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**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'),
    ]
) as nested:
```

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```
    ],
) 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

## **CLOUDFORMATION HELPERS**

### **2.1 What is this?**

The following methods are added to clients instantiated using Betterboto:

### **2.2 Methods**

`betterboto.cloudformation.create_or_update` (*self*, *\*\*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



## CODEBUILD HELPERS

### 3.1 What is this?

The following methods are added to clients instantiated using Betterboto:

### 3.2 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]`



## GUARDDUTY HELPERS

### 4.1 What is this?

The following methods are added to clients instantiated using Betterboto:

### 4.2 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`



## ORGANIZATIONS HELPERS

### 5.1 What is this?

The following methods are added to clients instantiated using Betterboto:

### 5.2 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

## SERVICE CATALOG HELPERS

### 6.1 What is this?

The following methods are added to clients instantiated using Betterboto:

### 6.2 Methods

`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_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.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`



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