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# **cdrouter.py Documentation**

***Release 0.8.0***

**QA Cafe**

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<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Install/Upgrade . . . . .	1
1.2	Usage . . . . .	1
<b>2</b>	<b>Reference</b>	<b>3</b>
2.1	CDRouter . . . . .	3
2.2	Filters . . . . .	5
2.3	Configs . . . . .	8
2.4	Devices . . . . .	13
2.5	PowerCmd . . . . .	17
2.6	Connection . . . . .	17
2.7	Attachments . . . . .	18
2.8	Jobs . . . . .	20
2.9	Packages . . . . .	23
2.10	Results . . . . .	27
2.11	Update . . . . .	37
2.12	Alerts . . . . .	39
2.13	TestResults . . . . .	42
2.14	Annotations . . . . .	47
2.15	Captures . . . . .	48
2.16	Highlights . . . . .	50
2.17	Imports . . . . .	52
2.18	Exports . . . . .	54
2.19	History . . . . .	55
2.20	System . . . . .	56
2.21	Tags . . . . .	62
2.22	Testsuites . . . . .	63
2.23	Users . . . . .	69
	<b>Python Module Index</b>	<b>73</b>
	<b>Index</b>	<b>75</b>



# CHAPTER 1

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## Introduction

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cdrouter is a simple Python wrapper for the CDRouter Web API. <https://support.qacafe.com/cdrouter-web-api/>  
For more information on CDRouter, please visit <http://www.qacafe.com/>.

## 1.1 Install/Upgrade

cdrouter is available on [PyPI](#). To install the latest stable version from PyPI:

```
$ pip install -U cdrouter
```

cdrouter supports Python 3.5 or newer.

## 1.2 Usage

First create a *CDRouter* object, passing it the URL of your CDRouter system, for example `http://localhost`, `https://cdrouter.example.com` or `http://172.20.0.1:8015`. If your CDRouter system uses a self-signed certificate for HTTPS connections (the default), you will need to pass in `insecure=True` to disable certificate validation. If Automatic Login is not enabled on your CDRouter system, you will need to provide authentication credentials by passing in an API token via the `token` parameter or a username and password via the `username` and `password` parameters. If `token` is not specified, it will default to the value of the `CDROUTER_API_TOKEN` environment variable. *CDRouter* will prompt for a username and password as necessary if Automatic Login is not enabled and an API token is not provided.

```
import time

from cdrouter import CDRouter
from cdrouter.cdrouter import CDRouterError
from cdrouter.filters import Field as field
from cdrouter.jobs import Job
from cdrouter.jobs import Options
```

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```
c = CDRouter('http://localhost', token='deadbeef')

for p in c.packages.iter_list(filter=field('tags').contains('noretry')):
    print('Launching package {}'.format(p.name))

    try:
        j = c.jobs.launch(Job(package_id=p.id, options=Options(extra_cli_args='-
↪testvar myvar=example'))
    except CDRouterError as ce:
        print('Error launching job: {}'.format(ce))
        continue

    while j.result_id == None:
        time.sleep(1)
        j = c.jobs.get(j.id)

    print('    Result-ID: {}'.format(j.result_id))

print('done.')
```

More examples of using cdrouter can be found [here](#). Please see the *Reference* page for more information on available fields and methods for each class.

Python client for the CDRouter Web API.

## 2.1 CDRouter

### 2.1.1 CDRouter

```
class cdrouter.CDRouter(base, token=None, username=None, password=None, _getuser=<function  
_getuser_default>, _getpass=<function _getpass_default>, retries=3, in-  
secure=False)
```

Service for accessing the CDRouter Web API.

#### Parameters

- **base** – Base HTTP or HTTPS URL for CDRouter system as a string, optionally including a port. For example *http://localhost*, *http://cdrouter.lan:8015* or *https://127.0.0.1*.
- **token** – (optional) CDRouter API token as a string. Not required if Automatic Login is enabled. If omitted, value will be taken from CDRouter\_API\_TOKEN environment variable.
- **username** – (optional) Username as string. Can be omitted if **token** is specified or Automatic Login is enabled. If omitted, `_getuser` will be called when a username is required.
- **password** – (optional) Password as string. Can be omitted if **token** is specified or Automatic Login is enabled. If omitted, `_getpass` will be called when a password is required.
- **\_getuser** – (optional) If **username** is *None*, function to be called as `_getuser(base)` which returns a username as a string. If `_getuser` is *None*, `cdrouter` will print a prompt to stdout and read the username from stdin.
- **\_getpass** – (optional) If **password** is *None*, a function to be called as `_getpass(base, username)` which returns user's password as a string. If `_getpass` is *None*, `cdrouter` will print a password prompt to stdout and read the password from stdin.

- **retries** – (optional) The number of times to retry authentication with the CDRouter system before giving up as an int.
- **insecure** – (optional) If bool *True* and *base* is an HTTPS URL, skip certificate verification and allow insecure connections to the CDRouter system.

**alerts = None**

*alerts.AlertsService* object

**annotations = None**

*annotations.AnnotationsService* object

**attachments = None**

*attachments.AttachmentsService* object

**authenticate** (*retries=3*)

Set API token by authenticating via username/password.

**Parameters** **retries** – Number of authentication retries to make before giving up as an int.

**Returns** Learned API token

**Return type** string

**captures = None**

*captures.CapturesService* object

**configs = None**

*configs.ConfigsService* object

**devices = None**

*devices.DevicesService* object

**exports = None**

*exports.ExportsService* object

**highlights = None**

*highlights.HighlightsService* object

**history = None**

*history.HistoryService* object

**imports = None**

*imports.ImportsService* object

**jobs = None**

*jobs.JobsService* object

**packages = None**

*packages.PackagesService* object

**results = None**

*results.ResultsService* object

**system = None**

*system.SystemService* object

**tags = None**

*tags.TagsService* object

**tests = None**

*testresults.TestResultsService* object

**testsuites = None**

*testsuites.TestsuitesService* object



```
users = None
users.UsersService object
```

## 2.1.2 CDRouterError

```
class cdrouter.cdrouter.CDRouterError(*args, **kwargs)
    Class for representing CDRouter Web API errors.
```

## 2.1.3 Links

```
class cdrouter.cdrouter.Links(**kwargs)
    Class representing paging information returned by list calls to the CDRouter Web API.
```

### Parameters

- **first** – (optional) First page number as an int.
- **last** – (optional) Last page number as an int.
- **current** – (optional) Current page number as an int.
- **total** – (optional) Total element count across all pages as an int.
- **limit** – (optional) Resources per page limit as an int.
- **next** – (optional) Next page number as an int.
- **prev** – (optional) Previous page number as an int.

## 2.1.4 Share

```
class cdrouter.cdrouter.Share(**kwargs)
    Model for CDRouter Shares.
```

### Parameters

- **user\_id** – (optional) User ID as an int.
- **read** – (optional) Bool *True* if reading is allowed.
- **write** – (optional) Bool *True* if writing is allowed.
- **execute** – (optional) Bool *True* if executing is allowed.

## 2.2 Filters

### 2.2.1 Field

```
class cdrouter.filters.Field(*args)
    Class for constructing CDRouter Web API filters. Field objects can be passed to filter parameters to make constructing filters easier.
```

The `value` parameter passed to Field methods is converted to a string using the builtin `str` function. Bool values are additionally lowercased such that bool `True` becomes string `'true'` and `False` becomes string `'false'`. The Field methods `contains`, `contained_by` and `overlaps` accept a variable number of values which are converted into a list in accordance with the API's syntax. For example, the int values `1, 2,`

3 is converted to the string '{1,2,3}' and the string values 'one', 'two', 'three' is converted to the string '{one,two,three}'.

Usage:

```
from cdrouter.filters import Field as field
# each pair of filters below are equivalent
c.packages.list(filter=[
    field('id').eq(123),
    'id=123',
    #
    field('use_as_testlist').ne(True),
    'use_as_testlist!=true',
    #
    field('name').not_().match('^(foo|bar)$', ignorecase=True),
    'name!~*(foo|bar)$',
    #
    field('tags').contains('foo', 'bar', 'baz'),
    'tags@>{foo,bar,baz}',
])
```

See [this](#) page for more details on CDRouter Web API filters.

**contained\_by** (\*args)

Construct an array contained by (<@) filter.

**Parameters** **args** – Filter values

**Returns** `filters.Field` object

**Return type** *filters.Field*

**contains** (\*args)

Construct an array contains (@>) filter.

**Parameters** **args** – Filter values

**Returns** `filters.Field` object

**Return type** *filters.Field*

**eq** (value)

Construct an equal to (=) filter.

**Parameters** **value** – Filter value

**Returns** `filters.Field` object

**Return type** *filters.Field*

**ge** (value)

Construct a greater than or equal to (>=) filter.

**Parameters** **value** – Filter value

**Returns** `filters.Field` object

**Return type** *filters.Field*

**gt** (value)

Construct a greater than (>) filter.

**Parameters** **value** – Filter value

**Returns** `filters.Field` object

**Return type** *filters.Field*

**le** (*value*)

Construct a less than or equal to ( $\leq$ ) filter.

**Parameters** **value** – Filter value

**Returns** *filters.Field* object

**Return type** *filters.Field*

**lt** (*value*)

Construct a less than ( $<$ ) filter.

**Parameters** **value** – Filter value

**Returns** *filters.Field* object

**Return type** *filters.Field*

**match** (*value*, *ignorecase=False*)

Construct a regexp match ( $\sim$ ) filter. Combine with `not_` method to construct a negative regexp match ( $!\sim$ ) filter.

**Parameters**

- **value** – Filter value
- **ignorecase** – If bool *True*, make match case insensitive ( $\sim^*$ ,  $!\sim^*$ )

**Returns** *filters.Field* object

**Return type** *filters.Field*

**ne** (*value*)

Construct a not equal to ( $\neq$ ) filter.

**Parameters** **value** – Filter value

**Returns** *filters.Field* object

**Return type** *filters.Field*

**not\_** ()

Negate the filter. Not supported by `contains`, `contained_by` or `overlaps` methods.

**Returns** *filters.Field* object

**Return type** *filters.Field*

**overlaps** (*\*args*)

Construct an array overlaps ( $\&\&$ ) filter.

**Parameters** **args** – Filter values

**Returns** *filters.Field* object

**Return type** *filters.Field*

## 2.3 Configs

### 2.3.1 ConfigsService

**class** `cdrouter.configs.ConfigsService` (*service*)

Service for accessing CDRouter Configs.

**bulk\_copy** (*ids*)

Bulk copy a set of configs.

**Parameters** *ids* – Int list of config IDs.

**Returns** `configs.Config` list

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)

Bulk delete a set of configs.

**Parameters**

- *ids* – (optional) Int list of config IDs.
- *filter* – (optional) String list of filters.
- *type* – (optional) *union* or *inter* as string.
- *all* – (optional) Apply to all if bool *True*.

**bulk\_edit** (*\_fields, ids=None, filter=None, type=None, all=False, testvars=None*)

Bulk edit a set of configs.

**Parameters**

- *\_fields* – `configs.Config` object
- *ids* – (optional) Int list of config IDs.
- *filter* – (optional) String list of filters.
- *type* – (optional) *union* or *inter* as string.
- *all* – (optional) Apply to all if bool *True*.
- *testvars* – (optional) `configs.ConfigTestvars` list

**bulk\_edit\_testvars** (*id, testvars*)

Bulk edit a config's testvars.

**Parameters**

- *id* – Config ID as an int.
- *testvars* – `configs.Testvar` list

**Returns** `configs.Testvar` list

**bulk\_export** (*ids*)

Bulk export a set of configs.

**Parameters** *ids* – Int list of config IDs.

**Return type** tuple (*io.BytesIO*, *'filename'*)

**check\_config** (*contents*)

Process config contents with `cdrouter-cli -check-config`.

**Parameters** *contents* – Config contents as string.

**Returns** `configs.CheckConfig` object

**Return type** `configs.CheckConfig`

**create** (*resource*)

Create a new config.

**Parameters** **resource** – `configs.Config` object

**Returns** `configs.Config` object

**Return type** `configs.Config`

**delete** (*id*)

Delete a config.

**Parameters** **id** – Config ID as an int.

**delete\_testvar** (*id, name, group=None*)

Delete a testvar in a config. Deleting a testvar unsets any explicitly configured value for it in the config.

**Parameters**

- **id** – Config ID as an int.
- **name** – Testvar name as string.
- **group** – (optional) Testvar group as string.

**edit** (*resource*)

Edit a config.

**Parameters** **resource** – `configs.Config` object

**Returns** `configs.Config` object

**Return type** `configs.Config`

**edit\_shares** (*id, user\_ids*)

Edit shares for a config.

**Parameters**

- **id** – Config ID as an int.
- **user\_ids** – User IDs as int list.

**Returns** `cdrouter.Share` list

**edit\_testvar** (*id, resource*)

Edit a testvar in a config.

**Parameters**

- **id** – Config ID as an int.
- **resource** – `configs.Testvar` object.

**Returns** `configs.Testvar` object

**Return type** `configs.Testvar`

**export** (*id*)

Export a config.

**Parameters** **id** – Config ID as an int.

**Return type** tuple (`io.BytesIO`, `'filename'`)

**get** (*id*)  
Get a config.

**Parameters** **id** – Config ID as an int.

**Returns** `configs.Config` object

**Return type** *configs.Config*

**get\_by\_name** (*name*)  
Get a config by name.

**Parameters** **name** – Config name as string.

**Returns** `configs.Config` object

**Return type** *configs.Config*

**get\_interfaces** (*contents*)  
Process config contents with `cdrouter-cli -print-interfaces`.

**Parameters** **contents** – Config contents as string.

**Returns** `configs.Interfaces` list

**get\_networks** (*contents*)  
Process config contents with `cdrouter-cli -print-networks-json`.

**Parameters** **contents** – Config contents as string.

**Returns** `configs.Networks` object

**Return type** *configs.Networks*

**get\_new** ()  
Get output of `cdrouter-cli -new-config`.

**Return type** string

**get\_plaintext** (*id*)  
Get a config as plaintext.

**Parameters** **id** – Config ID as an int.

**Return type** string

**get\_shares** (*id*)  
Get shares for a config.

**Parameters** **id** – Config ID as an int.

**Returns** `cdrouter.Share` list

**get\_testvar** (*id, name, group=None*)  
Get a testvar from a config.

**Parameters**

- **id** – Config ID as an int.
- **name** – Testvar name as string.
- **group** – (optional) Testvar group as string.

**Returns** `configs.Testvar` object

**Return type** *configs.Testvar*

**iter\_list** (\*args, \*\*kwargs)

Get a list of configs. Whereas `list` fetches a single page of configs according to its `limit` and `page` arguments, `iter_list` returns all configs by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `configs.Config` list

**list** (filter=None, type=None, sort=None, limit=None, page=None, detailed=None)

Get a list of configs, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `configs.Page` object

**list\_testvars** (id)

Get a list of a config's testvars.

**Parameters** **id** – Config ID as an int.

**Returns** `configs.Testvar` list

**upgrade\_config** (contents)

Process config contents with `cdrouter-cli -upgrade-config`.

**Parameters** **contents** – Config contents as string.

**Returns** `configs.UpgradeConfig` object

**Return type** `configs.UpgradeConfig`

## 2.3.2 Config

**class** `cdrouter.configs.Config` (\*\*kwargs)

Model for CDRouter Configs.

**Parameters**

- **id** – (optional) Config ID as an int.
- **name** – (optional) Config name as string.
- **description** – (optional) Config description as string.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **contents** – (optional) Config contents as string.
- **user\_id** – (optional) User ID as an int.

- **result\_id** – (optional) Result ID as an int (if a config snapshot).
- **tags** – (optional) Tags as string list.
- **note** – (optional) Note as string.
- **interfaces** – (optional) `configs.Interfaces` list (if a config snapshot).

### 2.3.3 Page

**class** `cdrouter.configs.Page`  
Named tuple for a page of list response data.

**Parameters**

- **data** – `configs.Config` list
- **links** – `cdrouter.Links` object

### 2.3.4 ConfigError

**class** `cdrouter.configs.ConfigError` (\*\*kwargs)  
Model for CDRouter Check Config Error.

**Parameters**

- **lines** – (optional) Line numbers as string list.
- **error** – (optional) Error message as string.

### 2.3.5 CheckConfig

**class** `cdrouter.configs.CheckConfig` (\*\*kwargs)  
Model for CDRouter Check Config.

**Parameters** **errors** – (optional) `configs.ConfigError` list

### 2.3.6 UpgradeConfig

**class** `cdrouter.configs.UpgradeConfig` (\*\*kwargs)  
Model for CDRouter Config Upgrades.

**Parameters**

- **success** – (optional) Bool *True* if successful.
- **output** – (optional) Output as string.

### 2.3.7 Networks

**class** `cdrouter.configs.Networks` (\*\*kwargs)  
Model for CDRouter Config Networks.

**Parameters**

- **name** – (optional) Network name as string.
- **type** – (optional) Network type as string.



- **side** – (optional) Network side as string.
- **title** – (optional) Network title as string.
- **children** – (optional) `configs.Networks` list.

## 2.3.8 Interfaces

**class** `cdrouter.configs.Interfaces` (*\*\*kwargs*)  
Model for CDRouter Config Interfaces.

### Parameters

- **name** – (optional) Interface name (i.e. 'lan', 'wan', etc.) as string.
- **value** – (optional) Interface value (i.e. 'eth0', 'eth1', etc.) as string.
- **is\_wireless** – (optional) Bool *True* if interface is a wireless interface.
- **is\_ics** – (optional) Bool *True* if interface is the ICS interface.

## 2.3.9 Testvar

**class** `cdrouter.configs.Testvar` (*\*\*kwargs*)  
Model for CDRouter Config Testvars.

### Parameters

- **group** – (optional) Testvar group name as string.
- **name** – (optional) Testvar name as string.
- **value** – (optional) Testvar value as string.
- **default** – (optional) Testvar default value as string.
- **isdefault** – (optional) Bool *True* if testvar is set to default value.
- **line** – (optional) Config file line number as int.

## 2.4 Devices

### 2.4.1 DevicesService

**class** `cdrouter.devices.DevicesService` (*service*)  
Service for accessing CDRouter Devices.

**bulk\_copy** (*ids*)  
Bulk copy a set of devices.

**Parameters** **ids** – Int list of device IDs.

**Returns** `devices.Device` list

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)  
Bulk delete a set of devices.

### Parameters

- **ids** – (optional) Int list of device IDs.

- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_edit** (*\_fields*, *ids=None*, *filter=None*, *type=None*, *all=False*)

Bulk edit a set of devices.

**Parameters**

- **\_fields** – `devices.Device` object
- **ids** – (optional) Int list of device IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_export** (*ids*)

Bulk export a set of devices.

**Parameters** **ids** – Int list of device IDs.

**Return type** tuple (*io.BytesIO*, 'filename')

**connect** (*id*)

Open proxy connection to a device's management interface.

**Parameters** **id** – Device ID as an int.

**Returns** `devices.Connection` object

**Return type** *devices.Connection*

**create** (*resource*)

Create a new device.

**Parameters** **resource** – `devices.Device` object

**Returns** `devices.Device` object

**Return type** *devices.Device*

**delete** (*id*)

Delete a device.

**Parameters** **id** – Device ID as an int.

**disconnect** (*id*)

Close proxy connection to a device's management interface.

**Parameters** **id** – Device ID as an int.

**edit** (*resource*)

Edit a device.

**Parameters** **resource** – `devices.Device` object

**Returns** `devices.Device` object

**Return type** *devices.Device*

**edit\_shares** (*id*, *user\_ids*)

Edit shares for a device.

**Parameters**

- **id** – Device ID as an int.
- **user\_ids** – User IDs as int list.

**Returns** `cdrouter.Share` list

**export** (*id*)

Export a device.

**Parameters** **id** – Device ID as an int.

**Return type** tuple (*io.BytesIO*, *'filename'*)

**get** (*id*)

Get a device.

**Parameters** **id** – Device ID as an int.

**Returns** `devices.Device` object

**Return type** *devices.Device*

**get\_by\_name** (*name*)

Get a device by name.

**Parameters** **name** – Device name as string.

**Returns** `devices.Device` object

**Return type** *devices.Device*

**get\_connection** (*id*)

Get information on proxy connection to a device's management interface.

**Parameters** **id** – Device ID as an int.

**Returns** `devices.Connection` object

**Return type** *devices.Connection*

**get\_shares** (*id*)

Get shares for a device.

**Parameters** **id** – Device ID as an int.

**Returns** `cdrouter.Share` list

**iter\_list** (*\*args*, *\*\*kwargs*)

Get a list of devices. Whereas `list` fetches a single page of devices according to its `limit` and `page` arguments, `iter_list` returns all devices by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `devices.Device` list

**list** (*filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*, *detailed=None*)

Get a list of devices, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.

- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `devices.Page` object

**power\_off** (*id*)

Power off a device using it's power off command.

**Parameters** **id** – Device ID as an int.

**Returns** `devices.PowerCmd` object

**Return type** *devices.PowerCmd*

**power\_on** (*id*)

Power on a device using it's power on command.

**Parameters** **id** – Device ID as an int.

**Returns** `devices.PowerCmd` object

**Return type** *devices.PowerCmd*

## 2.4.2 Device

**class** `cdrouter.devices.Device` (*\*\*kwargs*)  
Model for CDRouter Devices.

### Parameters

- **id** – (optional) Device ID as an int.
- **name** – (optional) Name as string.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **user\_id** – (optional) User ID as an int.
- **result\_id** – (optional) Result ID as an int (if a device snapshot).
- **attachments\_dir** – (optional) Filepath for attachments as string.
- **picture\_id** – (optional) Attachment ID for used for device picture as an int.
- **tags** – (optional) Tags as string list.
- **default\_ip** – (optional) Default IP as a string
- **default\_login** – (optional) Default login as a string
- **default\_password** – (optional) Default password as a string
- **default\_ssid** – (optional) Default SSID as a string
- **location** – (optional) Location as a string
- **device\_category** – (optional) Device category as a string
- **manufacturer** – (optional) Manufacturer as a string
- **manufacturer\_oui** – (optional) Manufacturer OUI as a string
- **model\_name** – (optional) Model name as a string

- **model\_number** – (optional) Model number as a string
- **description** – (optional) Description as a string
- **product\_class** – (optional) Product class as a string
- **serial\_number** – (optional) Serial number as a string
- **hardware\_version** – (optional) Hardware version as a string
- **software\_version** – (optional) Software version as a string
- **provisioning\_code** – (optional) Provisioning code as a string
- **note** – (optional) Note as a string
- **insecure\_mgmt\_url** – (optional) *True* if insecure HTTPS management URLs are allowed
- **mgmt\_url** – (optional) Management URL as a string
- **add\_mgmt\_addr** – (optional) *True* if address should be configured when opening proxy connection
- **mgmt\_interface** – (optional) Interface on which to configure address as string
- **mgmt\_addr** – (optional) Address to configure as string
- **power\_on\_cmd** – (optional) Command to run to power on device as string
- **power\_off\_cmd** – (optional) Command to run to power off device as string

### 2.4.3 Page

**class** `cdrouter.devices.Page`

Named tuple for a page of list response data.

**Parameters**

- **data** – `devices.Device` list
- **links** – `cdrouter.Links` object

## 2.5 PowerCmd

**class** `cdrouter.devices.PowerCmd` (*\*\*kwargs*)

Model for CDRouter Device Power command result.

**Parameters** **output** – (optional) Output from power on/off command as string.

## 2.6 Connection

**class** `cdrouter.devices.Connection` (*\*\*kwargs*)

Model for CDRouter Device Connections.

**Parameters**

- **proxy\_port** – (optional) HTTP proxy port as an int.
- **proxy\_https** – (optional) HTTPS proxy port as an int.

## 2.7 Attachments

### 2.7.1 AttachmentsService

**class** `cdrouter.attachments.AttachmentsService` (*service*)

**create** (*id*, *fd*, *filename*=*'attachment-name'*)

Add an attachment to a device.

**Parameters**

- **id** – Device ID as an int.
- **fd** – File-like object to upload.
- **filename** – (optional) Name to use for new attachment as a string.

**Returns** `attachments.Attachment` object

**Return type** `attachments.Attachment`

**delete** (*id*, *attid*)

Delete a device's attachment.

**Parameters**

- **id** – Device ID as an int.
- **attid** – Attachment ID as an int.

**download** (*id*, *attid*)

Download a device's attachment.

**Parameters**

- **id** – Device ID as an int.
- **attid** – Attachment ID as an int.

**Return type** tuple (*io.BytesIO*, *'filename'*)

**edit** (*resource*)

Edit a device's attachment.

**Parameters** **resource** – `attachments.Attachment` object

**Returns** `attachments.Attachment` object

**Return type** `attachments.Attachment`

**get** (*id*, *attid*)

Get a device's attachment.

**Parameters**

- **id** – Device ID as an int.
- **attid** – Attachment ID as an int.

**Returns** `attachments.Attachment` object

**Return type** `attachments.Attachment`

**iter\_list** (*id*, \**args*, \*\**kwargs*)

Get a list of attachments. Whereas `list` fetches a single page of attachments according to its `limit` and `page` arguments, `iter_list` returns all attachments by internally making successive calls to `list`.

#### Parameters

- **id** – Device ID as an int.
- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `attachments.Attachment` list

**list** (*id*, *filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*, *detailed=None*)

Get a list of a device's attachments, using summary representation by default (see `detailed` parameter).

#### Parameters

- **id** – Device ID as an int.
- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `attachments.Page` object

**thumbnail** (*id*, *attid*, *size=None*)

Download thumbnail of a device's attachment. Attachment must be a GIF, JPEG or PNG image.

#### Parameters

- **id** – Device ID as an int.
- **attid** – Attachment ID as an int.
- **size** – (optional) Height in pixels of generated thumbnail.

**Return type** tuple (*io.BytesIO*, *'filename'*)

## 2.7.2 Attachment

**class** `cdrouter.attachments.Attachment` (\*\**kwargs*)

Model for CDRouter Attachments.

#### Parameters

- **id** – (optional) Attachment ID as an int.
- **name** – (optional) Name as string.
- **description** – (optional) Description as string.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **size** – (optional) Attachment size as an int.
- **path** – (optional) Filepath to attachment as string.

- **device\_id** – (optional) Device ID as an int.

### 2.7.3 Page

**class** `cdrouter.attachments.Page`

Named tuple for a page of list response data.

**Parameters**

- **data** – `attachments.Attachment` list
- **links** – `cdrouter.Links` object

## 2.8 Jobs

### 2.8.1 JobsService

**class** `cdrouter.jobs.JobsService` (*service*)

Service for accessing CDRouter Jobs.

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)

Bulk delete a set of jobs.

**Parameters**

- **ids** – (optional) Int list of job IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_launch** (*jobs=None, \_fields=None, filter=None, type=None, all=False*)

Bulk launch a set of jobs.

**Parameters**

- **jobs** – `jobs.Job` list
- **\_fields** – `jobs.Job` object
- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**Returns** `jobs.Job` list

**delete** (*id*)

Delete a job.

**Parameters** **id** – Job ID as an int.

**edit** (*resource*)

Edit a job.

**Parameters** **resource** – `jobs.Job` object

**Returns** `jobs.Job` object

**Return type** *jobs.Job*



**get** (*id*)

Get a job.

**Parameters** *id* – Job ID as an int.

**Returns** `jobs.Job` object

**Return type** *jobs.Job*

**get\_interfaces** (*resource*)

Process job with cdrouter-cli -print-interfaces.

**Parameters** *resource* – `jobs.Job` object

**Returns** `configs.Interfaces` list

**iter\_list** (*\*args, \*\*kwargs*)

Get a list of jobs. Whereas `list` fetches a single page of jobs according to its `limit` and `page` arguments, `iter_list` returns all jobs by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `jobs.Job` list

**launch** (*resource*)

Launch a new job.

**Parameters** *resource* – `jobs.Job` object

**Returns** `jobs.Job` object

**Return type** *jobs.Job*

**list** (*filter=None, type=None, sort=None, limit=None, page=None, detailed=None*)

Get a list of jobs, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `jobs.Page` object

## 2.8.2 Job

**class** `cdrouter.jobs.Job` (*\*\*kwargs*)

Model for CDRouter Jobs.

**Parameters**

- **id** – (optional) Job ID as an int.
- **active** – (optional) Bool *True* if status is 'running'.

- **status** – (optional) Job status as a string.
- **options** – (optional) `jobs.Options` object
- **package\_id** – (optional) Package ID as an int.
- **package\_name** – (optional) Package name as string.
- **config\_id** – (optional) Config ID as an int.
- **config\_name** – (optional) Config name as string.
- **device\_id** – (optional) Device ID as an int.
- **device\_name** – (optional) Device name as string.
- **result\_id** – (optional) Result ID as an int.
- **user\_id** – (optional) User ID as an int.
- **created** – (optional) Job creation time as *DateTime*.
- **updated** – (optional) Job last-updated time as *DateTime*.
- **automatic** – (optional) Bool *True* if job scheduled automatically *DateTime*.
- **run\_at** – (optional) Job scheduled run-time *DateTime*.
- **interfaces** – (optional) `configs.Interfaces` list
- **interface\_names** – (optional) Job interface names as string list.
- **uses\_wireless** – (optional) Bool *True* if job uses any wireless interfaces.
- **uses\_ics** – (optional) Bool *True* if job uses any ICS interfaces.

### 2.8.3 Options

**class** `cdrouter.jobs.Options` (*\*\*kwargs*)  
Model for CDRouter Job Options.

#### Parameters

- **tags** – (optional) Tags as string list.
- **skip\_tests** – (optional) Tests to skip as string list.
- **begin\_at** – (optional) Test name to begin testing at as string.
- **end\_at** – (optional) Test name to end testing at as string.
- **extra\_cli\_args** – (optional) Extra *cdrouter-cli* arguments as string.

### 2.8.4 Page

**class** `cdrouter.jobs.Page`  
Named tuple for a page of list response data.

#### Parameters

- **data** – `jobs.Job` list
- **links** – `cdrouter.Links` object

## 2.9 Packages

### 2.9.1 PackagesService

**class** `cdrouter.packages.PackagesService` (*service*)

Service for accessing CDRouter Packages.

**analyze** (*id*)

Get a list of tests that will be skipped for a package.

**Parameters** *id* – Package ID as an int.

**Returns** `packages.Analysis` object

**Return type** *packages.Analysis*

**bulk\_copy** (*ids*)

Bulk copy a set of packages.

**Parameters** *ids* – Int list of package IDs.

**Returns** `packages.Package` list

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)

Bulk delete a set of packages.

**Parameters**

- *ids* – (optional) Int list of package IDs.
- *filter* – (optional) String list of filters.
- *type* – (optional) *union* or *inter* as string.
- *all* – (optional) Apply to all if bool *True*.

**bulk\_edit** (*\_fields, ids=None, filter=None, type=None, all=False*)

Bulk edit a set of packages.

**Parameters**

- *\_fields* – `packages.Package` object
- *ids* – (optional) Int list of package IDs.
- *filter* – (optional) String list of filters.
- *type* – (optional) *union* or *inter* as string.
- *all* – (optional) Apply to all if bool *True*.

**bulk\_export** (*ids*)

Bulk export a set of packages.

**Parameters** *ids* – Int list of package IDs.

**Return type** tuple (*io.BytesIO*, 'filename')

**create** (*resource*)

Create a new package.

**Parameters** *resource* – `packages.Package` object

**Returns** `packages.Package` object

**Return type** *packages.Package*

**delete** (*id*)

Delete a package.

**Parameters** **id** – Package ID as an int.

**edit** (*resource*)

Edit a package.

**Parameters** **resource** – `packages.Package` object

**Returns** `packages.Package` object

**Return type** *packages.Package*

**edit\_shares** (*id*, *user\_ids*)

Edit shares for a package.

**Parameters**

- **id** – Package ID as an int.
- **user\_ids** – User IDs as int list.

**Returns** `cdrouter.Share` list

**export** (*id*)

Export a package.

**Parameters** **id** – Package ID as an int.

**Return type** tuple (*io.BytesIO*, 'filename')

**get** (*id*)

Get a package.

**Parameters** **id** – Package ID as an int.

**Returns** `packages.Package` object

**Return type** *packages.Package*

**get\_by\_name** (*name*)

Get a package by name.

**Parameters** **name** – Package name as string.

**Returns** `packages.Package` object

**Return type** *packages.Package*

**get\_interfaces** (*resource*)

Process package with `cdrouter-cli -print-interfaces`.

**Parameters** **resource** – `packages.Package` object

**Returns** `configs.Interfaces` list

**get\_shares** (*id*)

Get shares for a package.

**Parameters** **id** – Package ID as an int.

**Returns** `cdrouter.Share` list

**iter\_list** (*\*args*, *\*\*kwargs*)

Get a list of packages. Whereas `list` fetches a single page of packages according to its limit and page arguments, `iter_list` returns all packages by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `packages.Package` list

**list** (*filter=None, type=None, sort=None, limit=None, page=None, detailed=None*)

Get a list of packages, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `packages.Page` object

**testlist\_expanded** (*id*)

Get a list of all tests in a package, with any addons, modules or testlists expanded.

**Parameters** **id** – Package ID as an int.

**Return type** string list

## 2.9.2 Package

**class** `cdrouter.packages.Package` (*\*\*kwargs*)

Model for CDRouter Packages.

**Parameters**

- **id** – (optional) Package ID as an int.
- **name** – (optional) Name as a string.
- **description** – (optional) Description as a string.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **test\_count** – (optional) Test count as an int.
- **testlist** – (optional) Testlist as a string list.
- **extra\_cli\_args** – (optional) Extra CLI args as a string.
- **user\_id** – (optional) User ID as an int.
- **agent\_id** – (optional) Agent ID as an int.
- **config\_id** – (optional) Config ID as an int.
- **result\_id** – (optional) Result ID as an int (if a package snapshot).
- **device\_id** – (optional) Device ID as an int.
- **options** – (optional) `packages.Options` object

- **tags** – (optional) Tags as a string list.
- **use\_as\_testlist** – (optional) Bool *True* if package is used as a testlist.
- **note** – (optional) Note as a string.
- **schedule** – (optional) `packages.Schedule` object
- **interfaces** – (optional) `configs.Interfaces` list (if a package snapshot).

### 2.9.3 Options

**class** `cdrouter.packages.Options (**kwargs)`

Model for CDRouter Package Options.

#### Parameters

- **forever** – (optional) Bool *True* if package looped forever.
- **loop** – (optional) Loop count as an int.
- **repeat** – (optional) Repeat count as an int.
- **maxfail** – (optional) Max fail count as an int.
- **duration** – (optional) Max testing time duration as an int.
- **wait** – (optional) Wait between tests duration as an int.
- **pause** – (optional) Bool *True* if pausing between tests.
- **shuffle** – (optional) Bool *True* if testlist is shuffled.
- **seed** – (optional) Shuffle seed as an int.
- **retry** – (optional) Retry count as an int.
- **rdelay** – (optional) Retry delay as an int.

### 2.9.4 Schedule

**class** `cdrouter.packages.Schedule (**kwargs)`

Model for CDRouter Package Schedule.

#### Parameters

- **enabled** – (optional) Bool *True* if schedule is enabled.
- **spec** – (optional) Cron spec schedule as a string.
- **options** – (optional) `results.Options` object

### 2.9.5 Page

**class** `cdrouter.packages.Page`

Named tuple for a page of list response data.

#### Parameters

- **data** – `packages.Package` list
- **links** – `cdrouter.Links` object

## 2.9.6 Analysis

**class** `cdrouter.packages.Analysis` (*\*\*kwargs*)  
Model for CDRouter Package Analysis.

### Parameters

- **total\_count** – (optional) Total count as an int.
- **run\_count** – (optional) Run count as an int.
- **skipped\_count** – (optional) Skipped test count as an int.
- **skipped\_tests** – (optional) Skipped tests as a string list.

## 2.10 Results

### 2.10.1 ResultsService

**class** `cdrouter.results.ResultsService` (*service*)  
Service for accessing CDRouter Results.

**all\_stats** ()

Compute stats for all results.

**Returns** `results.AllStats` object

**Return type** `results.AllStats`

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)  
Bulk delete a set of results.

### Parameters

- **ids** – (optional) Int list of result IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_edit** (*\_fields, ids=None, filter=None, type=None, all=False*)  
Bulk edit a set of results.

### Parameters

- **\_fields** – `results.Result` object
- **ids** – (optional) Int list of result IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_export** (*ids, exclude\_captures=False*)  
Bulk export a set of results.

**Parameters** **ids** – Int list of result IDs.

**Return type** tuple (*io.BytesIO, 'filename'*)

**delete** (*id*)

Delete a result.

**Parameters** *id* – Result ID as an int.

**diff\_stats** (*ids*)

Compute diff stats for a set of results.

**Parameters** *id* – Result IDs as int list.

**Returns** `results.DiffStats` object

**Return type** `results.DiffStats`

**download\_logdir\_archive** (*id*, *format='zip'*, *exclude\_captures=False*)

Download logdir archive in tgz or zip format.

**Parameters**

- *id* – Result ID as an int.
- *format* – (optional) Format to download, must be string *zip* or *tgz*.
- *exclude\_captures* – If bool *True*, don't include capture files

**Return type** tuple (*io.BytesIO*, *'filename'*)

**edit** (*resource*)

Edit a result.

**Parameters** *resource* – `results.Result` object

**Returns** `results.Result` object

**Return type** `results.Result`

**edit\_shares** (*id*, *user\_ids*)

Edit shares for a result.

**Parameters**

- *id* – Result ID as an int.
- *user\_ids* – User IDs as int list.

**Returns** `cdrouter.Share` list

**export** (*id*, *exclude\_captures=False*)

Export a result.

**Parameters**

- *id* – Result ID as an int.
- *exclude\_captures* – If bool *True*, don't export capture files

**Return type** tuple (*io.BytesIO*, *'filename'*)

**get** (*id*)

Get a result.

**Parameters** *id* – Result ID as an int.

**Returns** `results.Result` object

**Return type** `results.Result`

**get\_logdir\_file** (*id*, *filename*)

Download a logdir file.



**Parameters**

- **id** – Result ID as an int.
- **filename** – Logdir filename as string.

**Return type** tuple (*io.BytesIO*, *'filename'*)

**get\_shares** (*id*)

Get shares for a result.

**Parameters** **id** – Result ID as an int.

**Returns** `cdrouter.Share` list

**get\_test\_metric** (*id*, *name*, *metric*)

Get a test metric.

**Parameters**

- **id** – Result ID as an int.
- **name** – Test name as string.
- **metric** – Metric name as string.

**Returns** `results.Metric` object

**Return type** *results.Metric*

**get\_test\_metric\_csv** (*id*, *name*, *metric*)

Get a test metric as CSV.

**Parameters**

- **id** – Result ID as an int.
- **name** – Test name as string.
- **id** – Metric name as string.

**Return type** string

**iter\_list** (*\*args*, *\*\*kwargs*)

Get a list of results. Whereas `list` fetches a single page of results according to its `limit` and `page` arguments, `iter_list` returns all results by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `results.Result` list

**list** (*filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*, *detailed=None*)

Get a list of results, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.

- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `results.Page` object

**list\_csv** (*filter=None, type=None, sort=None, limit=None, page=None*)

Get a list of results as CSV.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.

**Return type** string

**list\_logdir** (*id, filter=None, sort=None*)

Get a list of logdir files.

**Parameters**

- **id** – Result ID as an int.
- **filter** – Filter to apply as string.
- **sort** – Sort field to apply as string.

**Returns** `results.LogDirFile` list

**pause** (*id, when=None*)

Pause a running result.

**Parameters**

- **id** – Result ID as an int.
- **when** – Must be string *end-of-test* or *end-of-loop*.

**pause\_end\_of\_loop** (*id*)

Pause a running result at the end of the current loop.

**Parameters** **id** – Result ID as an int.

**pause\_end\_of\_test** (*id*)

Pause a running result at the end of the current test.

**Parameters** **id** – Result ID as an int.

**progress\_stats** (*id*)

Compute progress stats for a result.

**Parameters** **id** – Result ID as an int.

**Returns** `results.Progress` object

**Return type** `results.Progress`

**set\_stats** (*ids*)

Compute stats for a set of results.

**Parameters** **id** – Result IDs as int list.

**Returns** `results.SetStats` object

**Return type** *results.SetStats*

**single\_stats** (*id*)

Compute stats for a result.

**Parameters** *id* – Result ID as an int.

**Returns** *results.SingleStats* object

**Return type** *results.SingleStats*

**stop** (*id*, *when=None*)

Stop a running result.

**Parameters**

- *id* – Result ID as an int.
- *when* – Must be string *end-of-test* or *end-of-loop*.

**stop\_end\_of\_loop** (*id*)

Stop a running result at the end of the current loop.

**Parameters** *id* – Result ID as an int.

**stop\_end\_of\_test** (*id*)

Stop a running result at the end of the current test.

**Parameters** *id* – Result ID as an int.

**summary\_stats** (*id*)

Compute summary stats for a result.

**Parameters** *id* – Result ID as an int.

**Returns** *results.SummaryStats* object

**Return type** *results.SummaryStats*

**unpause** (*id*)

Unpause a running result.

**Parameters** *id* – Result ID as an int.

**updates** (*id*, *update\_id=None*)

Get updates of a running result via long-polling. If no updates are available, CDRouter waits up to 10 seconds before sending an empty response.

**Parameters**

- *id* – Result ID as an int.
- *update\_id* – (optional) Update ID as an int.

**Returns** *results.Update* object

**Return type** *results.Update*

## 2.10.2 Result

**class** *cdrouter.results.Result* (\*\**kwargs*)

Model for CDRouter Results.

**Parameters**

- *id* – (optional) Result ID as an int.

- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **result** – (optional) Result as a string.
- **active** – (optional) Bool *True* if status is ‘running’ or ‘paused’.
- **status** – (optional) Status as a string.
- **loops** – (optional) Loop count as an int.
- **tests** – (optional) Test count as an int.
- **passed** – (optional) Passed count as an int.
- **fail** – (optional) Failed count as an int.
- **alerts** – (optional) Alert count as an int.
- **duration** – (optional) Duration in seconds as an int.
- **size\_on\_disk** – (optional) Size on disk in bytes as an int.
- **starred** – (optional) Bool *True* if result is starred.
- **archived** – (optional) Bool *True* if result is archived.
- **result\_dir** – (optional) Filepath to result directory as a string.
- **agent\_name** – (optional) Agent name as a string.
- **package\_name** – (optional) Package name as a string.
- **device\_name** – (optional) Device name as a string.
- **config\_name** – (optional) Config name as a string.
- **package\_id** – (optional) Package ID as an int.
- **device\_id** – (optional) Device ID as an int.
- **config\_id** – (optional) Config ID as an int.
- **user\_id** – (optional) User ID as an int.
- **note** – (optional) Note as a string.
- **pause\_message** – (optional) Pause message as a string (if currently paused).
- **build\_info** – (optional) Build info as a string.
- **tags** – (optional) Tags as a string list.
- **testcases** – (optional) Testcases as a string list.
- **options** – (optional) `results.Options` object
- **features** – (optional) Dict of feature name strings to `results.Feature` objects.
- **interfaces** – (optional) `configs.Interfaces` list.

### 2.10.3 Page

**class** `cdrouter.results.Page`

Named tuple for a page of list response data.

**Parameters**

- **data** – results.Result list
- **links** – cdrouter.Links object

## 2.10.4 TestCount

**class** cdrouter.results.**TestCount** (\*\*kwargs)  
Model for CDRouter Test Counts.

### Parameters

- **name** – (optional) Name as a string.
- **count** – (optional) Count as an int.

## 2.10.5 TestDuration

**class** cdrouter.results.**TestDuration** (\*\*kwargs)  
Model for CDRouter Test Durations.

### Parameters

- **name** – (optional) Name as a string.
- **duration** – (optional) Duration as an int.

## 2.10.6 ResultBreakdown

**class** cdrouter.results.**ResultBreakdown** (\*\*kwargs)  
Model for CDRouter Result Breakdowns.

### Parameters

- **passed** – (optional) Pass count as an int.
- **failed** – (optional) Fail count as an int.
- **skipped** – (optional) Skipped count as an int.
- **alerted** – (optional) Alerted count as an int.

## 2.10.7 TimeBreakdown

**class** cdrouter.results.**TimeBreakdown** (\*\*kwargs)  
Model for CDRouter Time Breakdowns.

### Parameters

- **passed** – (optional) Pass duration as an int.
- **failed** – (optional) Fail duration as an int.

### 2.10.8 SetStats

**class** cdrouter.results.**SetStats** (\*\*kwargs)  
Model for CDRouter Result Set Stats.

**Parameters**

- **frequent\_failures** – (optional) results.TestCount list
- **longest\_tests** – (optional) results.TestDuration list
- **result\_breakdown** – (optional) results.ResultBreakdown object
- **time\_breakdown** – (optional) results.TimeBreakdown object

### 2.10.9 TestResultSummary

**class** cdrouter.results.**TestResultSummary** (\*\*kwargs)  
Model for CDRouter TestResult summaries.

**Parameters**

- **id** – (optional) Result ID as an int.
- **seq** – (optional) TestResult sequence ID as an int.
- **result** – (optional) Test result as string.
- **alerts** – (optional) Alert count as an int.
- **duration** – (optional) Test duration as int.
- **flagged** – (optional) *True* if test is flagged.
- **name** – (optional) Test name as string.
- **description** – (optional) Test description as string.

### 2.10.10 TestResultDiff

**class** cdrouter.results.**TestResultDiff** (\*\*kwargs)  
Model for CDRouter TestResult diffs.

**Parameters**

- **name** – (optional) Test name as a string.
- **summaries** – (optional) results.TestResultSummary list

### 2.10.11 DiffStats

**class** cdrouter.results.**DiffStats** (\*\*kwargs)  
Model for CDRouter Result Diff Stats.

**Parameters** **tests** – (optional) results.TestResultDiff list

### 2.10.12 TestResultBreakdown

**class** `cdrouter.results.TestResultBreakdown` (*\*\*kwargs*)  
Model for CDRouter TestResult Breakdowns.

**Parameters**

- **failed\_at\_least\_once** – (optional) `results.TestCount` list
- **passed\_every\_time** – (optional) `results.TestCount` list

### 2.10.13 Progress

**class** `cdrouter.results.Progress` (*\*\*kwargs*)  
Model for CDRouter Result Progress.

**Parameters**

- **finished** – (optional) Finished count as an int.
- **total** – (optional) Total count as an int.
- **progress** – (optional) Progress as an int.
- **unit** – (optional) Unit as a string.

### 2.10.14 SingleStats

**class** `cdrouter.results.SingleStats` (*\*\*kwargs*)  
Model for CDRouter Single Results Stats.

**Parameters**

- **result\_breakdown** – (optional) `results.ResultBreakdown` object
- **progress** – (optional) `results.Progress` object

### 2.10.15 SummaryStats

**class** `cdrouter.results.SummaryStats` (*\*\*kwargs*)  
Model for CDRouter Summary Results Stats.

**Parameters**

- **result\_breakdown** – (optional) `results.ResultBreakdown` object
- **test\_summaries** – (optional) `testresults.TestResult` list

### 2.10.16 PackageCount

**class** `cdrouter.results.PackageCount` (*\*\*kwargs*)  
Model for CDRouter Package Counts.

**Parameters**

- **package\_name** – (optional) Package name as a string.
- **count** – (optional) Count as an int.

### 2.10.17 DeviceCount

**class** cdrouter.results.**DeviceCount** (\*\*kwargs)  
Model for CDRouter Device Counts.

#### Parameters

- **device\_name** – (optional) Device name as a string.
- **count** – (optional) Count as an int.

### 2.10.18 AllStats

**class** cdrouter.results.**AllStats** (\*\*kwargs)  
Model for CDRouter All Results Stats.

#### Parameters

- **frequent\_packages** – (optional) results.PackageCount list
- **package\_names** – (optional) results.PackageCount list
- **frequent\_devices** – (optional) results.DeviceCount list
- **device\_names** – (optional) results.DeviceCount list

### 2.10.19 Metric

**class** cdrouter.results.**Metric** (\*\*kwargs)  
Model for CDRouter Metrics.

#### Parameters

- **log\_file** – (optional) Filepath to logfile as a string.
- **timestamp** – (optional) Timestamp for metric as a *DateTime*.
- **metric** – (optional) Metric name as a string.
- **value** – (optional) First metric value as a float.
- **units** – (optional) First metric units as a string.
- **result** – (optional) Metric result as a string.
- **interface\_1** – (optional) First interface as a string.
- **interface\_2** – (optional) Second interface as a string.
- **streams** – (optional) Stream count as an int.
- **protocol** – (optional) Protocol as a string.
- **direction** – (optional) Direction as a string.
- **value\_2** – (optional) Second metric value as a float.
- **units\_2** – (optional) Second metric units as a string.
- **device\_1** – (optional) First device as a string.
- **device\_2** – (optional) Second device as a string.



### 2.10.20 LogDirFile

**class** `cdrouter.results.LogDirFile (**kwargs)`  
Model for CDRouter Logdir Files.

#### Parameters

- **name** – (optional) Name as a string.
- **size** – (optional) Filesize as an int.
- **modified** – (optional) Last-updated time as a *DateTime*.

### 2.10.21 Options

**class** `cdrouter.results.Options (**kwargs)`  
Model for CDRouter Result Options.

#### Parameters

- **tags** – (optional) Tags as string list.
- **skip\_tests** – (optional) Tests to skip as string list.
- **begin\_at** – (optional) Test name to begin testing at as string.
- **end\_at** – (optional) Test name to end testing at as string.
- **extra\_cli\_args** – (optional) Extra *cdrouter-cli* arguments as string.

### 2.10.22 Feature

**class** `cdrouter.results.Feature (**kwargs)`  
Model for CDRouter Result Feature.

#### Parameters

- **feature** – (optional) Feature as a string.
- **enabled** – (optional) *True* if feature is enabled.
- **reason** – (optional) Reason as a string

## 2.11 Update

**class** `cdrouter.results.Update (**kwargs)`  
Model for CDRouter Result Update.

#### Parameters

- **id** – (optional) Update ID as an int.
- **timestamp** – (optional) System time as *DateTime*.
- **progress** – (optional) `results.Progress` object
- **running** – (optional) `testresults.TestResult` object
- **updates** – (optional) `results.Result`, `testresults.TestResult` and `alerts.Alert` list

### 2.11.1 Result

**class** `cdrouter.results.Result` (*\*\*kwargs*)  
Model for CDRouter Results.

#### Parameters

- **id** – (optional) Result ID as an int.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **result** – (optional) Result as a string.
- **active** – (optional) Bool *True* if status is ‘running’ or ‘paused’.
- **status** – (optional) Status as a string.
- **loops** – (optional) Loop count as an int.
- **tests** – (optional) Test count as an int.
- **passed** – (optional) Passed count as an int.
- **fail** – (optional) Failed count as an int.
- **alerts** – (optional) Alert count as an int.
- **duration** – (optional) Duration in seconds as an int.
- **size\_on\_disk** – (optional) Size on disk in bytes as an int.
- **starred** – (optional) Bool *True* if result is starred.
- **archived** – (optional) Bool *True* if result is archived.
- **result\_dir** – (optional) Filepath to result directory as a string.
- **agent\_name** – (optional) Agent name as a string.
- **package\_name** – (optional) Package name as a string.
- **device\_name** – (optional) Device name as a string.
- **config\_name** – (optional) Config name as a string.
- **package\_id** – (optional) Package ID as an int.
- **device\_id** – (optional) Device ID as an int.
- **config\_id** – (optional) Config ID as an int.
- **user\_id** – (optional) User ID as an int.
- **note** – (optional) Note as a string.
- **pause\_message** – (optional) Pause message as a string (if currently paused).
- **build\_info** – (optional) Build info as a string.
- **tags** – (optional) Tags as a string list.
- **testcases** – (optional) Testcases as a string list.
- **options** – (optional) `results.Options` object
- **features** – (optional) Dict of feature name strings to `results.Feature` objects.
- **interfaces** – (optional) `configs.Interfaces` list.

## 2.12 Alerts

### 2.12.1 AlertsService

**class** `cdrouter.alerts.AlertsService` (*service*)

Service for accessing CDRouter Alerts.

**all\_stats** (*id*)

Compute alert stats for a single result.

**Parameters** *id* – Result ID as an int.

**Returns** `alerts.AllStats` object

**Return type** `alerts.AllStats`

**get** (*id*, *idx*)

Get an alert.

**Parameters**

- *id* – Result ID as an int.
- *idx* – Alert index as an int.

**Returns** `alerts.Alert` object

**Return type** `alerts.Alert`

**iter\_list** (*id*, *\*args*, *\*\*kwargs*)

Get a list of alerts. Whereas `list` fetches a single page of alerts according to its `limit` and `page` arguments, `iter_list` returns all alerts by internally making successive calls to `list`.

**Parameters**

- *id* – Result ID as an int.
- *args* – Arguments that `list` takes.
- *kwargs* – Optional arguments that `list` takes.

**Returns** `alerts.Alert` list

**list** (*id*, *filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*, *detailed=None*)

Get a list of alerts, using summary representation by default (see `detailed` parameter).

**Parameters**

- *id* – Result ID as an int.
- *filter* – (optional) Filters to apply as a string list.
- *type* – (optional) *union* or *inter* as string.
- *sort* – (optional) Sort fields to apply as string list.
- *limit* – (optional) Limit returned list length.
- *page* – (optional) Page to return.
- *detailed* – (optional) Return all fields if Bool *True*.

**Returns** `alerts.Page` object

### 2.12.2 Alert

**class** `cdrouter.alerts.Alert` (*\*\*kwargs*)  
Model for CDRouter Alerts.

#### Parameters

- **id** – (optional) Result ID as an int.
- **idx** – (optional) Alert index as an int.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **seq** – (optional) TestResult sequence ID as an int.
- **loop** – (optional) Loop number as an int.
- **test\_name** – (optional) Test name as string.
- **test\_description** – (optional) Test description as string.
- **category** – (optional) Alert category as a string.
- **description** – (optional) Alert description as a string.
- **dest\_ip** – (optional) Alert destination IP as a string.
- **dest\_port** – (optional) Alert destination port as an int.
- **interface** – (optional) Alert incoming interface as a string.
- **payload** – (optional) Alert payload as a base64 string.
- **payload\_ascii** – (optional) Alert payload as an ASCII string.
- **payload\_hex** – (optional) Alert payload as a hex string.
- **proto** – (optional) Alert protocol as a string.
- **references** – (optional) Alert references as a string list.
- **rev** – (optional) Alert rule revision as an int.
- **rule** – (optional) Alert rule as a string.
- **rule\_set** – (optional) Alert rule set as a string.
- **severity** – (optional) Alert severity as an int.
- **sid** – (optional) Alert rule SID as an int.
- **signature** – (optional) Alert signature as a string.
- **src\_ip** – (optional) Alert source IP as a string.
- **src\_port** – (optional) Alert source port as an int.

### 2.12.3 Page

**class** `cdrouter.alerts.Page`  
Named tuple for a page of list response data.

#### Parameters

- **data** – `alerts.Alert` list

- **links** – `cdrouter.Links` object

### 2.12.4 SeverityCount

**class** `cdrouter.alerts.SeverityCount` (*\*\*kwargs*)  
Model for CDRouter Severity Counts.

#### Parameters

- **name** – (optional) Severity name as a string.
- **severity** – (optional) Severity as an int.
- **count** – (optional) Count as an int.

### 2.12.5 CategoryCount

**class** `cdrouter.alerts.CategoryCount` (*\*\*kwargs*)  
Model for CDRouter Category Counts.

#### Parameters

- **category** – (optional) Category name as a string.
- **severity** – (optional) Severity as an int.
- **count** – (optional) Count as an int.

### 2.12.6 RuleSetCount

**class** `cdrouter.alerts.RuleSetCount` (*\*\*kwargs*)  
Model for CDRouter RuleSet Counts.

#### Parameters

- **name** – (optional) RuleSet name as a string.
- **count** – (optional) Count as an int.

### 2.12.7 SignatureCount

**class** `cdrouter.alerts.SignatureCount` (*\*\*kwargs*)  
Model for CDRouter Signature Counts.

#### Parameters

- **signature** – (optional) Signature name as a string.
- **severity** – (optional) Severity as an int.
- **count** – (optional) Count as an int.

## 2.12.8 TestCount

**class** `cdrouter.alerts.TestCount` (*\*\*kwargs*)  
Model for CDRouter Test Counts.

### Parameters

- **name** – (optional) Test name as a string.
- **count** – (optional) Count as an int.

## 2.12.9 AddrCount

**class** `cdrouter.alerts.AddrCount` (*\*\*kwargs*)  
Model for CDRouter Addr Counts.

### Parameters

- **addr** – (optional) Address as a string.
- **count** – (optional) Count as an int.

## 2.12.10 AllStats

**class** `cdrouter.alerts.AllStats` (*\*\*kwargs*)  
Model for CDRouter All Alerts Stats.

### Parameters

- **severities** – (optional) Dict of ints to `alerts.SeverityCount`
- **categories** – (optional) `alerts.CategoryCount` list
- **rule\_sets** – (optional) `alerts.RuleSetCount` list
- **signatures** – (optional) `alerts.SignatureCount` list
- **tests** – (optional) `alerts.TestCount` list
- **frequent\_sources** – (optional) `alerts.AddrCount` list
- **frequent\_destinations** – (optional) `alerts.AddrCount` list

## 2.13 TestResults

### 2.13.1 TestResultsService

**class** `cdrouter.testresults.TestResultsService` (*service*)  
Service for accessing CDRouter TestResults.

**edit** (*resource*)  
Edit a test result.

**Parameters** **resource** – `testresults.TestResult` object

**Returns** `testresults.TestResult` object

**Return type** *testresults.TestResult*

**get** (*id*, *seq*)

Get a test result.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.

**Returns** `testresults.TestResult` object

**Return type** `testresults.TestResult`

**get\_log\_plaintext** (*id*, *seq*)

Get a test result's log as plaintext.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.

**Return type** string

**iter\_list** (*id*, *\*args*, *\*\*kwargs*)

Get a list of test results. Whereas `list` fetches a single page of test results according to its `limit` and `page` arguments, `iter_list` returns all test results by internally making successive calls to `list`.

**Parameters**

- **id** – Result ID as an int.
- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `testresults.TestResult` list

**iter\_list\_log** (*id*, *seq*, *\*args*, *\*\*kwargs*)

Get a test result's log. Whereas `list_log` fetches a single range of log lines according to its `limit` and `offset` arguments, `iter_list_log` returns all log lines by internally making successive calls to `list_log`.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **args** – Arguments that `list_log` takes.
- **kwargs** – Optional arguments that `list_log` takes.

**Returns** `testresults.Line` list

**list** (*id*, *filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*, *detailed=None*)

Get a list of test results, using summary representation by default (see `detailed` parameter).

**Parameters**

- **id** – Result ID as an int.
- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.

- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testresults.Page` object

**list\_csv** (*id*, *filter=None*, *type=None*, *sort=None*, *limit=None*, *page=None*)  
Get a list of test results as CSV.

**Parameters**

- **id** – Result ID as an int.
- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.

**Return type** string

**list\_log** (*id*, *seq*, *offset=None*, *limit=None*, *filter=None*, *packets=None*, *timestamp\_format=None*)  
Get a test result's log.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **offset** – (optional) Offset within logfile to get.
- **limit** – (optional) Limit returned list length.
- **filter** – (optional) Filters to apply as a string list.
- **packets** – (optional) Set to bool *False* to omit packet logs.
- **timestamp\_format** – (optional) Timestamp format to use, must be string *long* or *short*.

**Returns** `testresults.Log` object

**Return type** `testresults.Log`

## 2.13.2 TestResult

**class** `cdrouter.testresults.TestResult` (\*\**kwargs*)  
Model for CDRouter TestResults.

**Parameters**

- **id** – (optional) Result ID as an int.
- **seq** – (optional) TestResult sequence ID as an int.
- **loop** – (optional) Loop number as an int.
- **active** – (optional) Bool *True* if result is 'running' or 'waiting'.
- **result** – (optional) Test result as string.
- **alerts** – (optional) Alerts count as int.



- **retries** – (optional) Retry count as int.
- **started** – (optional) Test start time as *DateTime*.
- **duration** – (optional) Test duration as int.
- **flagged** – (optional) *True* if test is flagged.
- **name** – (optional) Test name as string.
- **description** – (optional) Test description as string.
- **skip\_name** – (optional) Skip name for *TestResult* as string.
- **skip\_reason** – (optional) Skip reason for *TestResult* as string.
- **log** – (optional) Logfile path for *TestResult* as string.
- **keylog** – (optional) Keylog path for *TestResult* as string.
- **note** – (optional) Note for *TestResult* as string.

### 2.13.3 Page

**class** `cdrouter.testresults.Page`

Named tuple for a page of list response data.

#### Parameters

- **data** – `testresults.TestResult` list
- **links** – `cdrouter.Links` object

### 2.13.4 Summary

**class** `cdrouter.testresults.Summary` (*\*\*kwargs*)

Model for CDRouter Log Section Summaries.

#### Parameters

- **errors** – (optional) Error log count as int.
- **fails** – (optional) Fail log count as int.
- **passes** – (optional) Pass log count as int.
- **warnings** – (optional) Warning log count as int.
- **alerts** – (optional) Alert log count as int.

### 2.13.5 Line

**class** `cdrouter.testresults.Line` (*\*\*kwargs*)

Model for CDRouter Log Lines.

#### Parameters

- **raw** – (optional) Raw log text as string.
- **line** – (optional) Line number as int.
- **header** – (optional) *True* if line is a header.

- **section** – (optional) *True* if line is a section.
- **prefix** – (optional) Log prefix as string.
- **name** – (optional) Log stack name as string.
- **timestamp** – (optional) Log timestamp as string.
- **timestamp\_display** – (optional) Log display timestamp as string.
- **message** – (optional) Log message as string.
- **interface** – (optional) Log interface as string (if packet log).
- **packet** – (optional) Log frame number as an int (if packet log).
- **src** – (optional) Log source address as string (if packet log).
- **dst** – (optional) Log destination address as string (if packet log).
- **proto** – (optional) Log protocol name as string (if packet log).
- **info** – (optional) Log protocol summary as string (if packet log).
- **alert\_interface** – (optional) Log alert interface as string (if alert log).
- **alert\_index** – (optional) Log alert index as an int (if alert log).
- **alert\_src** – (optional) Log alert source address as string (if alert log).
- **alert\_dst** – (optional) Log alert destination address as string (if alert log).
- **alert\_proto** – (optional) Log alert protocol name as string (if alert log).
- **alert\_src\_port** – (optional) Log alert source port as int (if alert log).
- **alert\_dst\_port** – (optional) Log alert destination port as int (if alert log).
- **alert\_signature** – (optional) Log alert signature as string (if alert log).
- **alert\_severity** – (optional) Log alert severity as int (if alert log).
- **alert\_severity\_display** – (optional) Log alert display severity as string (if alert log).
- **alert\_sid** – (optional) Log alert SID as int (if alert log).
- **alert\_rev** – (optional) Log alert revision as int (if alert log).
- **summary** – (optional) `testresults.Summary` object (if section log)

### 2.13.6 Log

**class** `cdrouter.testresults.Log` (*\*\*kwargs*)

Model for CDRouter Log.

#### Parameters

- **offset** – (optional) Zero-based offset in logfile as int.
- **limit** – (optional) Limit as int.
- **lines** – (optional) `testresults.Line` list
- **total** – (optional) Total line count as int.
- **more** – (optional) Bool *True* if more lines are available.

## 2.14 Annotations

### 2.14.1 AnnotationsService

**class** `cdrouter.annotations.AnnotationsService(service)`  
Service for accessing CDRouter Annotations.

**create** (*id, seq, resource*)  
Create an annotation.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **resource** – `annotations.Annotation` object

**Returns** `annotations.Annotation` object

**Return type** `annotations.Annotation`

**create\_or\_edit** (*id, seq, resource*)  
Create or edit an annotation.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **resource** – `annotations.Annotation` object

**Returns** `annotations.Annotation` object

**Return type** `annotations.Annotation`

**delete** (*id, seq, line*)  
Delete an annotation.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **line** – Line number in TestResult's logfile as an int.

**edit** (*id, seq, resource*)  
Edit an annotation.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **resource** – `annotations.Annotation` object

**Returns** `annotations.Annotation` object

**Return type** `annotations.Annotation`

**get** (*id, seq, line*)  
Get an annotation.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **line** – Line number in TestResult’s logfile as an int.

**Returns** `annotations.Annotation` object

**Return type** `annotations.Annotation`

**list** (*id, seq, detailed=None*)

Get a list of annotations, using summary representation by default (see `detailed` parameter).

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `annotations.Annotation` list

## 2.14.2 Annotation

**class** `cdrouter.annotations.Annotation` (*\*\*kwargs*)

Model for CDRouter Annotations.

**Parameters**

- **id** – (optional) Result ID as an int.
- **seq** – (optional) TestResult sequence ID as an int.
- **line** – (optional) Line number in TestResult’s logfile as an int.
- **comment** – (optional) Comment text as string.

## 2.15 Captures

### 2.15.1 CapturesService

**class** `cdrouter.captures.CapturesService` (*service*)

Service for accessing CDRouter Captures.

**download** (*id, seq, intf, inline=False*)

Download a capture as a PCAP file.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **intf** – Interface name as string.
- **inline** – (optional) Use inline version of capture file.

**Return type** tuple (*io.BytesIO, 'filename'*)

**get** (*id, seq, intf*)

Get a capture.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **intf** – Interface name as string.

**Returns** `captures.Capture` object

**Return type** *`captures.Capture`*

**list** (*id, seq, detailed=None*)

Get a list of captures, using summary representation by default (see `detailed` parameter).

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `captures.Capture` list

**send\_to\_cloudshark** (*id, seq, intf, inline=False*)

Send a capture to a CloudShark Appliance. Both `cloudshark_appliance_url` and `cloudshark_appliance_token` must be properly configured via system preferences.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **intf** – Interface name as string.
- **inline** – (optional) Use inline version of capture file.

**Returns** `captures.CloudShark` object

**Return type** *`captures.CloudShark`*

## 2.15.2 Capture

**class** `cdrouter.captures.Capture` (*\*\*kwargs*)

Model for CDRouter Captures.

**Parameters**

- **id** – (optional) Result ID as an int.
- **seq** – (optional) TestResult sequence ID as an int.
- **type** – (optional) Capture type as string.
- **interface** – (optional) Interface name as string.
- **filename** – (optional) Path to capture file as string.

### 2.15.3 Section

### 2.15.4 Structure

### 2.15.5 SummaryPacket

### 2.15.6 Summary

### 2.15.7 Field

### 2.15.8 Proto

### 2.15.9 Packet

### 2.15.10 Decode

### 2.15.11 ASCIIByte

### 2.15.12 ASCIILine

### 2.15.13 ASCIIFrame

### 2.15.14 ASCII

### 2.15.15 CloudShark

**class** `cdrouter.captures.CloudShark` (*\*\*kwargs*)  
Model for CDRouter CloudShark uploads.

**Parameters** `url` – (optional) CloudShark URL as a string.

## 2.16 Highlights

### 2.16.1 HighlightsService

**class** `cdrouter.highlights.HighlightsService` (*service*)  
Service for accessing CDRouter Highlights.

**create** (*id, seq, resource*)  
Create a highlight.

**Parameters**

- `id` – Result ID as an int.
- `seq` – TestResult sequence ID as an int.
- `resource` – `highlights.Highlight` object

**Returns** `highlights.Highlight` object

**Return type** *highlights.Highlight*

**create\_or\_edit** (*id, seq, resource*)

Create or edit a highlight.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **resource** – `highlights.Highlight` object

**Returns** `highlights.Highlight` object

**Return type** *highlights.Highlight*

**delete** (*id, seq, line*)

Delete a highlight.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **line** – Line number in TestResult's logfile as an int.

**edit** (*id, seq, resource*)

Edit a highlight.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **resource** – `highlights.Highlight` object

**Returns** `highlights.Highlight` object

**Return type** *highlights.Highlight*

**get** (*id, seq, line*)

Get a highlight.

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **line** – Line number in TestResult's logfile as an int.

**Returns** `highlights.Highlight` object

**list** (*id, seq, detailed=None*)

Get a list of highlights, using summary representation by default (see `detailed` parameter).

**Parameters**

- **id** – Result ID as an int.
- **seq** – TestResult sequence ID as an int.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `highlights.Highlight` list

## 2.16.2 Highlight

**class** `cdrouter.highlights.Highlight` (*\*\*kwargs*)  
Model for CDRouter Highlights.

**Parameters**

- **id** – (optional) Result ID as an int.
- **seq** – (optional) TestResult sequence ID as an int.
- **line** – (optional) Line number in TestResult’s logfile as an int.
- **color** – (optional) Highlight color as string.

## 2.17 Imports

### 2.17.1 ImportsService

**class** `cdrouter.imports.ImportsService` (*service*)  
Service for accessing CDRouter Imports.

**commit** (*id*, *impreq*)  
Commit a staged import.

**Parameters**

- **id** – Staged import ID as an int.
- **impreq** – `imports.Request` object

**Returns** `imports.Request` object

**Return type** *imports.Request*

**delete** (*id*)  
Delete a staged import.

**Parameters** **id** – Staged import ID as an int.

**get** (*id*)  
Get a staged import.

**Parameters** **id** – Staged import ID as an int.

**Returns** `imports.Import` object

**Return type** *imports.Import*

**get\_commit\_request** (*id*)  
Get a commit request for a staged import.

**Parameters** **id** – Staged import ID as an int.

**Returns** `imports.Request` object

**Return type** *imports.Request*

**list** ()  
Get a list of staged (in-progress) imports.

**Returns** `imports.Import` list



**stage\_import\_from\_file** (*fd, filename='upload.gz'*)

Stage an import from a file upload.

**Parameters**

- **fd** – File-like object to upload.
- **filename** – (optional) Filename to use for import as string.

**Returns** `imports.Import` object

**stage\_import\_from\_filesystem** (*filepath*)

Stage an import from a filesystem path.

**Parameters** **filepath** – Local filesystem path as string.

**Returns** `imports.Import` object

**stage\_import\_from\_url** (*url, token=None, username=None, password=None, insecure=False*)

Stage an import from a URL to another CDRouter system.

**Parameters**

- **url** – URL to import as string.
- **token** – (optional) API token to use as string (may be required if importing from a CDRouter 10+ system).
- **username** – (optional) API username to use as string (may be required if importing from a CDRouter 10+ system).
- **password** – (optional) API password to use as string (may be required if importing from a CDRouter 10+ system).
- **insecure** – (optional) Allow insecure HTTPS connections if bool *True*.

**Returns** `imports.Import` object

## 2.17.2 Import

**class** `cdrouter.imports.Import` (*\*\*kwargs*)

Model for CDRouter Staged Imports.

**Parameters**

- **id** – (optional) Staged import ID as an int.
- **user\_id** – (optional) User ID as an int.
- **created** – (optional) Creation time as *DateTime*.
- **updated** – (optional) Last-updated time as *DateTime*.
- **archive** – (optional) Path to archive as string.
- **path** – (optional) Local filepath as string.
- **url** – (optional) URL to fetch as string.
- **insecure** – (optional) Allow insecure HTTPS connections if bool *True*.
- **size** – (optional) Size of import as int.

## 2.17.3 Response

**class** `cdrouter.imports.Response` (*\*\*kwargs*)  
Model for CDRouter Import Responses.

### Parameters

- **imported** – (optional) Bool *True* if resource imported successfully.
- **id** – (optional) Resource ID as an int.
- **name** – (optional) Resource name as string.
- **message** – (optional) Response message as string.

## 2.17.4 Resource

**class** `cdrouter.imports.Resource` (*\*\*kwargs*)  
Model for CDRouter Import Resources.

### Parameters

- **name** – (optional) Set to string to rename resource, leave empty to keep original
- **should\_import** – (optional) Bool *True* if resource should be imported.
- **existing\_id** – (optional) Contains ID as an int of existing resource which will be overwritten if *should\_import* is *True*.
- **response** – (optional) `imports.Response` object

## 2.17.5 Request

**class** `cdrouter.imports.Request` (*\*\*kwargs*)  
Model for CDRouter Import Requests.

### Parameters

- **replace\_existing** – (optional) Bool *True* if existing resources should be overwritten.
- **configs** – (optional) Dict of strings to `imports.Resource` objects.
- **devices** – (optional) Dict of strings to `imports.Resource` objects.
- **packages** – (optional) Dict of strings to `imports.Resource` objects.
- **results** – (optional) Dict of strings to `imports.Resource` objects.
- **tags** – (optional) Tags to add to imported resources as string list.

## 2.18 Exports

### 2.18.1 ExportsService

**class** `cdrouter.exports.ExportsService` (*service*)  
Service for accessing CDRouter Exports.

**bulk\_export** (*config\_ids=None, device\_ids=None, package\_ids=None, result\_ids=None, exclude\_captures=False*)

Bulk export a set of configs, devices, packages and results.

#### Parameters

- **config\_ids** – (optional) Int list of config IDs.
- **device\_ids** – (optional) Int list of device IDs.
- **package\_ids** – (optional) Int list of package IDs.
- **result\_ids** – (optional) Int list of result IDs.
- **exclude\_captures** – (optional) Exclude capture files if bool *True*.

**Return type** tuple (*io.BytesIO, 'filename'*)

## 2.19 History

### 2.19.1 HistoryService

**class** `cdrouter.history.HistoryService` (*service*)

Service for accessing CDRouter History.

**iter\_list** (*\*args, \*\*kwargs*)

Get a list of history entries. Whereas `list` fetches a single page of history entries according to its `limit` and `page` arguments, `iter_list` returns all history entries by internally making successive calls to `list`.

#### Parameters

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `historys.History list`

**list** (*filter=None, type=None, sort=None, limit=None, page=None, detailed=None*)

Get a list of history entries, using summary representation by default (see `detailed` parameter).

#### Parameters

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `history.Page` object

### 2.19.2 History

**class** `cdrouter.history.History` (*\*\*kwargs*)

Model for CDRouter History entries.

**Parameters**

- **user\_id** – (optional) User ID as an int.
- **created** – (optional) Entry creation time as *DateTime*.
- **resource** – (optional) Resource type as string.
- **id** – (optional) Resource ID as an int.
- **name** – (optional) Resource name as string.
- **action** – (optional) Action name as string.
- **description** – (optional) Resource description as string.

### 2.19.3 Page

**class** `cdrouter.history.Page`

Named tuple for a page of list response data.

**Parameters**

- **data** – `history.History` list
- **links** – `cdrouter.Links` object

## 2.20 System

### 2.20.1 SystemService

**class** `cdrouter.system.SystemService` (*service*)

Service for accessing CDRouter System.

**check\_for\_lounge\_upgrade** (*email*)

Check the CDRouter Support Lounge for eligible upgrades using your Support Lounge email.

**Parameters** **email** – CDRouter Support Lounge email as a string.

**Returns** `system.Release` object

**Return type** *system.Release*

**diagnostics** ()

Get system diagnostics from `cdrouter-diag` output.

**Return type** tuple (*io.BytesIO*, 'filename')

**edit\_preferences** (*resource*)

Edit preferences in `/usr/cdrouter-data/etc/config.yml`.

**Parameters** **resource** – `system.Preferences` object

**Returns** `system.Preferences` object

**Return type** *system.Preferences*

**get\_preferences** ()

Get preferences from `/usr/cdrouter-data/etc/config.yml`.

**Returns** `system.Preferences` object

**Return type** *system.Preferences*

**hostname()**

Get system hostname.

**Return type** string

**in\_use\_interfaces()**

Get system interfaces, with flags to determine which are in use.

**Returns** `system.InUseInterface` list

**info()**

Get system info from `cdrouter-cli -info` output.

**Return type** string

**interfaces** (*addresses=False*)

Get system interfaces.

**Parameters** **addresses** – (optional) If bool *True*, include interface addresses.

**Returns** `system.Interface` list

**latest\_lounge\_release()**

Get the latest release of CDRouter from the CDRouter Support Lounge.

**Returns** `system.ReleaseLatest` object

**Return type** *system.ReleaseLatest*

**lounge\_update\_license()**

Download & install a license for your CDRouter system from the CDRouter Support Lounge.

**Returns** `system.Upgrade` object

**Return type** *system.Upgrade*

**lounge\_upgrade** (*email, nonce, filename='cdrouter.rpm'*)

Download & install an upgrade from the CDRouter Support Lounge using your Support Lounge email and upgrade nonce. Please note that any running tests will be stopped.

**Parameters**

- **email** – CDRouter Support Lounge email as a string.
- **nonce** – Upgrade nonce from `system.Release`.
- **filename** – Upgrade filename from `system.Release`.

**Returns** `system.Upgrade` object

**Return type** *system.Upgrade*

**manual\_update\_license** (*fd, filename='cdrouter.lic'*)

Update the license on your CDRouter system manually by uploading a `.lic` license from the CDRouter Support Lounge.

**Parameters**

- **fd** – File-like object to upload.
- **filename** – (optional) Filename to use for license as string.

**manual\_upgrade** (*fd, filename='cdrouter.rpm'*)

Upgrade CDRouter manually by uploading an `.rpm` installer from the CDRouter Support Lounge. Please note that any running tests will be stopped.

**Parameters**

- **fd** – File-like object to upload.
- **filename** – (optional) Filename to use for installer as string.

**Returns** `system.Upgrade` object

**Return type** `system.Upgrade`

**poweroff()**

Poweroff the NTA1000. Please note that any running tests will be stopped.

**reboot()**

Reboot the NTA1000. Please note that any running tests will be stopped.

**restart()**

Restart the CDRouter Web UI. Please note that any running tests will be stopped.

**shutdown()**

Shutdown the CDRouter Web UI. Please note that any running tests will be stopped.

**space()**

Get system disk space usage.

**Returns** `system.Space` object

**Return type** `system.Space`

**time()**

Get system time.

**Return type** string

## 2.20.2 Version

**class** `cdrouter.system.Version(**kwargs)`

Model for CDRouter Release Versions.

### Parameters

- **raw** – (optional) Raw version as string.
- **major** – (optional) Major version as int.
- **minor** – (optional) Minor version as int.
- **build** – (optional) Build version as int.

## 2.20.3 ReleaseLatest

**class** `cdrouter.system.ReleaseLatest(**kwargs)`

Model for CDRouter Latest Releases.

### Parameters

- **latest** – (optional) `system.Version` object.
- **current** – (optional) `system.Version` object.
- **newer** – (optional) Bool *True* if newer release available.

## 2.20.4 Testsuite

**class** `cdrouter.system.Testsuite` (*\*\*kwargs*)  
Model for CDRouter Testsuite names.

### Parameters

- **shortname** – (optional) Brief testsuite name as string.
- **name** – (optional) Full testsuite name as string.

## 2.20.5 Release

**class** `cdrouter.system.Release` (*\*\*kwargs*)  
Model for CDRouter Releases.

### Parameters

- **build\_date** – (optional) Build date as string.
- **filename** – (optional) Installer filename as string.
- **version** – (optional) `system.Version` object
- **testsuite** – (optional) `system.Testsuite` object
- **nonce** – (optional) Upgrade nonce as string.

## 2.20.6 Upgrade

**class** `cdrouter.system.Upgrade` (*\*\*kwargs*)  
Model for CDRouter Upgrades.

### Parameters

- **success** – (optional) Bool *True* if successful.
- **installer** – (optional) Installer filename as string.
- **output** – (optional) Output as string.
- **error** – (optional) Error output as string.

## 2.20.7 InterfaceFlags

**class** `cdrouter.system.InterfaceFlags` (*\*\*kwargs*)  
Model for CDRouter Interface Flags.

### Parameters

- **up** – (optional) Bool *True* if interface is up.
- **broadcast** – (optional) Bool *True* if interface is broadcasting.
- **loopback** – (optional) Bool *True* if interface is a loopback interface.
- **point\_to\_point** – (optional) Bool *True* if interface is a point-to-point interface.
- **multicast** – (optional) Bool *True* if interface is multicast.

### 2.20.8 InterfaceAddr

**class** `cdrouter.system.InterfaceAddr (**kwargs)`  
Model for CDRouter Interface Addresses.

#### Parameters

- **network** – (optional) Interface network as a string.
- **address** – (optional) Interface address as a string.

### 2.20.9 Interface

**class** `cdrouter.system.Interface (**kwargs)`  
Model for CDRouter Interfaces.

#### Parameters

- **index** – (optional) Interface index as an int.
- **mtu** – (optional) Interface MTU as an int.
- **name** – (optional) Interface name as a string.
- **hardware\_addr** – (optional) Interface hardware address as a string.
- **flags** – (optional) `system.InterfaceFlags` object
- **addresses** – (optional) `system.InterfaceAddr` list
- **multicast\_addresses** – (optional) `system.InterfaceAddr` list

### 2.20.10 InUseInterfaceFlags

**class** `cdrouter.system.InUseInterfaceFlags (**kwargs)`  
Model for CDRouter In Use Interface Flags.

#### Parameters

- **in\_use** – (optional) Bool *True* if interface is in use by a running job.
- **is\_wireless** – (optional) Bool *True* if interface is a wireless interface.
- **is\_ics** – (optional) Bool *True* if interface is in use as the ICS interface of a running job.

### 2.20.11 InUseInterface

**class** `cdrouter.system.InUseInterface (**kwargs)`  
Model for CDRouter In Use Interfaces.

#### Parameters

- **name** – (optional) Interface name as a string.
- **flags** – (optional) `system.InUseInterfaceFlags` object



## 2.20.12 Preferences

**class** `cdrouter.system.Preferences` (*\*\*kwargs*)

Model for CDRouter Preferences.

### Parameters

- **automatic\_login** – (optional) Bool *True* if Automatic Login is enabled.
- **cloudshark\_appliance\_autotags** – (optional) CloudShark Appliance autotags as a string.
- **cloudshark\_appliance\_insecure** – (optional) String *yes* if insecure CloudShark Appliance URLs are allowed.
- **cloudshark\_appliance\_password** – (optional) CloudShark Appliance password as a string.
- **cloudshark\_appliance\_tags** – (optional) CloudShark Appliance tags as a string.
- **cloudshark\_appliance\_token** – (optional) CloudShark Appliance API token as a string.
- **cloudshark\_appliance\_url** – (optional) CloudShark Appliance URL as a string.
- **cloudshark\_appliance\_username** – (optional) CloudShark Appliance username as a string.
- **hostname** – (optional) CDRouter system’s hostname as a string.
- **migrated** – (optional) Migrated resources as a string list.
- **port** – (optional) CDRouter’s HTTP port as an int.
- **https** – (optional) CDRouter’s HTTPS port as an int.
- **force\_https** – (optional) If string *yes*, redirect HTTP connections to CDRouter to HTTPS.
- **use\_cloudshark** – (optional) If string *yes*, use CloudShark Appliance for capture viewing.
- **log\_timestamp\_format** – (optional) Log timestamp format, must be string *short* or *long*.
- **editor\_keymap** – (optional) Config editor keymap, must be string *default*, *emacs* or *vim*.
- **lounge\_url** – (optional) CDRouter Support Lounge URL as a string.
- **lounge\_insecure** – (optional) If bool *True*, allow insecure HTTPS connections to the CDRouter Support Lounge.

## 2.20.13 Space

**class** `cdrouter.system.Space` (*\*\*kwargs*)

Model for CDRouter Disk Space Usage.

### Parameters

- **avail** – (optional) Available disk space as an int.
- **path** – (optional) Path to CDRouter’s data directory as a string.
- **pcent** – (optional) Percentage of disk space used as an int.

- **size** – (optional) Total disk space as an int.
- **unit** – (optional) Disk space units as a string, default is 'bytes'.
- **used** – (optional) Used disk space as an int.

## 2.21 Tags

### 2.21.1 TagsService

**class** `cdrouter.tags.TagsService` (*service*)

Service for accessing CDRouter Tags.

**delete** (*name*)

Delete a tag.

**Parameters** **name** – Tag name as string.

**edit** (*resource*, *old\_name=None*)

Edit a tag. When renaming a tag, *old\_name* must be set to the old tag name.

**Parameters**

- **resource** – `tags.Tag` object
- **old\_name** – (optional) Old tag name as a string. Only required when renaming a tag.

**Returns** `tags.Tag` object

**Return type** *tags.Tag*

**get** (*name*)

Get a tag.

**Parameters** **name** – Tag name as string.

**Returns** `tags.Tag` object

**Return type** *tags.Tag*

**list** (*resource=None*, *sort=None*)

Get a list of tags.

**Parameters**

- **resource** – (optional) Restrict to given resource type as string.
- **sort** – (optional) Sort fields to apply as string list.

**Returns** `tags.Tag` list

### 2.21.2 Tag

**class** `cdrouter.tags.Tag` (*\*\*kwargs*)

Model for CDRouter Tags.

**Parameters**

- **resource** – (optional) Resource type as string.
- **id** – (optional) Resource ID as an int.
- **name** – (optional) Resource name as string.

- **count** – (optional) Resource tag count as an int.
- **tags** – (optional) Resource tags as a string list.
- **configs** – (optional) `tags.ResourceTags` list
- **devices** – (optional) `tags.ResourceTags` list
- **packages** – (optional) `tags.ResourceTags` list
- **results** – (optional) `tags.ResourceTags` list

### 2.21.3 ResourceTags

**class** `cdrouter.tags.ResourceTags` (*\*\*kwargs*)  
Model for CDRouter Resource Tags.

**Parameters**

- **id** – (optional) Resource ID as an int.
- **name** – (optional) Resource name as string.
- **tags** – (optional) Resource tags as a string list.

## 2.22 Testsuites

### 2.22.1 TestsuitesService

**class** `cdrouter.testsuites.TestsuitesService` (*service*)  
Service for accessing CDRouter Testsuites.

**get\_error** (*name*)  
Get an error.

**Parameters** **name** – Error name as string.

**Returns** `testsuites.Error` object

**Return type** *testsuites.Error*

**get\_group** (*name*)  
Get a group.

**Parameters** **name** – Group name as string.

**Returns** `testsuites.Group` object

**Return type** *testsuites.Group*

**get\_label** (*name*)  
Get a label.

**Parameters** **name** – Label name as string.

**Returns** `testsuites.Label` object

**Return type** *testsuites.Label*

**get\_module** (*name*)  
Get a module.

**Parameters** **name** – Module name as string.

**Returns** `testsuites.Module` object

**Return type** *testsuites.Module*

**get\_test** (*name*)

Get a test.

**Parameters** **name** – Test name as string.

**Returns** `testsuites.Test` object

**Return type** *testsuites.Test*

**get\_testvar** (*name*)

Get a testvar.

**Parameters** **name** – Testvar name as string.

**Returns** `testsuites.Testvar` object

**Return type** *testsuites.Testvar*

**info** ()

Get testsuite info.

**Returns** `testsuites.Info` object

**Return type** *testsuites.Info*

**list\_errors** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of errors.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Error` list

**list\_groups** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of groups.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Group` list

**list\_labels** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of labels.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.

- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Label` list

**list\_modules** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of modules.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Module` list

**list\_tests** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of tests.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Test` list

**list\_testvars** (*filter=None, type=None, sort=None, detailed=None*)

Get a list of testvars.

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `testsuites.Testvar` list

**search** (*query*)

Perform full text search of testsuite.

**Parameters** **query** – Search query as a string.

**Returns** `testsuites.Search` object

**Return type** `testsuites.Search`

**update** ()

Update testsuite info.

## 2.22.2 Info

**class** `cdrouter.testsuites.Info` (*\*\*kwargs*)

Model for CDRouter Testsuite Info.

**Parameters**

- **id** – (optional) Testsuite ID as an int.
- **build\_info** – (optional) CDRouter build info as string.
- **copyright** – (optional) CDRouter copyright info as string.
- **license\_type** – (optional) License type as string.
- **customer** – (optional) Customer name from license as string.
- **lifetime** – (optional) License lifetime as string.
- **killtime** – (optional) License killtime as string.
- **nag** – (optional) Bool *True* if should nag leading up to license expiration.
- **os** – (optional) OS name as string.
- **os\_type** – (optional) OS type as string.
- **serial\_number** – (optional) NTA serial number as string.
- **system\_id** – (optional) CDRouter system ID as string.
- **testsuite** – (optional) CDRouter testsuite name as string.
- **release** – (optional) CDRouter release as string.
- **addons** – (optional) Enabled CDRouter addons as string list.
- **all\_addons** – (optional) All CDRouter addons as string list.
- **interfaces** – (optional) `configs.Interfaces` list
- **execute\_instances** – (optional) Execute instances as an int.
- **license\_info** – (optional) `testsuites.LicenseInfo` object

### 2.22.3 Group

**class** `cdrouter.testsuites.Group` (*\*\*kwargs*)  
Model for CDRouter Groups.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as string.
- **index** – (optional) Index as int.
- **test\_count** – (optional) Test count as int.
- **modules** – (optional) Modules as string list.

### 2.22.4 Module

**class** `cdrouter.testsuites.Module` (*\*\*kwargs*)  
Model for CDRouter Modules.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as string.

- **index** – (optional) Index as int.
- **group** – (optional) Group name as string.
- **description** – (optional) Module description as string.
- **test\_count** – (optional) Test count as int.
- **tests** – (optional) Tests as string list.
- **labels** – (optional) Labels as string list.
- **aliases** – (optional) Aliases as string list.

### 2.22.5 Test

**class** cdrouter.testsuites.**Test** (\*\*kwargs)  
Model for CDRouter Tests.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as string.
- **index** – (optional) Index as int.
- **group** – (optional) Group name as string.
- **module** – (optional) Module name as string.
- **synopsis** – (optional) Test synopsis as string.
- **description** – (optional) Test description as string.
- **labels** – (optional) Labels as string list.
- **aliases** – (optional) Aliases as string list.
- **testvars** – (optional) Testvars as string list.
- **skip\_name** – (optional) Skip name as string.
- **skip\_reason** – (optional) Skip reason as string.

### 2.22.6 Label

**class** cdrouter.testsuites.**Label** (\*\*kwargs)  
Model for CDRouter Skip Labels.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as string.
- **index** – (optional) Index as int.
- **reason** – (optional) Skip reason as string.
- **description** – (optional) Description as string.
- **modules** – (optional) Modules as string list.
- **tests** – (optional) Tests as string list.

### 2.22.7 Error

**class** cdrouter.testsuites.**Error** (\*\*kwargs)  
Model for CDRouter Start Errors.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as string.
- **index** – (optional) Index as int.
- **description** – (optional) Description as string.

### 2.22.8 Testvar

**class** cdrouter.testsuites.**Testvar** (\*\*kwargs)  
Model for CDRouter Start Errors.

#### Parameters

- **id** – (optional) Testsuite ID as an int.
- **name** – (optional) Name as a string.
- **index** – (optional) Index as an int.
- **humanname** – (optional) Human-readable name as a string.
- **display** – (optional) Display name as a string.
- **dataclass** – (optional) Data-type as a string.
- **addedin** – (optional) Added-in info as a string.
- **deprecatedin** – (optional) Deprecated-in info as a string.
- **obsoletedin** – (optional) Obsoleted-in info as a string.
- **min** – (optional) Minimum value as a string.
- **max** – (optional) Maximum value as a string.
- **length** – (optional) Required length as a string.
- **description** – (optional) Description as a string.
- **default** – (optional) Default value as a string.
- **defaultdisabled** – (optional) Bool *True* if testvar has no default value.
- **dyndefault** – (optional) Bool *True* if testvar's default value is dynamically calculated.
- **keywords** – (optional) Accepted values as a string list.
- **alsoaccept** – (optional) Also-accepted values as a string list.
- **wildcard** – (optional) Bool *True* if testvar is a wildcard testvar.
- **instances** – (optional) Number of allowed wildcard instances as an int.
- **parent** – (optional) Parent wildcard testvar name as a string.
- **children** – (optional) Child testvars as a string list.
- **tests** – (optional) Test names as a string list.



## 2.22.9 Search

**class** `cdrouter.testsuites.Search` (*\*\*kwargs*)  
Model for CDRouter Testsuite Searches.

### Parameters

- **addons** – (optional) `testsuites.Group` list
- **modules** – (optional) `testsuites.Module` list
- **tests** – (optional) `testsuites.Test` list
- **reasons** – (optional) `testsuites.Label` list
- **errors** – (optional) `testsuites.Error` list
- **testvars** – (optional) `testsuites.Testvar` list

## 2.23 Users

### 2.23.1 UsersService

**class** `cdrouter.users.UsersService` (*service*)  
Service for accessing CDRouter Users.

**bulk\_copy** (*ids*)  
Bulk copy a set of users.

**Parameters** **ids** – Int list of user IDs.

**Returns** `users.User` list

**bulk\_delete** (*ids=None, filter=None, type=None, all=False*)  
Bulk delete a set of users.

### Parameters

- **ids** – (optional) Int list of user IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**bulk\_edit** (*\_fields, ids=None, filter=None, type=None, all=False*)  
Bulk edit a set of users.

### Parameters

- **\_fields** – `users.User` object
- **ids** – (optional) Int list of user IDs.
- **filter** – (optional) String list of filters.
- **type** – (optional) *union* or *inter* as string.
- **all** – (optional) Apply to all if bool *True*.

**change\_password** (*id, new, old=None, change\_token=True*)  
Change a user's password.

**Parameters**

- **id** – User ID as an int.
- **new** – New password as string.
- **old** – (optional) Old password as string (required if performing action as non-admin).
- **change\_token** – (optional) If bool *True*, also generate a new API token for user.

**Returns** `users.User` object

**Return type** `users.User`

**change\_token** (*id*)

Change a user's token.

**Parameters** **id** – User ID as an int.

**Returns** `users.User` object

**Return type** `users.User`

**create** (*resource*)

Create a new user.

**Parameters** **resource** – `users.User` object

**Returns** `users.User` object

**Return type** `users.User`

**delete** (*id*)

Delete a user.

**Parameters** **id** – User ID as an int.

**edit** (*resource*)

Edit a user.

**Parameters** **resource** – `users.User` object

**Returns** `users.User` object

**Return type** `users.User`

**get** (*id*)

Get a user.

**Parameters** **id** – User ID as an int.

**Returns** `users.User` object

**Return type** `users.User`

**get\_by\_name** (*name*)

Get a user by name.

**Parameters** **name** – User name as string.

**Returns** `users.User` object

**Return type** `users.User`

**iter\_list** (*\*args, \*\*kwargs*)

Get a list of users. Whereas `list` fetches a single page of users according to its `limit` and `page` arguments, `iter_list` returns all users by internally making successive calls to `list`.

**Parameters**

- **args** – Arguments that `list` takes.
- **kwargs** – Optional arguments that `list` takes.

**Returns** `users.User` list

**list** (*filter=None, type=None, sort=None, limit=None, page=None, detailed=None*)

Get a list of users, using summary representation by default (see `detailed` parameter).

**Parameters**

- **filter** – (optional) Filters to apply as a string list.
- **type** – (optional) *union* or *inter* as string.
- **sort** – (optional) Sort fields to apply as string list.
- **limit** – (optional) Limit returned list length.
- **page** – (optional) Page to return.
- **detailed** – (optional) Return all fields if Bool *True*.

**Returns** `users.Page` object

## 2.23.2 User

**class** `cdrouter.users.User` (*\*\*kwargs*)

Model for CDRouter Users.

**Parameters**

- **id** – (optional) User ID as an int.
- **admin** – (optional) Bool *True* if user is an administrator.
- **disabled** – (optional) Bool *True* if user is disabled.
- **name** – (optional) User name as string.
- **description** – (optional) User description as string.
- **created** – (optional) User creation time as *DateTime*.
- **updated** – (optional) User last-updated time as *DateTime*.
- **token** – (optional) User's API token as string.

## 2.23.3 Page

**class** `cdrouter.users.Page`

Named tuple for a page of list response data.

**Parameters**

- **data** – `users.User` list
- **links** – `cdrouter.Links` object



**C**

`cdrouter`, 3



## A

AddrCount (class in *cdrouter.alerts*), 42  
 Alert (class in *cdrouter.alerts*), 40  
 alerts (*cdrouter.CDRouter* attribute), 4  
 AlertsService (class in *cdrouter.alerts*), 39  
 all\_stats() (*cdrouter.alerts.AlertsService* method), 39  
 all\_stats() (*cdrouter.results.ResultsService* method), 27  
 AllStats (class in *cdrouter.alerts*), 42  
 AllStats (class in *cdrouter.results*), 36  
 Analysis (class in *cdrouter.packages*), 27  
 analyze() (*cdrouter.packages.PackagesService* method), 23  
 Annotation (class in *cdrouter.annotations*), 48  
 annotations (*cdrouter.CDRouter* attribute), 4  
 AnnotationsService (class in *cdrouter.annotations*), 47  
 Attachment (class in *cdrouter.attachments*), 19  
 attachments (*cdrouter.CDRouter* attribute), 4  
 AttachmentsService (class in *cdrouter.attachments*), 18  
 authenticate() (*cdrouter.CDRouter* method), 4

## B

bulk\_copy() (*cdrouter.configs.ConfigsService* method), 8  
 bulk\_copy() (*cdrouter.devices.DevicesService* method), 13  
 bulk\_copy() (*cdrouter.packages.PackagesService* method), 23  
 bulk\_copy() (*cdrouter.users.UsersService* method), 69  
 bulk\_delete() (*cdrouter.configs.ConfigsService* method), 8  
 bulk\_delete() (*cdrouter.devices.DevicesService* method), 13  
 bulk\_delete() (*cdrouter.jobs.JobsService* method), 20

bulk\_delete() (*cdrouter.packages.PackagesService* method), 23  
 bulk\_delete() (*cdrouter.results.ResultsService* method), 27  
 bulk\_delete() (*cdrouter.users.UsersService* method), 69  
 bulk\_edit() (*cdrouter.configs.ConfigsService* method), 8  
 bulk\_edit() (*cdrouter.devices.DevicesService* method), 14  
 bulk\_edit() (*cdrouter.packages.PackagesService* method), 23  
 bulk\_edit() (*cdrouter.results.ResultsService* method), 27  
 bulk\_edit() (*cdrouter.users.UsersService* method), 69  
 bulk\_edit\_testvars() (*cdrouter.configs.ConfigsService* method), 8  
 bulk\_export() (*cdrouter.configs.ConfigsService* method), 8  
 bulk\_export() (*cdrouter.devices.DevicesService* method), 14  
 bulk\_export() (*cdrouter.exports.ExportsService* method), 54  
 bulk\_export() (*cdrouter.packages.PackagesService* method), 23  
 bulk\_export() (*cdrouter.results.ResultsService* method), 27  
 bulk\_launch() (*cdrouter.jobs.JobsService* method), 20

## C

Capture (class in *cdrouter.captures*), 49  
 captures (*cdrouter.CDRouter* attribute), 4  
 CapturesService (class in *cdrouter.captures*), 48  
 CategoryCount (class in *cdrouter.alerts*), 41  
 CDRouter (class in *cdrouter*), 3  
 cdrouter (module), 3  
 CDRouterError (class in *cdrouter.cdrouter*), 5

[change\\_password\(\)](#) (*cdrouter.users.UsersService method*), 69  
[change\\_token\(\)](#) (*cdrouter.users.UsersService method*), 70  
[check\\_config\(\)](#) (*cdrouter.configs.ConfigsService method*), 8  
[check\\_for\\_lounge\\_upgrade\(\)](#) (*cdrouter.system.SystemService method*), 56  
[CheckConfig](#) (*class in cdrouter.configs*), 12  
[CloudShark](#) (*class in cdrouter.captures*), 50  
[commit\(\)](#) (*cdrouter.imports.ImportsService method*), 52  
[Config](#) (*class in cdrouter.configs*), 11  
[ConfigError](#) (*class in cdrouter.configs*), 12  
[configs](#) (*cdrouter.CDRouter attribute*), 4  
[ConfigsService](#) (*class in cdrouter.configs*), 8  
[connect\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[Connection](#) (*class in cdrouter.devices*), 17  
[contained\\_by\(\)](#) (*cdrouter.filters.Field method*), 6  
[contains\(\)](#) (*cdrouter.filters.Field method*), 6  
[create\(\)](#) (*cdrouter.annotations.AnnotationsService method*), 47  
[create\(\)](#) (*cdrouter.attachments.AttachmentsService method*), 18  
[create\(\)](#) (*cdrouter.configs.ConfigsService method*), 9  
[create\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[create\(\)](#) (*cdrouter.highlights.HighlightsService method*), 50  
[create\(\)](#) (*cdrouter.packages.PackagesService method*), 23  
[create\(\)](#) (*cdrouter.users.UsersService method*), 70  
[create\\_or\\_edit\(\)](#) (*cdrouter.annotations.AnnotationsService method*), 47  
[create\\_or\\_edit\(\)](#) (*cdrouter.highlights.HighlightsService method*), 50

## D

[delete\(\)](#) (*cdrouter.annotations.AnnotationsService method*), 47  
[delete\(\)](#) (*cdrouter.attachments.AttachmentsService method*), 18  
[delete\(\)](#) (*cdrouter.configs.ConfigsService method*), 9  
[delete\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[delete\(\)](#) (*cdrouter.highlights.HighlightsService method*), 51  
[delete\(\)](#) (*cdrouter.imports.ImportsService method*), 52  
[delete\(\)](#) (*cdrouter.jobs.JobsService method*), 20  
[delete\(\)](#) (*cdrouter.packages.PackagesService method*), 23  
[delete\(\)](#) (*cdrouter.results.ResultsService method*), 27  
[delete\(\)](#) (*cdrouter.tags.TagsService method*), 62  
[delete\(\)](#) (*cdrouter.users.UsersService method*), 70  
[delete\\_testvar\(\)](#) (*cdrouter.configs.ConfigsService method*), 9  
[Device](#) (*class in cdrouter.devices*), 16  
[DeviceCount](#) (*class in cdrouter.results*), 36  
[devices](#) (*cdrouter.CDRouter attribute*), 4  
[DevicesService](#) (*class in cdrouter.devices*), 13  
[diagnostics\(\)](#) (*cdrouter.system.SystemService method*), 56  
[diff\\_stats\(\)](#) (*cdrouter.results.ResultsService method*), 28  
[DiffStats](#) (*class in cdrouter.results*), 34  
[disconnect\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[download\(\)](#) (*cdrouter.attachments.AttachmentsService method*), 18  
[download\(\)](#) (*cdrouter.captures.CapturesService method*), 48  
[download\\_logdir\\_archive\(\)](#) (*cdrouter.results.ResultsService method*), 28

## E

[edit\(\)](#) (*cdrouter.annotations.AnnotationsService method*), 47  
[edit\(\)](#) (*cdrouter.attachments.AttachmentsService method*), 18  
[edit\(\)](#) (*cdrouter.configs.ConfigsService method*), 9  
[edit\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[edit\(\)](#) (*cdrouter.highlights.HighlightsService method*), 51  
[edit\(\)](#) (*cdrouter.jobs.JobsService method*), 20  
[edit\(\)](#) (*cdrouter.packages.PackagesService method*), 24  
[edit\(\)](#) (*cdrouter.results.ResultsService method*), 28  
[edit\(\)](#) (*cdrouter.tags.TagsService method*), 62  
[edit\(\)](#) (*cdrouter.testresults.TestResultsService method*), 42  
[edit\(\)](#) (*cdrouter.users.UsersService method*), 70  
[edit\\_preferences\(\)](#) (*cdrouter.system.SystemService method*), 56  
[edit\\_shares\(\)](#) (*cdrouter.configs.ConfigsService method*), 9  
[edit\\_shares\(\)](#) (*cdrouter.devices.DevicesService method*), 14  
[edit\\_shares\(\)](#) (*cdrouter.packages.PackagesService method*), 24  
[edit\\_shares\(\)](#) (*cdrouter.results.ResultsService method*), 28  
[edit\\_testvar\(\)](#) (*cdrouter.configs.ConfigsService method*), 9



`eq()` (*cdrouter.filters.Field* method), 6  
*Error* (class in *cdrouter.testsuites*), 68  
`export()` (*cdrouter.configs.ConfigsService* method), 9  
`export()` (*cdrouter.devices.DevicesService* method), 15  
`export()` (*cdrouter.packages.PackagesService* method), 24  
`export()` (*cdrouter.results.ResultsService* method), 28  
`exports` (*cdrouter.CDRouter* attribute), 4  
*ExportsService* (class in *cdrouter.exports*), 54

## F

*Feature* (class in *cdrouter.results*), 37  
*Field* (class in *cdrouter.filters*), 5

## G

`ge()` (*cdrouter.filters.Field* method), 6  
`get()` (*cdrouter.alerts.AlertsService* method), 39  
`get()` (*cdrouter.annotations.AnnotationsService* method), 47  
`get()` (*cdrouter.attachments.AttachmentsService* method), 18  
`get()` (*cdrouter.captures.CapturesService* method), 48  
`get()` (*cdrouter.configs.ConfigsService* method), 9  
`get()` (*cdrouter.devices.DevicesService* method), 15  
`get()` (*cdrouter.highlights.HighlightsService* method), 51  
`get()` (*cdrouter.imports.ImportsService* method), 52  
`get()` (*cdrouter.jobs.JobsService* method), 21  
`get()` (*cdrouter.packages.PackagesService* method), 24  
`get()` (*cdrouter.results.ResultsService* method), 28  
`get()` (*cdrouter.tags.TagsService* method), 62  
`get()` (*cdrouter.testresults.TestResultsService* method), 42  
`get()` (*cdrouter.users.UsersService* method), 70  
`get_by_name()` (*cdrouter.configs.ConfigsService* method), 10  
`get_by_name()` (*cdrouter.devices.DevicesService* method), 15  
`get_by_name()` (*cdrouter.packages.PackagesService* method), 24  
`get_by_name()` (*cdrouter.users.UsersService* method), 70  
`get_commit_request()` (*cdrouter.imports.ImportsService* method), 52  
`get_connection()` (*cdrouter.devices.DevicesService* method), 15  
`get_error()` (*cdrouter.testsuites.TestsuitesService* method), 63  
`get_group()` (*cdrouter.testsuites.TestsuitesService* method), 63  
`get_interfaces()` (*cdrouter.configs.ConfigsService* method), 10

`get_interfaces()` (*cdrouter.jobs.JobsService* method), 21  
`get_interfaces()` (*cdrouter.packages.PackagesService* method), 24  
`get_label()` (*cdrouter.testsuites.TestsuitesService* method), 63  
`get_log_plaintext()` (*cdrouter.testresults.TestResultsService* method), 43  
`get_logdir_file()` (*cdrouter.results.ResultsService* method), 28  
`get_module()` (*cdrouter.testsuites.TestsuitesService* method), 63  
`get_networks()` (*cdrouter.configs.ConfigsService* method), 10  
`get_new()` (*cdrouter.configs.ConfigsService* method), 10  
`get_plaintext()` (*cdrouter.configs.ConfigsService* method), 10  
`get_preferences()` (*cdrouter.system.SystemService* method), 56  
`get_shares()` (*cdrouter.configs.ConfigsService* method), 10  
`get_shares()` (*cdrouter.devices.DevicesService* method), 15  
`get_shares()` (*cdrouter.packages.PackagesService* method), 24  
`get_shares()` (*cdrouter.results.ResultsService* method), 29  
`get_test()` (*cdrouter.testsuites.TestsuitesService* method), 64  
`get_test_metric()` (*cdrouter.results.ResultsService* method), 29  
`get_test_metric_csv()` (*cdrouter.results.ResultsService* method), 29  
`get_testvar()` (*cdrouter.configs.ConfigsService* method), 10  
`get_testvar()` (*cdrouter.testsuites.TestsuitesService* method), 64  
*Group* (class in *cdrouter.testsuites*), 66  
`gt()` (*cdrouter.filters.Field* method), 6

## H

*Highlight* (class in *cdrouter.highlights*), 52  
`highlights` (*cdrouter.CDRouter* attribute), 4  
*HighlightsService* (class in *cdrouter.highlights*), 50  
`history` (*cdrouter.CDRouter* attribute), 4  
*History* (class in *cdrouter.history*), 55  
*HistoryService* (class in *cdrouter.history*), 55  
`hostname()` (*cdrouter.system.SystemService* method), 57

**I**

`Import` (class in `cdrouter.imports`), 53  
`imports` (`cdrouter.CDRouter` attribute), 4  
`ImportsService` (class in `cdrouter.imports`), 52  
`in_use_interfaces()`  
    (`cdrouter.system.SystemService` method), 57  
`Info` (class in `cdrouter.testsuites`), 65  
`info()` (`cdrouter.system.SystemService` method), 57  
`info()` (`cdrouter.testsuites.TestsuitesService` method), 64  
`Interface` (class in `cdrouter.system`), 60  
`InterfaceAddr` (class in `cdrouter.system`), 60  
`InterfaceFlags` (class in `cdrouter.system`), 59  
`Interfaces` (class in `cdrouter.configs`), 13  
`interfaces()` (`cdrouter.system.SystemService` method), 57  
`InUseInterface` (class in `cdrouter.system`), 60  
`InUseInterfaceFlags` (class in `cdrouter.system`), 60  
`iter_list()` (`cdrouter.alerts.AlertsService` method), 39  
`iter_list()` (`cdrouter.attachments.AttachmentsService` method), 18  
`iter_list()` (`cdrouter.configs.ConfigsService` method), 10  
`iter_list()` (`cdrouter.devices.DevicesService` method), 15  
`iter_list()` (`cdrouter.history.HistoryService` method), 55  
`iter_list()` (`cdrouter.jobs.JobsService` method), 21  
`iter_list()` (`cdrouter.packages.PackagesService` method), 24  
`iter_list()` (`cdrouter.results.ResultsService` method), 29  
`iter_list()` (`cdrouter.testresults.TestResultsService` method), 43  
`iter_list()` (`cdrouter.users.UsersService` method), 70  
`iter_list_log()` (`cdrouter.testresults.TestResultsService` method), 43

**J**

`Job` (class in `cdrouter.jobs`), 21  
`jobs` (`cdrouter.CDRouter` attribute), 4  
`JobsService` (class in `cdrouter.jobs`), 20

**L**

`Label` (class in `cdrouter.testsuites`), 67  
`latest_lounge_release()`  
    (`cdrouter.system.SystemService` method), 57  
`launch()` (`cdrouter.jobs.JobsService` method), 21  
`le()` (`cdrouter.filters.Field` method), 7

`Line` (class in `cdrouter.testresults`), 45  
`Links` (class in `cdrouter.cdrouter`), 5  
`list()` (`cdrouter.alerts.AlertsService` method), 39  
`list()` (`cdrouter.annotations.AnnotationsService` method), 48  
`list()` (`cdrouter.attachments.AttachmentsService` method), 19  
`list()` (`cdrouter.captures.CapturesService` method), 49  
`list()` (`cdrouter.configs.ConfigsService` method), 11  
`list()` (`cdrouter.devices.DevicesService` method), 15  
`list()` (`cdrouter.highlights.HighlightsService` method), 51  
`list()` (`cdrouter.history.HistoryService` method), 55  
`list()` (`cdrouter.imports.ImportsService` method), 52  
`list()` (`cdrouter.jobs.JobsService` method), 21  
`list()` (`cdrouter.packages.PackagesService` method), 25  
`list()` (`cdrouter.results.ResultsService` method), 29  
`list()` (`cdrouter.tags.TagsService` method), 62  
`list()` (`cdrouter.testresults.TestResultsService` method), 43  
`list()` (`cdrouter.users.UsersService` method), 71  
`list_csv()` (`cdrouter.results.ResultsService` method), 30  
`list_csv()` (`cdrouter.testresults.TestResultsService` method), 44  
`list_errors()` (`cdrouter.testsuites.TestsuitesService` method), 64  
`list_groups()` (`cdrouter.testsuites.TestsuitesService` method), 64  
`list_labels()` (`cdrouter.testsuites.TestsuitesService` method), 64  
`list_log()` (`cdrouter.testresults.TestResultsService` method), 44  
`list_logdir()` (`cdrouter.results.ResultsService` method), 30  
`list_modules()` (`cdrouter.testsuites.TestsuitesService` method), 65  
`list_tests()` (`cdrouter.testsuites.TestsuitesService` method), 65  
`list_testvars()` (`cdrouter.configs.ConfigsService` method), 11  
`list_testvars()` (`cdrouter.testsuites.TestsuitesService` method), 65  
`Log` (class in `cdrouter.testresults`), 46  
`LogDirFile` (class in `cdrouter.results`), 37  
`lounge_update_license()`  
    (`cdrouter.system.SystemService` method), 57  
`lounge_upgrade()` (`cdrouter.system.SystemService` method), 57  
`lt()` (`cdrouter.filters.Field` method), 7

## M

`manual_update_license()`  
(*cdrouter.system.SystemService* method),  
57

`manual_upgrade()` (*cdrouter.system.SystemService*  
method), 57

`match()` (*cdrouter.filters.Field* method), 7

`Metric` (class in *cdrouter.results*), 36

`Module` (class in *cdrouter.testsuites*), 66

## N

`ne()` (*cdrouter.filters.Field* method), 7

`Networks` (class in *cdrouter.configs*), 12

`not_()` (*cdrouter.filters.Field* method), 7

## O

`Options` (class in *cdrouter.jobs*), 22

`Options` (class in *cdrouter.packages*), 26

`Options` (class in *cdrouter.results*), 37

`overlaps()` (*cdrouter.filters.Field* method), 7

## P

`Package` (class in *cdrouter.packages*), 25

`PackageCount` (class in *cdrouter.results*), 35

`packages` (*cdrouter.CDRouter* attribute), 4

`PackagesService` (class in *cdrouter.packages*), 23

`Page` (class in *cdrouter.alerts*), 40

`Page` (class in *cdrouter.attachments*), 20

`Page` (class in *cdrouter.configs*), 12

`Page` (class in *cdrouter.devices*), 17

`Page` (class in *cdrouter.history*), 56

`Page` (class in *cdrouter.jobs*), 22

`Page` (class in *cdrouter.packages*), 26

`Page` (class in *cdrouter.results*), 32

`Page` (class in *cdrouter.testresults*), 45

`Page` (class in *cdrouter.users*), 71

`pause()` (*cdrouter.results.ResultsService* method), 30

`pause_end_of_loop()`  
(*cdrouter.results.ResultsService* method),  
30

`pause_end_of_test()`  
(*cdrouter.results.ResultsService* method),  
30

`power_off()` (*cdrouter.devices.DevicesService*  
method), 16

`power_on()` (*cdrouter.devices.DevicesService*  
method), 16

`PowerCmd` (class in *cdrouter.devices*), 17

`poweroff()` (*cdrouter.system.SystemService* method),  
58

`Preferences` (class in *cdrouter.system*), 61

`Progress` (class in *cdrouter.results*), 35

`progress_stats()` (*cdrouter.results.ResultsService*  
method), 30

## R

`reboot()` (*cdrouter.system.SystemService* method), 58

`Release` (class in *cdrouter.system*), 59

`ReleaseLatest` (class in *cdrouter.system*), 58

`Request` (class in *cdrouter.imports*), 54

`Resource` (class in *cdrouter.imports*), 54

`ResourceTags` (class in *cdrouter.tags*), 63

`Response` (class in *cdrouter.imports*), 54

`restart()` (*cdrouter.system.SystemService* method),  
58

`Result` (class in *cdrouter.results*), 31, 38

`ResultBreakdown` (class in *cdrouter.results*), 33

`results` (*cdrouter.CDRouter* attribute), 4

`ResultsService` (class in *cdrouter.results*), 27

`RuleSetCount` (class in *cdrouter.alerts*), 41

## S

`Schedule` (class in *cdrouter.packages*), 26

`Search` (class in *cdrouter.testsuites*), 69

`search()` (*cdrouter.testsuites.TestsuitesService*  
method), 65

`send_to_cloudshark()`  
(*cdrouter.captures.CapturesService* method),  
49

`set_stats()` (*cdrouter.results.ResultsService*  
method), 30

`SetStats` (class in *cdrouter.results*), 34

`SeverityCount` (class in *cdrouter.alerts*), 41

`Share` (class in *cdrouter.cdrouter*), 5

`shutdown()` (*cdrouter.system.SystemService* method),  
58

`SignatureCount` (class in *cdrouter.alerts*), 41

`single_stats()` (*cdrouter.results.ResultsService*  
method), 31

`SingleStats` (class in *cdrouter.results*), 35

`Space` (class in *cdrouter.system*), 61

`space()` (*cdrouter.system.SystemService* method), 58

`stage_import_from_file()`  
(*cdrouter.imports.ImportsService* method),  
52

`stage_import_from_filesystem()`  
(*cdrouter.imports.ImportsService* method),  
53

`stage_import_from_url()`  
(*cdrouter.imports.ImportsService* method),  
53

`stop()` (*cdrouter.results.ResultsService* method), 31

`stop_end_of_loop()`  
(*cdrouter.results.ResultsService* method),  
31

`stop_end_of_test()`  
(*cdrouter.results.ResultsService* method),  
31

`Summary` (class in *cdrouter.testresults*), 45

`summary_stats()` (*cdrouter.results.ResultsService*  
    *method*), 31  
`SummaryStats` (*class in cdrouter.results*), 35  
`system` (*cdrouter.CDRouter* attribute), 4  
`SystemService` (*class in cdrouter.system*), 56

## T

`Tag` (*class in cdrouter.tags*), 62  
`tags` (*cdrouter.CDRouter* attribute), 4  
`TagsService` (*class in cdrouter.tags*), 62  
`Test` (*class in cdrouter.testsuites*), 67  
`TestCount` (*class in cdrouter.alerts*), 42  
`TestCount` (*class in cdrouter.results*), 33  
`TestDuration` (*class in cdrouter.results*), 33  
`testlist_expanded()`  
    (*cdrouter.packages.PackagesService* *method*),  
    25  
`TestResult` (*class in cdrouter.testresults*), 44  
`TestResultBreakdown` (*class in cdrouter.results*),  
    35  
`TestResultDiff` (*class in cdrouter.results*), 34  
`TestResultsService` (*class in cdrouter.testresults*),  
    42  
`TestResultSummary` (*class in cdrouter.results*), 34  
`tests` (*cdrouter.CDRouter* attribute), 4  
`Testsuite` (*class in cdrouter.system*), 59  
`testsuites` (*cdrouter.CDRouter* attribute), 4  
`TestsuitesService` (*class in cdrouter.testsuites*), 63  
`Testvar` (*class in cdrouter.configs*), 13  
`Testvar` (*class in cdrouter.testsuites*), 68  
`thumbnail()` (*cdrouter.attachments.AttachmentsService*  
    *method*), 19  
`time()` (*cdrouter.system.SystemService* *method*), 58  
`TimeBreakdown` (*class in cdrouter.results*), 33

## U

`unpause()` (*cdrouter.results.ResultsService* *method*),  
    31  
`Update` (*class in cdrouter.results*), 37  
`update()` (*cdrouter.testsuites.TestsuitesService*  
    *method*), 65  
`updates()` (*cdrouter.results.ResultsService* *method*),  
    31  
`Upgrade` (*class in cdrouter.system*), 59  
`upgrade_config()` (*cdrouter.configs.ConfigsService*  
    *method*), 11  
`UpgradeConfig` (*class in cdrouter.configs*), 12  
`User` (*class in cdrouter.users*), 71  
`users` (*cdrouter.CDRouter* attribute), 4  
`UsersService` (*class in cdrouter.users*), 69

## V

`Version` (*class in cdrouter.system*), 58