
better-boto

Release 0.5.20

eamonn faherty

Jun 15, 2021

CONTENTS:

1	Client	3
1.1	What is this?	3
1.2	Classes	3
2	Budgets helpers	5
2.1	What is this?	5
2.2	Methods	5
3	CloudFormation helpers	7
3.1	What is this?	7
3.2	Methods	7
4	CodeBuild helpers	9
4.1	What is this?	9
4.2	Methods	9
5	CodeCommit helpers	11
5.1	What is this?	11
5.2	Methods	11
6	GuardDuty helpers	13
6.1	What is this?	13
6.2	Methods	13
7	Cloudwatch logs helpers	15
7.1	What is this?	15
7.2	Methods	15
8	Organizations helpers	17
8.1	What is this?	17
8.2	Methods	17
9	Service Catalog helpers	21
9.1	What is this?	21
9.2	Methods	21
10	SSM helpers	25
10.1	What is this?	25
10.2	Methods	25
	Python Module Index	27

Better Boto aims to reduce the burden of using AWS Boto3. AWS Boto3 is a low level SDK for interacting with AWS Services and sometimes it feels too low level or too crud like.

Better Boto is a collection of helper functions to make using AWS Boto easier. For example, it added a `create_or_update` method to the AWS CloudFormation client. It also provides some helpers for dealing with pagination operations and some help using AWS Organizations. Check out the API for more info.

1.1 What is this?

With the following clients you can use them as context managers and they provide extra functionality for you. Each client is documented below:

1.2 Classes

class `betterboto.client.ClientContextManager` (*service_name*, ***kwargs*)

`ClientContextManager` allows you to use boto3 client as a python context manager. This allows you to perform the following:

```
with ClientContextManager('cloudformation') as cloudformation_client:
    cloudformation_client.create_stack(**args)
```

class `betterboto.client.CrossAccountClientContextManager` (*service_name*, *role_arn*,
role_session_name,
***kwargs*)

`CrossAccountClientContextManager` allows you to use boto3 client as a python context manager for another account. This allows you to perform the following:

```
with CrossAccountClientContextManager(
    'cloudformation',
    'arn:aws:iam::0123456789010:role/deployer',
    'deployment_account_session',
) as deployment_account_cloudformation:
    deployment_account_cloudformation.create_stack(**args)
```

class `betterboto.client.CrossMultipleAccountsClientContextManager` (*service_name*,
*assum-
able_details*,
***kwargs*)

`CrossMultipleAccountsClientContextManager` allows you to use boto3 client as a python context manager for another account. This allows you to perform the following:

```
with CrossMultipleAccountsClientContextManager(
    'cloudformation',
    [
        ('arn:aws:iam::0123456789010:role/deployer', 'deployment_account_session
↪'),
        ('arn:aws:iam::097167856333:role/deployer', 'deployment_account_session
↪nested'),
    ],
    (continues on next page)
```

(continued from previous page)

```
    ],
) as deployment_account_cloudformation:
    deployment_account_cloudformation.create_stack(**args)
```

class betterboto.client.**MultiRegionClientContextManager**(*service_name*, *regions*,
 ***kwargs*)

MultiRegionClientContextManager allows you to use boto3 client as a python context manager for multiple regions. This allows you to perform the following:

```
with MultiRegionClientContextManager('cloudformation', ['us-east-1', 'eu-west-1']):
    ↪ as cloudformation_clients:
        for region_name, cloudformation_client in cloudformation_clients.items():
            cloudformation_client.create_stack(**args)
```

If you want to deploy to multiple regions at the same time then you should use Python Threads

BUDGETS HELPERS

2.1 What is this?

The following methods are added to clients instantiated using Betterboto:

2.2 Methods

`betterboto.budgets.describe_budgets_single_page(self, **kwargs)`

This will continue to call `describe_budgets` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `describe_budgets` does.

Parameters

- **self** – budgets client
- **kwargs** – these are passed onto the `describe_budgets` method call

Returns `budgets.describe_budgets.response`

CLOUDFORMATION HELPERS

3.1 What is this?

The following methods are added to clients instantiated using Betterboto:

3.2 Methods

`betterboto.cloudformation.create_or_update` (*self*, *ShouldUseChangeSets=True*, *ShouldDeleteRollbackComplete=False*, ***kwargs*)

For the given template and stack name, this method will create a stack if it doesn't already exist otherwise it will generate a changeset and then execute it. This method will wait for the operation to complete before returning and in the instance of an error it will print out the stack events to help you debug more easily.

Parameters

- **self** – cloudformation client
- **kwargs** – these are passed onto the `create_stack` and `create_change_set` method calls

Returns None

`betterboto.cloudformation.describe_stacks_single_page` (*self*, ***kwargs*)

This will continue to call `describe_stacks` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `describe_stacks` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `describe_stacks` method call

Returns `servicecatalog_client.describe_stacks.response`

`betterboto.cloudformation.ensure_deleted` (*self*, *StackName*)

This will check if there is a stack with the given `StackName` in a state that can be deleted. If there is, it will delete it.

Parameters

- **self** – cloudformation client
- **StackName** – This is the name of the stack that should be deleted

Returns None

`betterboto.cloudformation.list_stacks_single_page(self, **kwargs)`

This will continue to call `list_stacks` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_stacks` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_stacks` method call

Returns `servicecatalog_client.list_stacks.response`

CODEBUILD HELPERS

4.1 What is this?

The following methods are added to clients instantiated using Betterboto:

4.2 Methods

`betterboto.codebuild.start_build_and_wait_for_completion(self, **kwargs)`

This will start a build of an AWS CodeBuild Project and wait for it to complete. It will return the result of the build.

Parameters

- **self** – codebuild client
- **kwargs** – these are passed onto the start_build method call

Returns `codebuild_client.batch_get_builds.response[0]`

CODECOMMIT HELPERS

5.1 What is this?

The following methods are added to clients instantiated using Betterboto:

5.2 Methods

`betterboto.codecommit.list_branches_single_page` (*self*, ***kwargs*)

This will continue to call `list_branches` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_branches` does.

Parameters

- **self** – codecommit client
- **kwargs** – these are passed onto the `list_branches` method call

Returns `codecommit_client.list_branches.response`

GUARDDUTY HELPERS

6.1 What is this?

The following methods are added to clients instantiated using Betterboto:

6.2 Methods

`betterboto.guardduty.list_members_single_page(self, **kwargs)`

This will continue to call `list_members` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_members` does.

Parameters

- **self** – guardduty client
- **kwargs** – these are passed onto the `list_members` method call

Returns `guardduty_client.list_members.response`

CLOUDWATCH LOGS HELPERS

7.1 What is this?

The following methods are added to clients instantiated using Betterboto:

7.2 Methods

ORGANIZATIONS HELPERS

8.1 What is this?

The following methods are added to clients instantiated using Betterboto:

8.2 Methods

`betterboto.organizations.convert_path_to_ou(self, path)`

This method accepts a path and returns the ou. This raises an exception when converting / and you have more than one root

Parameters

- **self** – organizations client
- **path** – organizations path

Returns the ou of the path specified

`betterboto.organizations.list_accounts_single_page(self, **kwargs)`

This will continue to call `list_accounts` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_accounts` does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the `list_accounts` method call

Returns `organizations_client.list_accounts.response`

`betterboto.organizations.list_children_nested(self, **kwargs)`

This method will return a list of all children (either `ACCOUNT` or `ORGANIZATIONAL_UNIT`) for the given `ParentId`. It includes children, grandchildren lower levels of nesting.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the `list_children` method call

Returns list of children in the structure of `[{'Id': "0123456789010"}, {'Id': "1009876543210"}]`

`betterboto.organizations.list_children_single_page(self, **kwargs)`

This will continue to call `list_children` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_children` does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_children method call

Returns organizations_client.list_children.response

```
betterboto.organizations.list_delegated_administrators_single_page(self,
                                                                    **kwargs)
```

This will continue to call list_delegated_administrators until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_delegated_administrators does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_delegated_administrators method call

Returns organizations_client.list_delegated_administrators.response

```
betterboto.organizations.list_delegated_services_for_account_single_page(self,
                                                                           **kwargs)
```

This will continue to call list_delegated_services_for_account until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_delegated_services_for_account does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_delegated_services_for_account method call

Returns organizations_client.list_delegated_services_for_account.response

```
betterboto.organizations.list_organizational_units_for_parent_single_page(self,
                                                                           **kwargs)
```

This will continue to call list_organizational_units_for_parent until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_organizational_units_for_parent does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_organizational_units_for_parent method call

Returns organizations_client.list_organizational_units_for_parent.response

```
betterboto.organizations.list_parents_single_page(self, **kwargs)
```

This will continue to call list_parents until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_parents does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_parents method call

Returns organizations_client.list_parents.response

```
betterboto.organizations.list_policies_for_target_single_page(self, **kwargs)
```

This will continue to call list_policies_for_target until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_policies_for_target does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_policies_for_target method call

Returns organizations_client.list_policies_for_target.response

`betterboto.organizations.list_policies_single_page(self, **kwargs)`

This will continue to call list_policies until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_policies does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_policies method call

Returns organizations_client.list_policies.response

`betterboto.organizations.list_roots_single_page(self, **kwargs)`

This will continue to call list_roots until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_roots does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_roots method call

Returns organizations_client.list_roots.response

`betterboto.organizations.list_targets_for_policy_single_page(self, **kwargs)`

This will continue to call list_targets_for_policy until there are no more pages left to retrieve. It will return the aggregated response in the same structure as list_targets_for_policy does.

Parameters

- **self** – organizations client
- **kwargs** – these are passed onto the list_targets_for_policy method call

Returns organizations_client.list_targets_for_policy.response

SERVICE CATALOG HELPERS

9.1 What is this?

The following methods are added to clients instantiated using Betterboto:

9.2 Methods

`betterboto.servicecatalog.describe_provisioned_product_plan_single_page` (*self*, ***kwargs*)

This will continue to call `describe_provisioned_product_plan` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `describe_provisioned_product_plan` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `describe_provisioned_product_plan` method call

Returns `servicecatalog_client.describe_provisioned_product_plan.response`

`betterboto.servicecatalog.list_accepted_portfolio_shares_single_page` (*self*, ***kwargs*)

This will continue to call `list_accepted_portfolio_shares` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_accepted_portfolio_shares` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_accepted_portfolio_shares` method call

Returns `servicecatalog_client.list_accepted_portfolio_shares.response`

`betterboto.servicecatalog.list_launch_paths_single_page` (*self*, ***kwargs*)

This will continue to call `list_launch_paths` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_launch_paths` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_launch_paths` method call

Returns `servicecatalog_client.list_launch_paths.response`

`betterboto.servicecatalog.list_portfolio_access_single_page(self, **kwargs)`

This will continue to call `list_portfolio_access` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_portfolio_access` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_portfolio_access` method call

Returns `servicecatalog_client.list_portfolio_access.response`

`betterboto.servicecatalog.list_portfolios_for_product_single_page(self, **kwargs)`

This will continue to call `list_portfolios_for_product` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_portfolios_for_product` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_portfolios_for_product` method call

Returns `servicecatalog_client.list_portfolios_for_product.response`

`betterboto.servicecatalog.list_portfolios_single_page(self, **kwargs)`

This will continue to call `list_portfolios` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_portfolios` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_portfolios` method call

Returns `servicecatalog_client.list_portfolios.response`

`betterboto.servicecatalog.list_principals_for_portfolio_single_page(self, **kwargs)`

This will continue to call `list_principals_for_portfolio` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_principals_for_portfolio` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_principals_for_portfolio` method call

Returns `servicecatalog_client.list_principals_for_portfolio.response`

`betterboto.servicecatalog.list_provisioned_product_plans_single_page(self, **kwargs)`

This will continue to call `list_provisioned_product_plans` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_provisioned_product_plans` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the `list_provisioned_product_plans` method call

Returns `servicecatalog_client.list_provisioned_product_plans.response`

`betterboto.servicecatalog.list_provisioning_artifacts_single_page(self, **kwargs)`

This will continue to call `list_provisioning_artifacts` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `list_provisioning_artifacts` does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the list_provisioning_artifacts method call

Returns servicecatalog_client.list_provisioning_artifacts.response

```
betterboto.servicecatalog.scan_provisioned_products_single_page(self,
                                                                **kwargs)
```

This will continue to call scan_provisioned_products until there are no more pages left to retrieve. It will return the aggregated response in the same structure as scan_provisioned_products does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the scan_provisioned_products method call

Returns servicecatalog_client.scan_provisioned_products.response

```
betterboto.servicecatalog.search_products_as_admin_single_page(self, **kwargs)
```

This will continue to call search_products_as_admin until there are no more pages left to retrieve. It will return the aggregated response in the same structure as search_products_as_admin does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the search_products_as_admin method call

Returns servicecatalog_client.search_products_as_admin.response

```
betterboto.servicecatalog.search_provisioned_products_single_page(self,
                                                                **kwargs)
```

This will continue to call search_provisioned_products until there are no more pages left to retrieve. It will return the aggregated response in the same structure as search_provisioned_products does.

Parameters

- **self** – servicecatalog client
- **kwargs** – these are passed onto the search_provisioned_products method call

Returns servicecatalog_client.search_provisioned_products.response

SSM HELPERS

10.1 What is this?

The following methods are added to clients instantiated using Betterboto:

10.2 Methods

exception `betterboto.ssm.ParameterVersionNotFoundException`

`betterboto.ssm.get_parameter_history_single_page(self, **kwargs)`

This will continue to call `get_parameter_history_single_page` until there are no more pages left to retrieve. It will return the aggregated response in the same structure as `get_parameter_history_single_page` does.

Parameters

- **self** – ssm client
- **kwargs** – these are passed onto the `get_parameter_history_single_page` method call

Returns `ssm_client.get_parameter_history_single_page.response`

`betterboto.ssm.put_parameter_and_wait(self, Name, **kwargs)`

This will call `put_parameter` and ensure it has been successfully put by checking it

Parameters

- **self** – ssm client
- **Name** – The fully qualified name of the parameter that you want to add to the system
- **kwargs** – These args are passed through to `ssm.put_parameter`

Returns `ssm.get_parameter.response`

PYTHON MODULE INDEX

b

`betterboto.budgets`, [5](#)
`betterboto.client`, [3](#)
`betterboto.cloudformation`, [7](#)
`betterboto.codebuild`, [9](#)
`betterboto.codecommit`, [11](#)
`betterboto.guardduty`, [13](#)
`betterboto.organizations`, [17](#)
`betterboto.servicecatalog`, [21](#)
`betterboto.ssm`, [25](#)

INDEX

B

`betterboto.budgets` (module), 5
`betterboto.client` (module), 3
`betterboto.cloudformation` (module), 7
`betterboto.codebuild` (module), 9
`betterboto.codecommit` (module), 11
`betterboto.guardduty` (module), 13
`betterboto.organizations` (module), 17
`betterboto.servicecatalog` (module), 21
`betterboto.ssm` (module), 25

C

`ClientContextManager` (class in `betterboto.client`), 3
`convert_path_to_ou()` (in module `betterboto.organizations`), 17
`create_or_update()` (in module `betterboto.cloudformation`), 7
`CrossAccountClientContextManager` (class in `betterboto.client`), 3
`CrossMultipleAccountsClientContextManager` (class in `betterboto.client`), 3

D

`describe_budgets_single_page()` (in module `betterboto.budgets`), 5
`describe_provisioned_product_plan_single_page()` (in module `betterboto.servicecatalog`), 21
`describe_stacks_single_page()` (in module `betterboto.cloudformation`), 7

E

`ensure_deleted()` (in module `betterboto.cloudformation`), 7

G

`get_parameter_history_single_page()` (in module `betterboto.ssm`), 25

L

`list_accepted_portfolio_shares_single_page()` (in module `betterboto.servicecatalog`), 21

`list_accounts_single_page()` (in module `betterboto.organizations`), 17
`list_branches_single_page()` (in module `betterboto.codecommit`), 11
`list_children_nested()` (in module `betterboto.organizations`), 17
`list_children_single_page()` (in module `betterboto.organizations`), 17
`list_delegated_administrators_single_page()` (in module `betterboto.organizations`), 18
`list_delegated_services_for_account_single_page()` (in module `betterboto.organizations`), 18
`list_launch_paths_single_page()` (in module `betterboto.servicecatalog`), 21
`list_members_single_page()` (in module `betterboto.guardduty`), 13
`list_organizational_units_for_parent_single_page()` (in module `betterboto.organizations`), 18
`list_parents_single_page()` (in module `betterboto.organizations`), 18
`list_policies_for_target_single_page()` (in module `betterboto.organizations`), 18
`list_policies_single_page()` (in module `betterboto.organizations`), 19
`list_portfolio_access_single_page()` (in module `betterboto.servicecatalog`), 21
`list_portfolios_for_product_single_page()` (in module `betterboto.servicecatalog`), 22
`list_portfolios_single_page()` (in module `betterboto.servicecatalog`), 22
`list_principals_for_portfolio_single_page()` (in module `betterboto.servicecatalog`), 22
`list_provisioned_product_plans_single_page()` (in module `betterboto.servicecatalog`), 22
`list_provisioning_artifacts_single_page()` (in module `betterboto.servicecatalog`), 22
`list_roots_single_page()` (in module `betterboto.organizations`), 19
`list_stacks_single_page()` (in module `betterboto.cloudformation`), 7
`list_targets_for_policy_single_page()` (in module `betterboto.organizations`), 19

M

`MultiRegionClientContextManager` (*class in `betterboto.client`*), [4](#)

P

`ParameterVersionNotFoundException`, [25](#)
`put_parameter_and_wait()` (*in module `betterboto.ssm`*), [25](#)

S

`scan_provisioned_products_single_page()`
 (*in module `betterboto.servicecatalog`*), [23](#)
`search_products_as_admin_single_page()`
 (*in module `betterboto.servicecatalog`*), [23](#)
`search_provisioned_products_single_page()`
 (*in module `betterboto.servicecatalog`*), [23](#)
`start_build_and_wait_for_completion()`
 (*in module `betterboto.codebuild`*), [9](#)