

AWS sessions tasks

By Radwa Nabil

1-create two IAM user:

The screenshot shows the AWS IAM Management Console. The left sidebar has 'Access management' expanded, showing 'User groups', 'Users', 'Roles', 'Policies', 'Identity providers', and 'Account settings'. The main area is titled 'IAM dashboard' and shows the following statistics:
User groups: 2
Users: 2
Roles: 2
Policies: 0
Identity providers: 0

2-create two user group:

The screenshot shows the 'User groups' page in the AWS IAM Management Console. The left sidebar has 'Access management' expanded, showing 'User groups', 'Users', 'Roles', 'Policies', 'Identity providers', and 'Account settings'. The main area shows 'User groups (2) Info' and a table with the following data:
Group name	Users	Permissions	Creation time
DevOps | 1 | Defined | 11 days ago
WebDevOps | 1 | Defined | 11 days ago

3-Put each user in different group and assign different permissions:

The screenshot shows the AWS IAM Management Console. On the left, the navigation pane is open with 'Identity and Access Management (IAM)' selected. Under 'Access management', 'User groups' is also selected. The main content area shows a 'DevOps' user group summary. The 'Summary' section displays the group name 'DevOps', creation time 'September 07, 2021, 15:14 (UTC+02:00)', and ARN 'arn:aws:iam::036432257381:group/DevOps'. Below this, there are tabs for 'Users', 'Permissions', and 'Access advisor', with 'Users' currently selected. The 'Users in this group (1)' section shows one user named 'Username1'.

The screenshot shows the same AWS IAM Management Console interface, but the 'Permissions' tab is now selected under the 'DevOps' user group. The 'Permissions policies (1)' section shows a single policy named 'AdministratorAccess'. This policy is described as 'AWS managed - job function' and provides 'Provides full access to AWS services'. There are buttons for 'Simulate', 'Remove', and 'Add permissions'.

The screenshot shows the same AWS IAM Management Console interface, with the 'Permissions' tab still selected. The 'Permissions policies (1)' section remains the same, showing the 'AdministratorAccess' policy. The overall layout is consistent with the previous screenshots, showing the AWS interface and the specific configuration steps for creating and managing user groups and their permissions.

IAM Management Console IAM Management Console New Tab

console.aws.amazon.com/iamv2/home?#/groups/details/WebDevOps

aws Services Search for services, features, marketplace products, and docs [Alt+S]

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Identity and Access Management (IAM)

Dashboard

Access management

User groups

Users Roles Policies Identity providers Account settings

Access reports

Access analyzer Archive rules Analyzers Settings Credential report Organization activity Service control policies (SCPs)

WebDevOps

Summary

Delete Edit

User group name: WebDevOps Creation time: September 07, 2021, 15:20 (UTC+02:00) ARN: arn:aws:iam::036432257381:group/WebDevOps

Users Permissions Access advisor

Users in this group (1) Info

An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS.

Search

User name Groups Last activity Creation time

Usernum2 1 None 11 days ago

Feedback English (US) Type here to search

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IAM Management Console IAM Management Console New Tab

console.aws.amazon.com/iamv2/home?#/groups/details/WebDevOps?section=permissions

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Identity and Access Management (IAM)

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WebDevOps

Summary

Delete Edit

User group name: WebDevOps Creation time: September 07, 2021, 15:20 (UTC+02:00) ARN: arn:aws:iam::036432257381:group/WebDevOps

Users Permissions Access advisor

Permissions policies (1) Info

You can attach up to 10 managed policies.

Filter policies by property or policy name and press enter

Policy Name Type Description

AmazonGlacierReadOnlyAccess AWS managed

4-create EC2 instance and launch it:

The screenshot shows the AWS EC2 Instances page. The left sidebar is collapsed. The main area displays a table titled 'Instances (1/8)'. A single row is selected, showing an instance named 'instance' with the ID 'i-0c7837136f6b583bc'. The instance is listed as 'Running' with a status check of '2/2 checks passed'. The table includes columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4 DNS. Below the table, a detailed view for the selected instance is shown, with tabs for Details, Security, Networking, Storage, Status checks, Monitoring, and Tags. The 'Details' tab is active, showing the instance summary.

5-install apache webserver:

```
Installed:
httpd.x86_64 0:2.4.48-2.amzn2

Dependency Installed:
apr.x86_64 0:1.6.3-5.amzn2.0.2
generic-logos-httd.noarch 0:18.0.0-4.amzn2
mailcap.noarch 0:2.1.41-2.amzn2

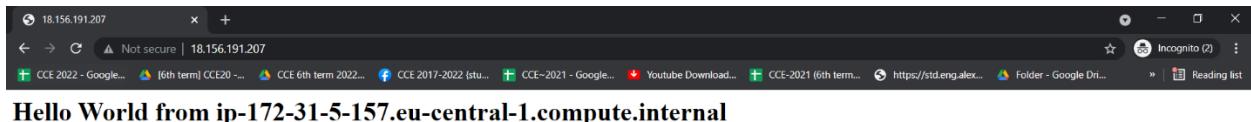
Complete!
[root@ip-172-31-40-1 ec2-user]# sudo systemctl start httpd
[root@ip-172-31-40-1 ec2-user]# sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Sat 2021-09-18 21:48:58 UTC; 9s ago
     Docs: man:httpd.service(8)
 Main PID: 4201 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
   CGroup: /system.slice/httpd.service
           ├─4201 /usr/sbin/httpd -DFOREGROUND
           ├─4202 /usr/sbin/httpd -DFOREGROUND
           ├─4203 /usr/sbin/httpd -DFOREGROUND
           ├─4204 /usr/sbin/httpd -DFOREGROUND
           ├─4205 /usr/sbin/httpd -DFOREGROUND
           └─4206 /usr/sbin/httpd -DFOREGROUND

Sep 18 21:48:58 ip-172-31-40-1.eu-central-1.compute.internal systemd[1]: Starting The Apache HTTP Server...
Sep 18 21:48:58 ip-172-31-40-1.eu-central-1.compute.internal systemd[1]: Started The Apache HTTP Server.
[root@ip-172-31-40-1 ec2-user]#
```

i-00d67375fff8c2890

Public IPs: 18.185.102.31 Private IPs: 172.31.40.1

6-served when an http request is served:



7-Create VPC:

A screenshot of the AWS VPC Management Console. The left sidebar shows navigation options like 'VPC Dashboard', 'Your VPCs', and 'Subnets'. The main area displays a table titled 'Your VPCs (2)'. The table has columns for Name, VPC ID, State, IPv4 CIDR, and IPv6 CIDR. Two VPCs are listed: 'vpc-e0325c8a' (Available, 172.31.0.0/16) and 'demo-vpc' (Available, 10.0.0.0/16). A 'Create VPC' button is visible at the top right of the table area.

Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR
vpc-e0325c8a	vpc-e0325c8a	Available	172.31.0.0/16	-
demo-vpc	vpc-004e6f74571032a11	Available	10.0.0.0/16	-

8-Create 2 subnets (private & public):

The screenshot shows the AWS VPC Management Console with the Subnets page open. The left sidebar shows navigation options like VPC Dashboard, Subnets, and NAT Gateways. The main area displays a table of subnets with columns: Name, Subnet ID, State, VPC, IPv4 CIDR, and IPv6 CIDR. There are five subnets listed:

Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR
-	subnet-4684d22c	Available	vpc-e0325c8a	172.31.16.0/20	-
-	subnet-2c1b8b60	Available	vpc-e0325c8a	172.31.0.0/20	-
PrivateSubnetA	subnet-06fdb7b401c4efbd	Available	vpc-004e6f74571032a11 demo-vpc	10.0.0.0/24	-
PublicSubnetB	subnet-098c7bf3241cabbf3f	Available	vpc-004e6f74571032a11 demo-vpc	10.0.1.0/24	-
-	subnet-315ed34d	Available	vpc-e0325c8a	172.31.32.0/20	-

9-Create NAT gateway inside public subnet:

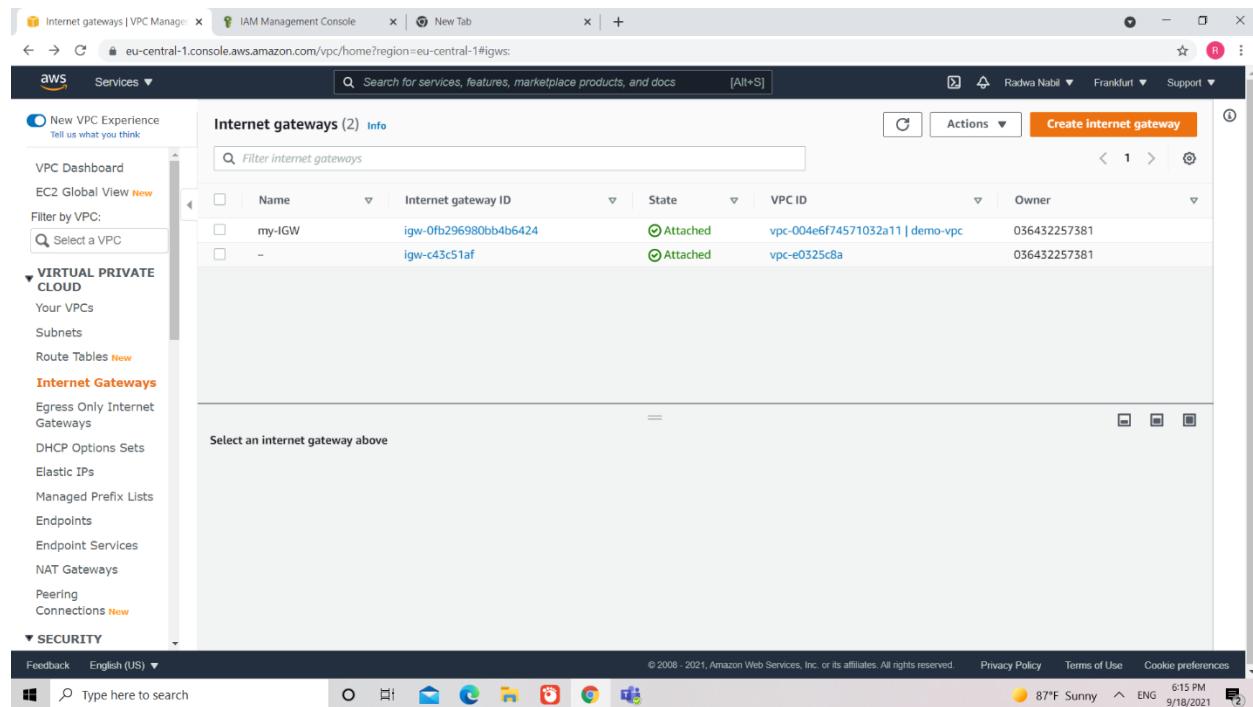
The screenshot shows the AWS VPC Management Console with the NAT gateways page open. The left sidebar shows navigation options like VPC Dashboard, Subnets, and NAT Gateways. The main area displays a table of NAT gateways with columns: Name, NAT gateway ID, Connectivity type, State, State message, Elastic IP address, and Private IP address. One NAT gateway is listed:

Name	NAT gateway ID	Connectivity type	State	State message	Elastic IP address	Private IP address
my-NAT	nat-0e19476193273faea	Public	Available	-	3.69.224.114	10.0.0.114

Below the table, there is a detailed view of the my-NAT entry:

NAT gateway ID	Connectivity type	State	State message
nat-0e19476193273faea	Public	Available	-
Elastic IP address	Private IP address	Network interface ID	VPC
3.69.224.114	10.0.0.114	eni-054167deee04f6d12	vpc-004e6f74571032a11 / demo-vpc
Subnet	Created	Deleted	
subnet-06fdb7b401c4efbd / PrivateSubnetA	2021/09/10 17:59 GMT+2	-	

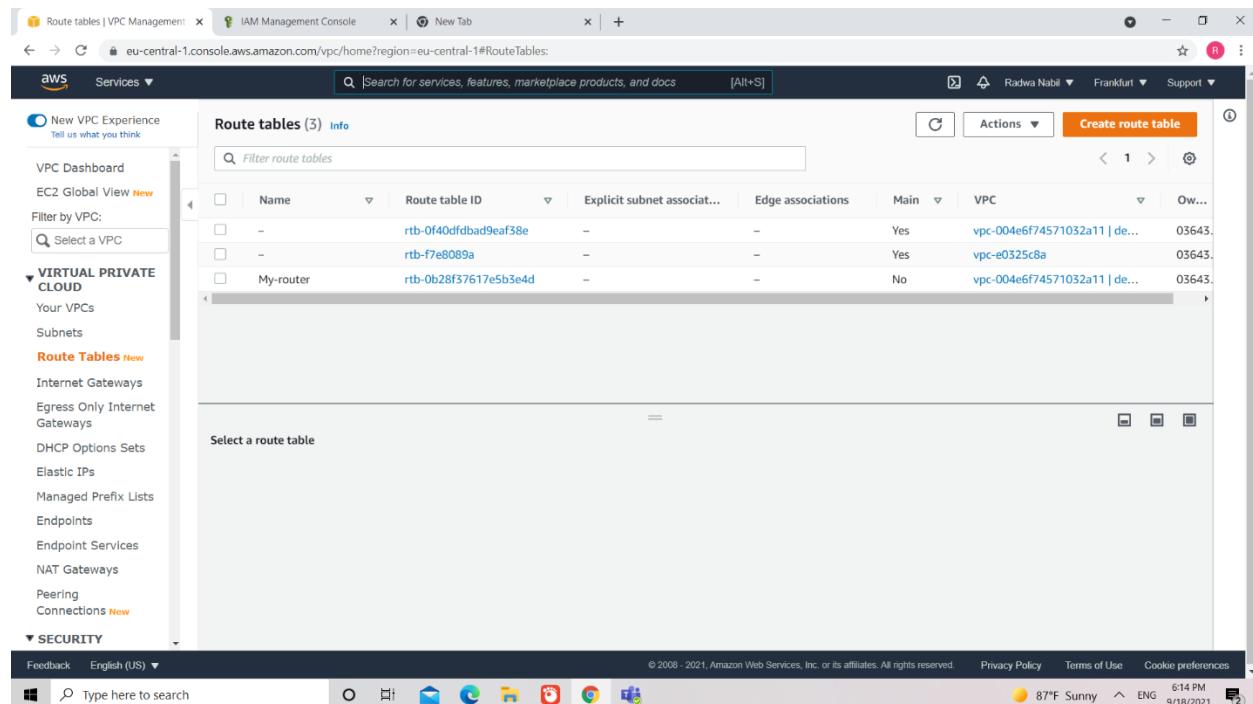
10-Create Internet gateway and attach it:



The screenshot shows the AWS VPC Management Console with the 'Internet gateways' section selected. The interface includes a search bar, a table with columns for Name, Internet gateway ID, State, VPC ID, and Owner, and a 'Create internet gateway' button. Two internet gateways are listed: 'my-IGW' and 'igw-c43c51af', both attached to the 'demo-vpc' VPC.

Name	Internet gateway ID	State	VPC ID	Owner
my-IGW	igw-0fb296980bb4b6424	Attached	vpc-004e6f74571032a11 demo-vpc	036432257381
-	igw-c43c51af	Attached	vpc-e0325c8a	036432257381

11-Create router to manage traffic:



The screenshot shows the AWS VPC Management Console with the 'Route tables' section selected. The interface includes a search bar, a table with columns for Name, Route table ID, Explicit subnet associations, Edge associations, Main, VPC, and Owner, and a 'Create route table' button. Three route tables are listed: 'rtb-0f40dfdbad9eaf38e', 'rtb-f7e8089a', and 'My-router'. The 'My-router' table is associated with the 'demo-vpc' VPC.

Name	Route table ID	Explicit subnet associations	Edge associations	Main	VPC	Owner
-	rtb-0f40dfdbad9eaf38e	-	-	Yes	vpc-004e6f74571032a11 de...	03643...
-	rtb-f7e8089a	-	-	Yes	vpc-e0325c8a	03643...
My-router	rtb-0b28f37617e5b3e4d	-	-	No	vpc-004e6f74571032a11 de...	03643...

The screenshot shows the AWS VPC Management Console. On the left, there's a navigation sidebar with sections like VPC Dashboard, EC2 Global View, and Route Tables. The main area is titled 'Route Tables' and shows a table with two rows:

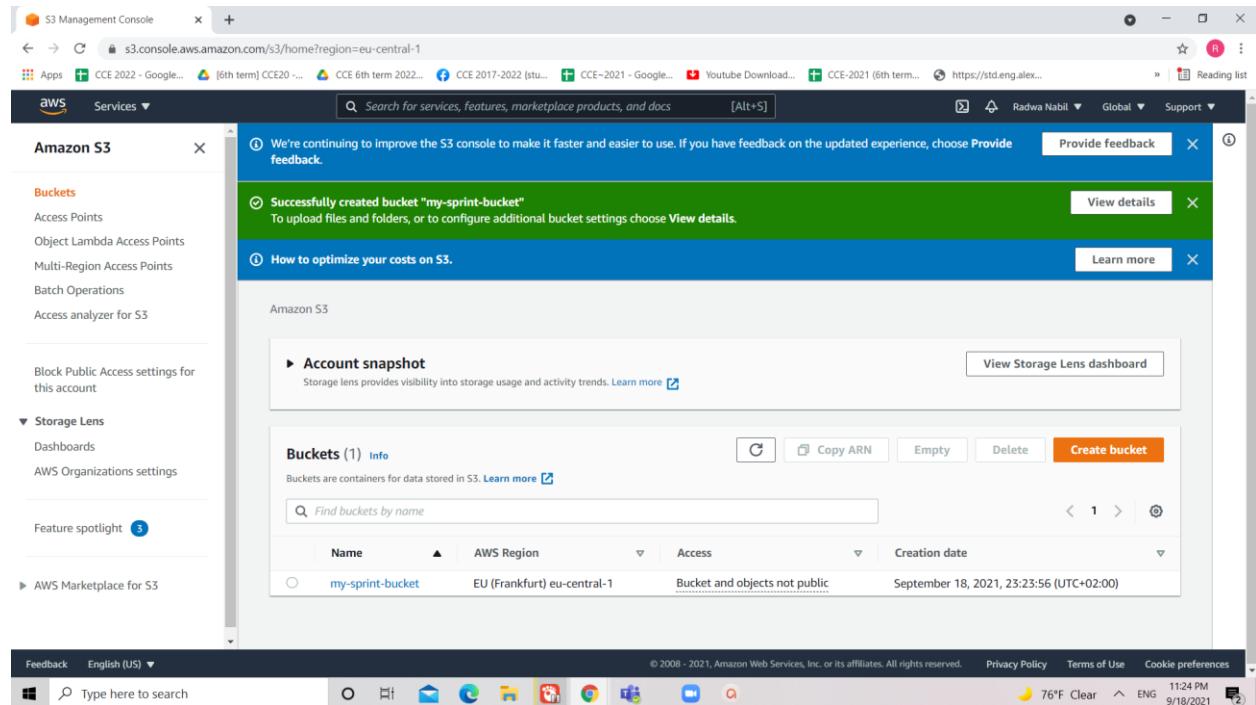
Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No
0.0.0.0/0	igw-0fb296980bb4b6424	Active	No

12-Create S3 bucket:

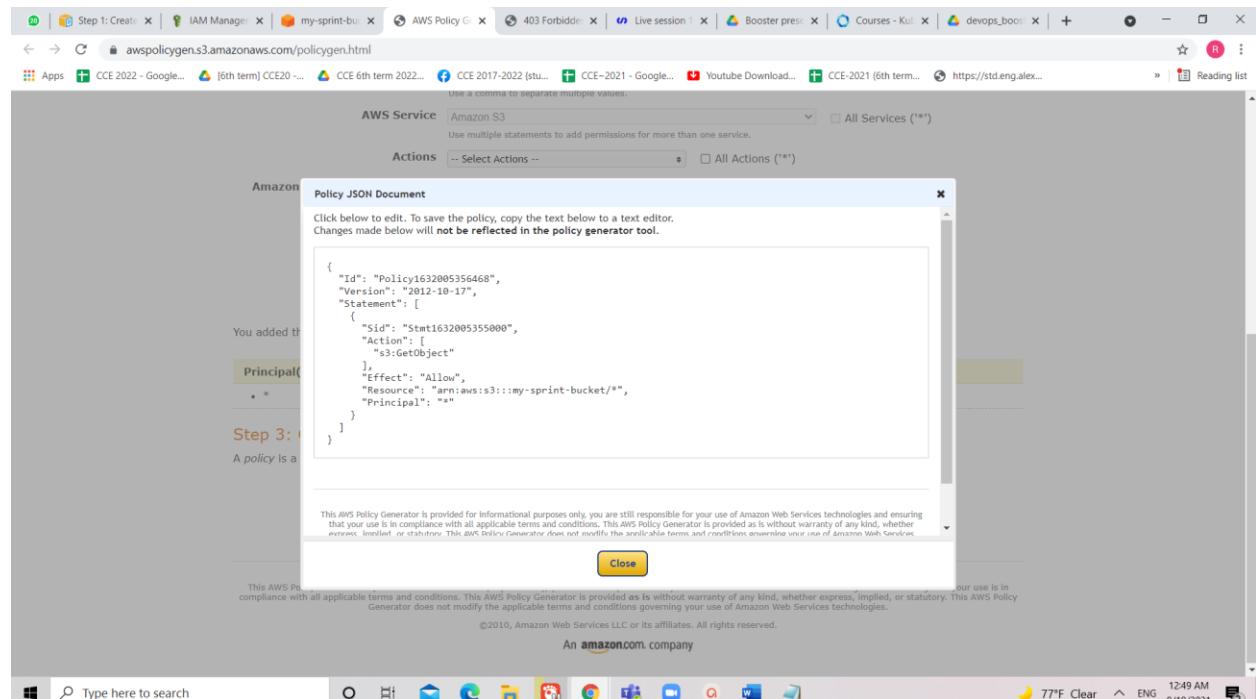
The screenshot shows the AWS S3 Management Console. The left sidebar has sections like Buckets, Storage Lens, and Feature spotlight. The main area is titled 'Buckets (1)' and shows a table with one row:

Name	AWS Region	Access	Creation date
my-sprint-bucket	EU (Frankfurt) eu-central-1	Bucket and objects not public	September 18, 2021, 23:23:56 (UTC+02:00)

13-upload files of static website on s3 bucket:



14-Use policy generator to make the website accessible by public:



15-It is now Publicly accessible:

The screenshot shows the AWS S3 console interface. On the left, there's a sidebar with options like Buckets, Access Points, Object Lambda Access Points, Multi-Region Access Points, Batch Operations, and Access analyzer for S3. The main area shows a bucket named "my-sprint-bucket". A green banner at the top says "Successfully edited bucket policy." Below it, the bucket status is shown as "Publicly accessible". The "Permissions" tab is selected in the navigation bar. Under "Permissions overview", it shows "Access" set to "Public". At the bottom, there's a section titled "Block public access (bucket settings)" with a note about granting public access through ACLs or bucket policies.

16-The static website hosted:

The screenshot shows a static website hosted on AWS S3. The URL is "my-sprint-bucket.s3-website.eu-central-1.amazonaws.com/home". The page has a header with "Tasty" and a navigation menu with links to Home, About, Services, Menu, and Contact us. The main content features the text "Tasty food" and "Try the best food of the week.", followed by a "View Menu" button. To the right is a large image of a salad. The footer includes a search bar and system status information like "77°F Clear" and "12:51 AM 9/19/2021".

17-Create Snapshot to EBS volume

The screenshot shows the 'Create Snapshot' page in the AWS Management Console. The 'Select resource type' dropdown is set to 'Volume'. The 'Volume' input field contains 'vol-0b8beef9eb8bdffb'. There is a 'Description' input field and an 'Encrypted' dropdown set to 'Not Encrypted'. Below these fields is a key-value pair input area. A note says 'This resource currently has no tags' and 'Choose the Add tag button or click to add a Name tag'. An 'Add Tag' button is present. At the bottom right are 'Cancel' and 'Create Snapshot' buttons. The top navigation bar shows tabs for 'Instance details', 'Create Snapshot', and 'bedimcode/responsive-website-'.

18-Create image for ec2 instance:

The screenshot shows the 'Instances' page in the AWS Management Console. On the left, the 'Instances' section is expanded, showing 'Instances New' and other options like 'Instance Types' and 'Launch Templates'. In the main pane, a table lists instances, including one named 'my_demo' which is 'Running'. A context menu is open over this instance, with the 'Create image' option highlighted. A tooltip for 'Create image' says 'Create template from instance' and 'Launch more like this'. The top navigation bar shows tabs for 'S3 Management Console', 'Instances', and 'bedimcode/responsive-website-'.

19-Create public image for ec2 instance:

The screenshot shows the AWS EC2 Management Console interface. A modal dialog box titled "Modify Image Permissions" is open, asking if the user wants to change the visibility of the image from "Private" to "Public". The "Public" radio button is selected. Below the dialog, the main table lists two AMIs: "image2" and "Backup19-9".

Name	AMI Name	AMI ID	Source	Owner	Visibility	Status	Creation Date	Platform	Root Device Type
image2		ami-0fa1990ed8d558760	036432257381...	036432257381	Private	pending	September 19, 2021 at 1:21...	Other Linux	ebs
Backup19-9		ami-059da7e2ab6792ae0	036432257381...	036432257381	Private	available	September 19, 2021 at 1:12...	Other Linux	ebs

20-Two images created public and private:

The screenshot shows the AWS EC2 Management Console interface. The main table displays two AMIs: "Backup19-9" and "image2". The "Backup19-9" row indicates it is "Public" and "available". The "image2" row indicates it is "Private" and "available".

Name	AMI Name	AMI ID	Source	Owner	Visibility	Status	Creation Date	Platform	Root Device Type
Backup19-9		ami-0fa1990ed8d558760	036432257381...	036432257381	Public	available	September 19, 2021 at 1:12...	Other Linux	ebs
image2		ami-059da7e2ab6792ae0	036432257381...	036432257381	Private	available	September 19, 2021 at 1:21...	Other Linux	ebs

21-Create cloud formation template:

The screenshot shows the AWS CloudFormation 'Create stack' wizard. The current step is 'Step 1 Specify template'. On the left, a sidebar lists steps: Step 1 Specify template (current), Step 2 Specify stack details, Step 3 Configure stack options, and Step 4 Review. The main area is titled 'Prerequisite - Prepare template' with the sub-section 'Prepare template'. It states: 'Every stack is based on a template. A template is a JSON or YAML file that contains configuration information about the AWS resources you want to include in the stack.' Below are three radio buttons: 'Template is ready' (selected), 'Use a sample template', and 'Create template in Designer'. The next section, 'Specify template', describes what a template is and provides a 'Template source' field. The 'Amazon S3 URL' radio button is selected, and the URL 'https://s3-external-1.amazonaws.com/cf-templates-3nr9ek3oz701-us-east-1/2021262Nte-new.template58amyoa7tw' is entered. A 'View in Designer' button is available. At the bottom right are 'Cancel', 'Previous', and 'Next' buttons.

The screenshot shows the AWS CloudFormation 'Create stack' wizard. The current step is 'Step 2 Specify stack details'. The sidebar shows steps 1 and 2. The main area is titled 'Specify stack details' with the 'Stack name' section. The 'Stack name' input field contains 'sprints-stack'. A note says: 'Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).'. The 'Parameters' section is shown below, stating: 'No parameters' and 'There are no parameters defined in your template'. At the bottom right are 'Cancel', 'Previous', and 'Next' buttons.

The screenshot shows the AWS CloudFormation 'Create stack' wizard. The current step is 'Step 3 Configure stack options'. The sidebar shows steps 1, 2, and 3. The main area is the final configuration step, which is currently empty. At the bottom right are 'Cancel', 'Previous', and 'Next' buttons.

temp - Notepad

File Edit Format View Help

```
{  
    "AWSTemplateFormatVersion": "2010-09-09",  
    "Resources": {  
        "ExampleEc2Instance": {  
            "Type": "AWS::EC2::Instance",  
            "Properties": {  
                "InstanceType": "t2.micro",  
                "ImageId" : "ami-a0cfeed8"  
            }  
        }  
    }  
}
```

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