generated.AwsCodeBuildProjectDetails* attribute), 49  
 vpc\_config (*asff.generated.AwsLambdaFunctionDetails* attribute), 94  
 vpc\_id (*asff.generated.AwsCodeBuildProjectVpcConfig* attribute), 52  
 vpc\_id (*asff.generated.AwsEc2InstanceDetails* attribute), 62  
 vpc\_id (*asff.generated.AwsEc2SecurityGroupDetails* attribute), 65  
 vpc\_id (*asff.generated.AwsEc2SecurityGroupUserIdGroupPair* attribute), 67  
 vpc\_id (*asff.generated.AwsElasticsearchDomainVPCOptions* attribute), 72  
 vpc\_id (*asff.generated.AwsElbLoadBalancerDetails* attribute), 77  
 vpc\_id (*asff.generated.AwsElbv2LoadBalancerDetails* attribute), 81  
 vpc\_id (*asff.generated.AwsLambdaFunctionVpcConfig* attribute), 96  
 vpc\_id (*asff.generated.AwsRdsDbClusterSnapshotDetails* attribute), 103  
 vpc\_id (*asff.generated.AwsRdsDbSnapshotDetails* attribute), 114  
 vpc\_id (*asff.generated.AwsRdsDbSubnetGroup* attribute), 115  
 vpc\_id (*asff.generated.AwsRedshiftClusterDetails* attribute), 123  
 vpc\_options (*asff.generated.AwsElasticsearchDomainDetails* attribute), 70  
 vpc\_peering\_connection\_id (*asff.generated.AwsEc2SecurityGroupUserIdGroupPair* attribute), 67  
 vpc\_security\_group\_id (*asff.generated.AwsRdsDbInstanceVpcSecurityGroup* attribute), 109  
 vpc\_security\_group\_id (*asff.generated.AwsRedshiftClusterVpcSecurityGroup* attribute), 127  
 vpc\_security\_groups (*asff.generated.AwsRdsDbClusterDetails* attribute), 100  
 vpc\_security\_groups (*asff.generated.AwsRdsDbInstanceDetails* attribute), 108  
 vpc\_security\_groups (*asff.generated.AwsRedshiftClusterDetails* attribute), 123  
 vulnerabilities (*asff.generated.AwsSecurityFinding* attribute), 134  
 Vulnerability (class in *asff.generated*), 153  
 VulnerabilityList (in module *asff.generated*), 27  
 VulnerabilityVendor (class in *asff.generated*), 154  
 vulnerable\_packages (*asff.generated.Vulnerability* attribute), 154

## W

WafAction (class in *asff.generated*), 154  
 WafExcludedRule (class in *asff.generated*), 155  
 WafExcludedRuleList (in module *asff.generated*), 27  
 WafOverrideAction (class in *asff.generated*), 155  
 web\_acl\_arn (*asff.generated.AwsApiGatewayStageDetails* attribute), 32  
 web\_acl\_id (*asff.generated.AwsCloudFrontDistributionDetails* attribute), 44  
 web\_acl\_id (*asff.generated.AwsWafWebAclDetails* attribute), 136  
 workflow (*asff.generated.AwsSecurityFinding* attribute), 134  
 Workflow (class in *asff.generated*), 155  
 workflow\_state (*asff.generated.AwsSecurityFinding* attribute), 134  
 WorkflowState (in module *asff.generated*), 27  
 WorkflowStatus (in module *asff.generated*), 27  
 write\_capacity\_units (*asff.generated.AwsDynamoDbTableProvisionedThroughput* attribute), 58

## Z

zip\_file (*asff.generated.AwsLambdaFunctionCode* attribute), 93  
 zone\_name (*asff.generated.AvailabilityZone* attribute), 28