
better-boto

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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_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** – organizations client
- **kwargs** – these are passed onto the `list_accepted_portfolio_shares` method call

Returns `organizations_client.list_accepted_portfolio_shares.response`

`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_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_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.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** – organizations client
- **kwargs** – these are passed onto the `search_products_as_admin` method call

Returns `organizations_client.search_products_as_admin.response`

SERVICE CATALOG HELPERS

9.1 What is this?

The following methods are added to clients instantiated using Betterboto:

9.2 Methods

`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

`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`

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