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LAB EXERCISE 10

Lab Exercise 10– Creating Multiple IAM Users in Terraform

Objective:

Learn how to use Terraform to create multiple IAM users with unique settings.

Prerequisites:

- Terraform installed on your machine.
- AWS CLI configured with the necessary credentials.

Steps:

1. Create a Terraform Directory:

```
mkdir terraform-iam-users
```

```
cd terraform-iam-users
```

```
PS C:\D content backup\Academics\SPCM Lab> mkdir terraform-iam-users
```

```
Directory: C:\D content backup\Academics\SPCM Lab
```

Mode	LastWriteTime	Length	Name
----	-----	-----	----
d-----	28-02-2025 22:23		terraform-iam-users

```
PS C:\D content backup\Academics\SPCM Lab> cd terraform-iam-users
```

```
PS C:\D content backup\Academics\SPCM Lab\terraform-iam-users> |
```

- Create Terraform Configuration Files:
- Create a file named main.tf:

iam.tf

```
variable "iam_users" {  
  type = list(string)  
  default = ["user1", "user2", "user3"]  
}  
  
resource "aws_iam_user" "iam_users" {  
  count = length(var.iam_users)  
  name = var.iam_users[count.index]  
  
  tags = {  
    Name = "${var.iam_users[count.index]}"  
  }  
}
```

```
iam.tf > resource "aws_iam_user" "iam_users"  
1  variable "iam_users" {  
2    type = list(string)  
3    default = ["anshika-user1", "user2", "user3"]  
4  }  
5  
6  resource "aws_iam_user" "iam_users" {  
7    count = length(var.iam_users)  
8    name = var.iam_users[count.index]  
9  
10   tags = {  
11     Name = "${var.iam_users[count.index]}"  
12   }  
13 }
```

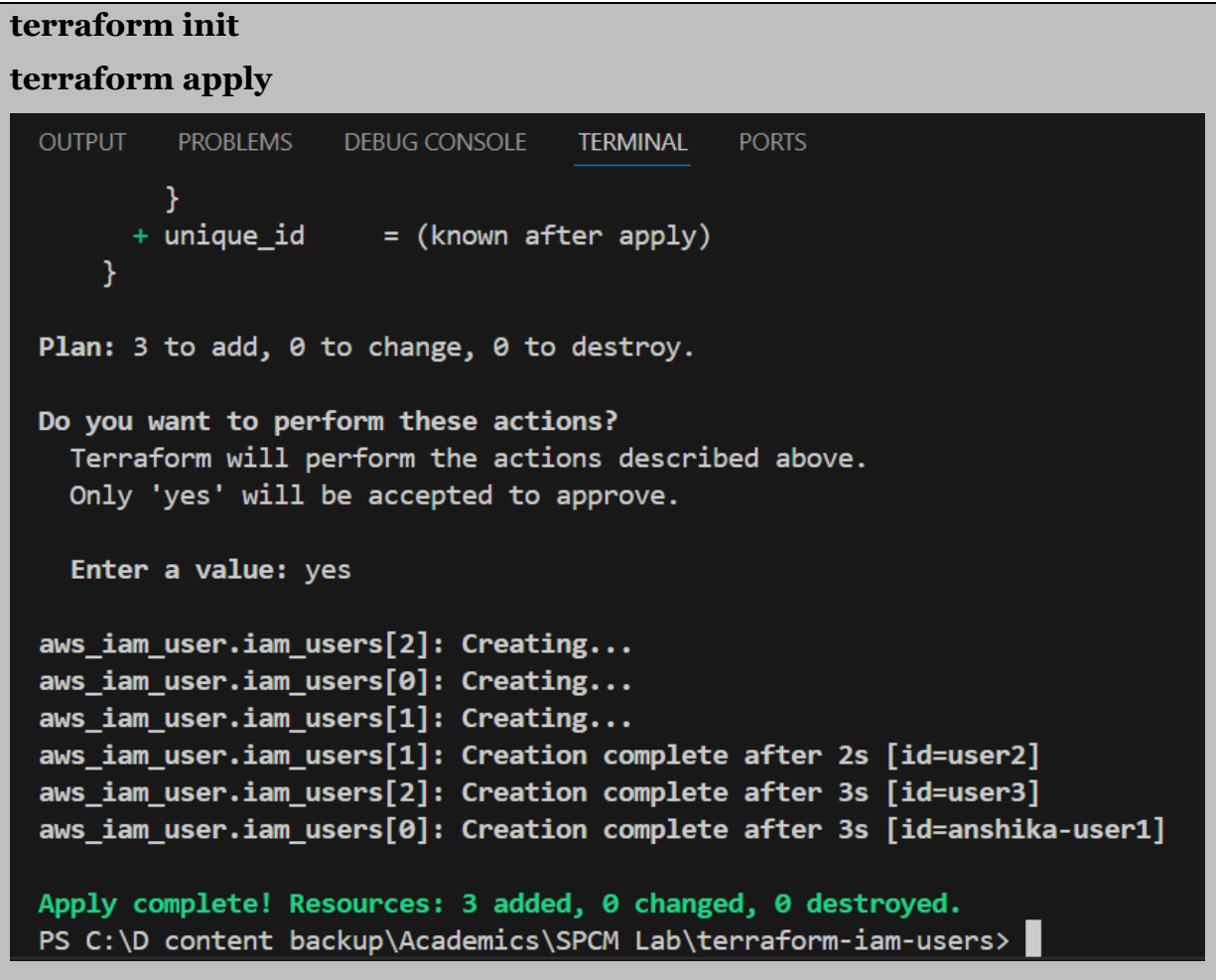
In this configuration, we define a list variable `iam_users` containing the names of the IAM users we want to create. The `aws_iam_user` resource is then used in a loop to create users based on the values in the list.

2. Initialize and Apply:

Run the following Terraform commands to initialize and apply the configuration:

```
terraform init
```

```
terraform apply
```

A screenshot of a terminal window with a dark background. At the top, there are tabs labeled 'OUTPUT', 'PROBLEMS', 'DEBUG CONSOLE', 'TERMINAL' (which is selected and underlined), and 'PORTS'. The terminal output shows a Terraform configuration snippet for an IAM user resource, followed by a plan summary indicating 3 resources to be added. It then prompts for confirmation to perform the actions, which is approved by typing 'yes'. The final output shows the successful creation of three IAM users: 'user2', 'user3', and 'anshika-user1'.

```
    }
  + unique_id      = (known after apply)
}

Plan: 3 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

Enter a value: yes

aws_iam_user.iam_users[2]: Creating...
aws_iam_user.iam_users[0]: Creating...
aws_iam_user.iam_users[1]: Creating...
aws_iam_user.iam_users[1]: Creation complete after 2s [id=user2]
aws_iam_user.iam_users[2]: Creation complete after 3s [id=user3]
aws_iam_user.iam_users[0]: Creation complete after 3s [id=anshika-user1]

Apply complete! Resources: 3 added, 0 changed, 0 destroyed.
PS C:\D content backup\Academics\SPCM Lab\terraform-iam-users>
```

Terraform will prompt you to confirm the creation of IAM users. Type yes and press Enter.

3. Verify Users in AWS Console:

- Log in to the AWS Management Console and navigate to the IAM service.
- Verify that the IAM users with the specified names and tags have been created.

Users (4) [Info](#)

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

< 1 > ⚙

<input type="checkbox"/>	User name	Path	Group:	Last activity	MFA	Password age	Console last sign-in	
<input type="checkbox"/>	anshika-user	/	0	✓ 8 minutes ago	-	-	-	/
<input type="checkbox"/>	anshika-user1	/	0	-	-	-	-	-
<input type="checkbox"/>	user2	/	0	-	-	-	-	-
<input type="checkbox"/>	user3	/	0	-	-	-	-	-

4. Update IAM Users:

- If you want to add or remove IAM users, modify the iam_users list in the main.tf file.
- Rerun the terraform apply command to apply the changes:

Created another user -

Users (5) [Info](#)

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

< 1 > ⚙

<input type="checkbox"/>	User name	Path	Group:	Last activity	MFA	Password age	Console last sign-in	
<input type="checkbox"/>	anshika-user	/	0	✓ 11 minutes ago	-	-	-	/
<input type="checkbox"/>	anshika-user1	/	0	-	-	-	-	-
<input type="checkbox"/>	user2	/	0	-	-	-	-	-
<input type="checkbox"/>	user3	/	0	-	-	-	-	-
<input type="checkbox"/>	user4	/	0	-	-	-	-	-

5. Clean Up:

- After testing, you can clean up the IAM users:

terraform destroy

```
OUTPUT  PROBLEMS  DEBUG CONSOLE  TERMINAL  PORTS

- unique_id          = "AIDAUIALHVPTZEQLFZAHV" -> null
  # (1 unchanged attribute hidden)
}

Plan: 0 to add, 0 to change, 3 to destroy.

Do you really want to destroy all resources?
  Terraform will destroy all your managed infrastructure, as shown above.
  There is no undo. Only 'yes' will be accepted to confirm.

Enter a value: yes

aws_iam_user.iam_users[2]: Destroying... [id=user3]
aws_iam_user.iam_users[1]: Destroying... [id=user2]
aws_iam_user.iam_users[0]: Destroying... [id=anshika-user1]
aws_iam_user.iam_users[2]: Destruction complete after 2s
aws_iam_user.iam_users[1]: Destruction complete after 2s
aws_iam_user.iam_users[0]: Destruction complete after 2s

Destroy complete! Resources: 3 destroyed.
PS C:\D content backup\Academics\SPCM Lab\terraform-iam-users> |
```

- Confirm the destruction by typing yes.

6. Conclusion:

This lab exercise demonstrates how to create multiple IAM users in AWS using Terraform. The use of variables and loops allows you to easily manage and scale the creation of IAM users. Experiment with different user names and settings in the main.tf file to understand how Terraform provisions resources based on your configuration.