

Boto3 Concepts



Boto3 Concepts:

- The core concepts of boto3 are:
 - Session
 - Resource
 - Client
 - Meta
 - Collections
 - Waiters
 - Paginators

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Boto3 Concepts



- In this course we shall focus on **session, resource and client**.
- Session is a core **concept of boto3** and is used to login into **AWS management console**.

Boto3 Concepts(session, resource and client)

- **Session:**
 - It is an **AWS Management Console** in our terms.

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Boto3 Concepts



- There are two types of consoles on AWS.

Aws management console & Aws resource console

Boto3 Concepts(session, resource and client)

- **Session:**
 - It is an AWS Management Console in our terms.

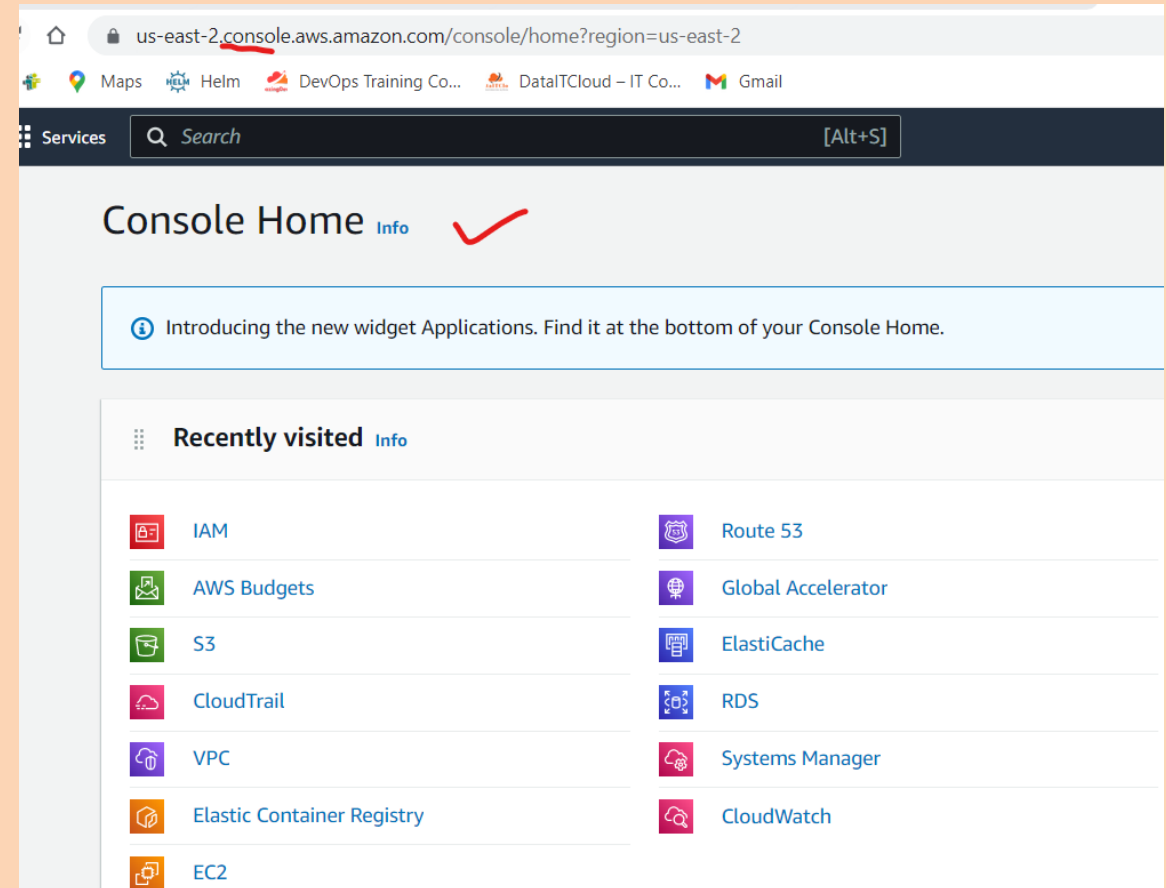
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Boto3 Concepts



➤ There are two types of consoles on AWS.

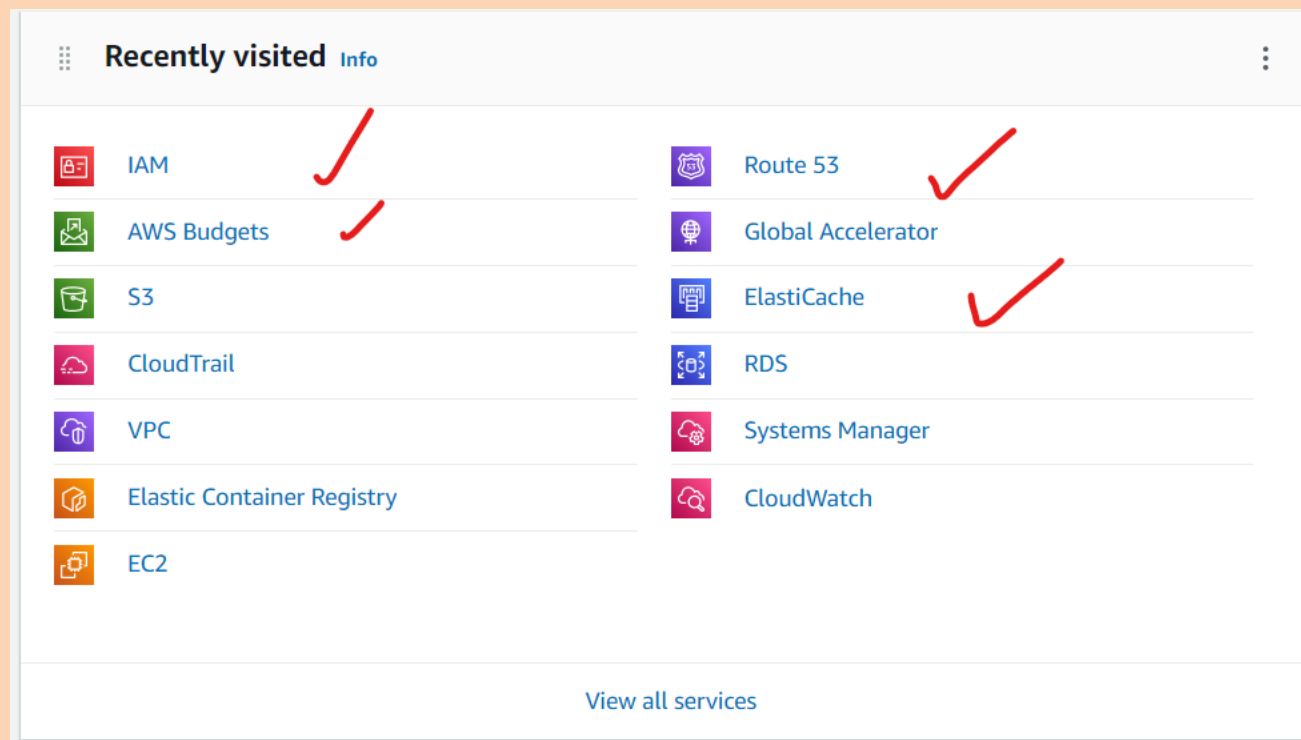
Aws management console



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Boto3 Concepts

- There are two types of consoles on AWS.
Resource management console, such as IAM,S3,VPC etc.



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➤ Let write a manual logic on how you access the IAM users in your Aws Account.

Step 1: Login into AWS Management Console manually as the root or IAM user.

Step 2: Access IAM Service Console

Options: users, groups, roles, permissions

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Now let us examine the same logic with python, boto3, and awscli .

Step 1: import boto3 => the aws sdk for aws

```
>>> import boto3
```

Step 2: create a variable to use for example => aws_management_console

Step 3: write the session login line

```
>>> aws_management_console = boto3.session.Session(profile_name = "root")
```

=====

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Boto3 Concepts



- Let us write this logic on python IDLE
- session.Session is part of the boto3

```
Forex@LAPTOP-4C614INS MINGW64 ~ (main)
$ python
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30)
Type "help", "copyright", "credits" or "license" for more
>>> import boto3 ✓
>>> print(dir(boto3))
['DEFAULT_SESSION', 'NullHandler', 'Session', '__author__',
 '__file__', '__loader__', '__name__', '__package__', '__spec__',
 'et_default_session', '_warn_deprecated_python', 'client',
 'resource', 'resources', 'session', 'set_stream_logger',
>>> ]
```

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Boto3 Concepts



- Let us write this logic on python IDLE
- session.Session is part of the boto3
- Resource, resources, logging and client are all functions in boto3

```
$ python
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> import boto3
>>> print(dir(boto3))
['DEFAULT_SESSION', 'NullHandler', 'Session', '__author__', '__builtins__', '__cached__', '__doc__',
 '__file__', '__loader__', '__name__', '__package__', '__path__', '__spec__', '__version__', '_get_default_session',
 '_warn_deprecated_python', 'client', 'compat', 'docs', 'exceptions', 'logging', 'resource', 'resources', 'session',
 'set_stream_logger', 'setup_default_session', 'utils']
```

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- Let us write this logic on python IDLE
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```
>>> print(boto3.client)
<function client at 0x0000018476029D80>
>>> print(boto3.resources)
<module 'boto3.resources' from 'C:\\Users\\Fore
on.Python.3.10_qbz5n2kfra8p0\\LocalCache\\local
es\\__init__.py'>
>>> print(boto3.resource)
<function resource at 0x0000018476029E10>
```

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- Let us write this logic on **python IDLE**
- **session.Session** is part of the boto3
- **Resource, resources, logging and client** are all functions in boto3

```
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es\\__init__.py'>
>>> print(boto3.resource)
<function resource at 0x0000018476029E10>
```

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- Let us write this logic on **python IDLE**
- **session.Session** is part of the boto3
- **Resource, resources, logging and client** are all functions in boto3

```
Forex@LAPTOP-4C614INS MINGW64 ~ (main)
$ python
Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:50:30) [MSC v.1933 64
Type "help", "copyright", "credits" or "license" for more information.
✓>>> import boto3
✓>>> aws_management_console = boto3.session.Session(profile_name = "root")
>>> print(aws_management_console)
Session(region_name='us-east-2') ✓
```

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Thank you
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