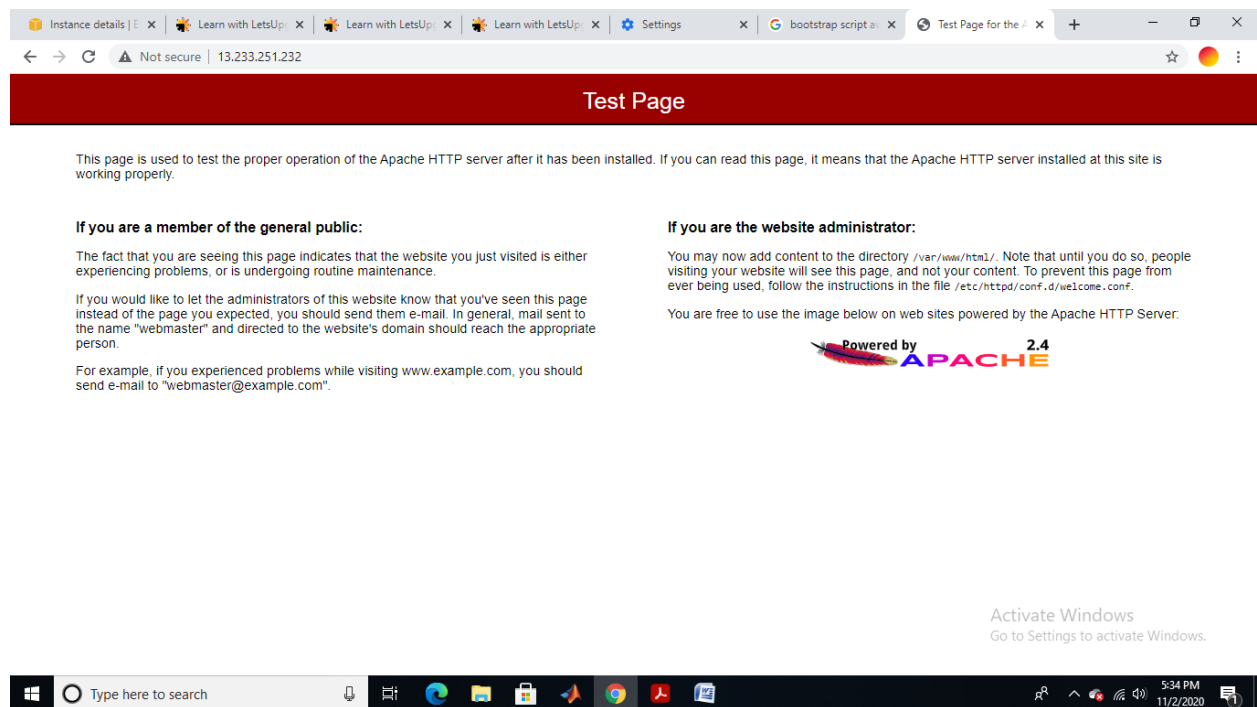


IAM ROLES WITH S3 AND BOOTSTRAPPING WITH EC2

BOOTSTRAPPING ALLOWS US TO WRITE AND PUT SCRIPT ON STARTUP WHILE LAUNCHING AN EC2 INSTANCE SO THAT IT EXECUTES AUTOMATICALLY AS SOON AS THE INSTANCE IS LAUNCHED.

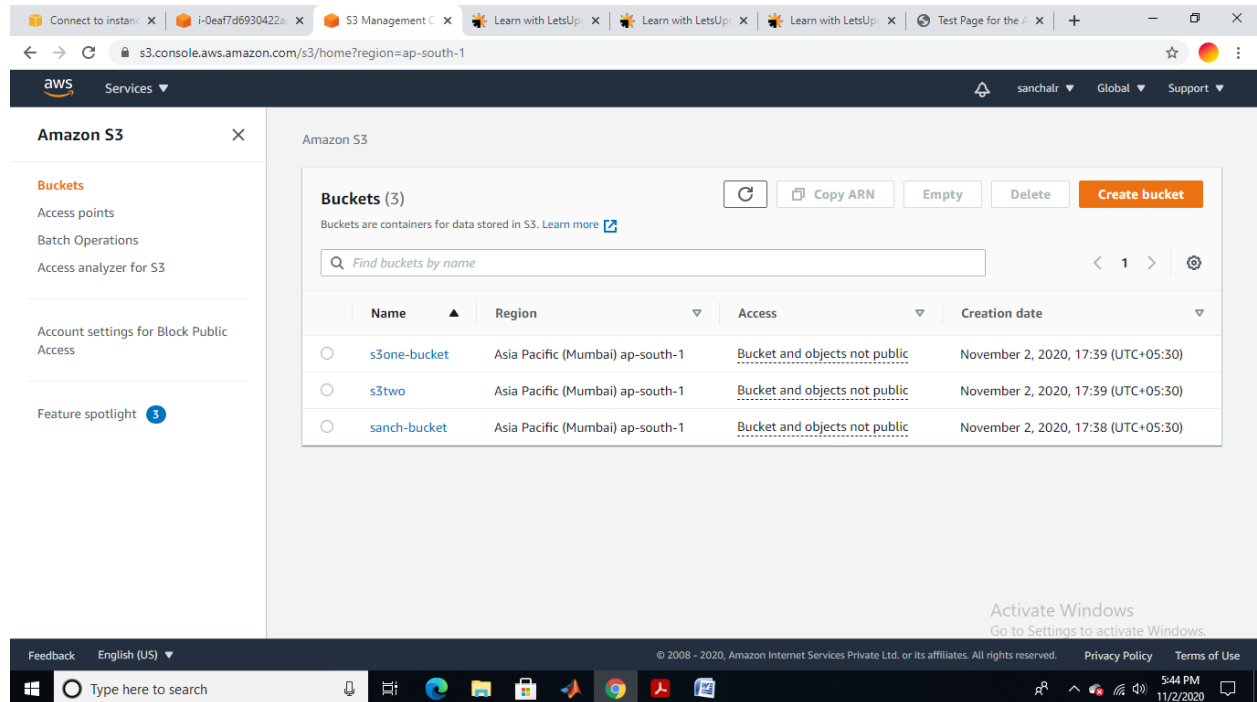
TASK1: CREATING A BOOTSTRAPPED INSTANCE

HERE, A BOOTSCRAP SCRIPT TO INSTALL APACHE HTTPD IS WRITTEN IN THE CONFIGURE INSTANCE DETAILS SECTION IN THE USER DATA ALTERNATIVE.



TASK 2: CHECKING BUCKET LIST AND CREATING A NEW BUCKET FROM EC2 USING IAM ROLES

ANY NUMBER OF BUCKETS CAN BE CREATED IN S3 AND HERE WE HAVE CREATED 3 BUCKETS AND LISTED THEM ACCORDINGLY. BY DEFAULT, 100 BUCKETS CAN BE CREATED PER ACCOUNT AND LIMIT CAN BE INCREASED UPTO 1000 BY SUBMITTING A SERVICE LIMIT INCREASE.



LISTING S3 BUCKETS AND CREATING A NEW BUCKET

BUCKETS ARE LISTED USING COMMAND {AWS S3 LS} AND NEW BUCKET IS CREATED USING COMMAND {AWS S3 MB S3:// REGION(IF WANT ANOTHER REGION) AND NEW BUCKET NAME}.

Connect to instance: x i-0eaf7d6930422ac65 x S3 Management C x Learn with LetsUp: x Learn with LetsUp: x Learn with LetsUp: x Test Page for the / x + -

ap-south-1.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0eaf7d6930422ac65

Last login: Mon Nov 2 12:13:34 2020 from ec2-13-233-177-1.ap-south-1.compute.amazonaws.com

```

_ _ | _ _ | _
_ | ( _ _ /   Amazon Linux 2 AMI
_ | \ _ _ | _

https://aws.amazon.com/amazon-linux-2/
25 package(s) needed for security, out of 39 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-41-93 ~]$ sudo su
[root@ip-172-31-41-93 ec2-user]# aws s3 ls
2020-11-02 12:09:12 s3one-bucket
2020-11-02 12:09:31 s3two
2020-11-02 12:08:32 sanch-bucket
[root@ip-172-31-41-93 ec2-user]# aws s3 mb s3://role-bucket --region Asia Pacific (Mumbai) ap-south-1
bash: syntax error near unexpected token `('
[root@ip-172-31-41-93 ec2-user]# aws s3 mb s3://role-bucket --region Asia Pacific Mumbai ap-south-1
Unknown options: Pacific,Mumbai,ap-south-1
[root@ip-172-31-41-93 ec2-user]# aws s3 mb s3://role-bucket --region ap-south-1
make_bucket: role-bucket
[root@ip-172-31-41-93 ec2-user]#

```

i-0eaf7d6930422ac65 (iam)

Public IPs: 13.232.84.132 Private IPs: 172.31.41.93

Activate Windows
Go to Settings to activate Windows.

Type here to search

VERIFIED IN S3 CONSOLE

CREATION OF NEW BUCKET NAMED ROLE-BUCKET

Connect to instance: x i-0eaf7d6930422ac65 x S3 Management C x Learn with LetsUp: x Learn with LetsUp: x Learn with LetsUp: x Test Page for the / x + -

s3.console.aws.amazon.com/s3/home?region=ap-south-1

aws Services

Amazon S3

Buckets

Access points

Batch Operations

Access analyzer for S3

Account settings for Block Public Access

Feature spotlight

Amazon S3

Buckets (4)

Buckets are containers for data stored in S3. [Learn more](#)

Find buckets by name

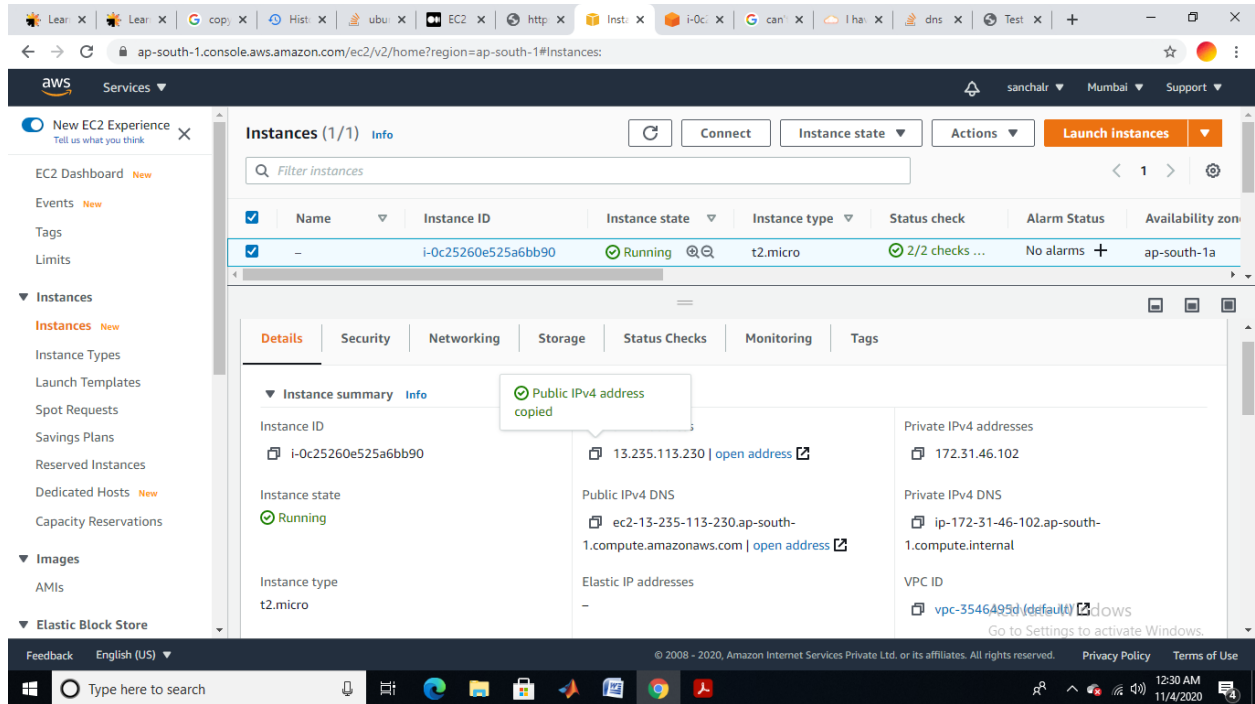
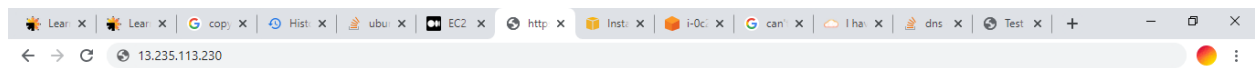
Name	Region	Access	Creation date
role-bucket	Asia Pacific (Mumbai) ap-south-1	Objects can be public	November 2, 2020, 17:56 (UTC+05:30)
s3one-bucket	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	November 2, 2020, 17:39 (UTC+05:30)
s3two	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	November 2, 2020, 17:39 (UTC+05:30)
sanch-bucket	Asia Pacific (Mumbai) ap-south-1	Bucket and objects not public	November 2, 2020, 17:38 (UTC+05:30)

Activate Windows
Go to Settings to activate Windows.

Feedback English (US)

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Type here to search

TASK 3: HOSTING A WEBPAGE USING THE BOOTSTRAP SCRIPT ON EC2.**HTML FILE DISPLAYED****IAM.HTML FILE WAS CREATED AND COPIED IN EC2 INSTANCE.**

HEY!!! THIS IS IAM ROLE PRACTICAL THIS PRACTICAL HOSTS A WEBPAGE USING BOOTSTRAP SCRIPT ON EC2

Activate Windows
Go to Settings to activate Windows.



IAM CREATED NAMED ROLE2

ROLE DOES NOT HAVE USERNAME AND PASSWORD. IT IS AN IDENTITY WITH PERMISSION POLICIES THAT DETERMINE WHAT THE IDENTITY CAN AND CANNOT DO IN AWS.

ROLE CREATED IS ADDED TO INSTANCE.

ROLE CAN BE ASSIGNED TO DIFFERENT TRUSTED ENTITY AS ANOTHER AWS ACCOUNT, WEB IDENTITY, SAML FEDERATION AND USE CASES LIKE EC2 OR LAMBDA. HERE WE ARE USING EC2 AS TRUSTED ENTITY AND EC2 USE CASE.

The screenshot shows the AWS IAM console interface. The left sidebar contains navigation links for Identity and Access Management (IAM), including Dashboard, Access management (Groups, Users, Roles, Policies, Identity providers, Account settings), Access reports (Access analyzer, Archive rules, Analyzers, Settings, Credential report, Organization activity), and Feedback. The main content area displays a table of roles with columns for Role name, Trusted entities, and Last activity. The role 'role2' is selected, showing it is trusted by 'AWS service: ec2' and has activity 'Today'.

Role name	Trusted entities	Last activity
<input type="checkbox"/> aws-elasticbeanstalk-ec2-role	AWS service: ec2	27 days
<input type="checkbox"/> aws-elasticbeanstalk-service-role	AWS service: elasticbeanstalk	27 days
<input type="checkbox"/> AWSServiceRoleForAutoScaling	AWS service: autoscaling (Service-Linked role)	27 days
<input type="checkbox"/> AWSServiceRoleForElasticLoadBalancing	AWS service: elasticloadbalancing (Service-Linked role)	27 days
<input type="checkbox"/> AWSServiceRoleForSupport	AWS service: support (Service-Linked role)	None
<input type="checkbox"/> AWSServiceRoleForTrustedAdvisor	AWS service: trustedadvisor (Service-Linked role)	None
<input checked="" type="checkbox"/> role2	AWS service: ec2	Today

CREATING AN EC2 INSTANCE IN CUSTOM VPC

CREATE VPC

The screenshot shows the AWS VPC Management Console interface. A green notification banner at the top states: "You successfully created vpc-02de7131cd2680066 / my-vpc". The main content area displays the details for the VPC `vpc-02de7131cd2680066 / my-vpc`.

Details			
VPC ID vpc-02de7131cd2680066	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP options set dopt-39997352	Route table rtb-08785d07715ed3c77	Network ACL acl-04787a0880d2fab8d
Default VPC No	IPv4 CIDR 10.1.0.0/16	IPv6 pool -	IPv6 CIDR -
Owner ID 618543464581			

The left sidebar shows the navigation menu with options like VPC Dashboard, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, Endpoints, Endpoint Services, and NAT Gateways.

CREATE SUBNET

The screenshot shows the AWS VPC Management Console interface for the Subnets page. A table lists the subnets associated with the VPC `vpc-02de7131cd2680066 / my-vpc`.

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	AV
subnet1	subnet-06cb104bc50b2b67f	available	vpc-02de7131cd2680066 ...	10.1.1.0/24	251	-	ap-
def1	subnet-3fab0744	available	vpc-3546495d default	172.31.16.0/20	4091	-	ap-
def2	subnet-4449d308	available	vpc-3546495d default	172.31.0.0/20	4091	-	ap-
def3	subnet-f1a99c99	available	vpc-3546495d default	172.31.32.0/20	4091	-	ap-

Below the table, the details for the selected subnet `subnet-06cb104bc50b2b67f` are shown, including its description, flow logs, route table, network ACL, tags, and sharing information.

CREATE INTERNET GATEWAY

The screenshot shows the AWS VPC Management Console interface. A green notification banner at the top states: "Internet gateway igw-0eb944815655aca37 successfully attached to vpc-02de7131cd2680066". The main content area displays the details for the Internet Gateway **igw-0eb944815655aca37 / igw-a**. The details table shows:

Internet gateway ID	State	VPC ID	Owner
igw-0eb944815655aca37	Attached	vpc-02de7131cd2680066 my-vpc	618543464581

Below the details, the tags section shows a single tag with Key **Name** and Value **igw-a**. The left sidebar contains navigation links for VPCs, Subnets, Route Tables, Internet Gateways, Egress Only Internet Gateways, DHCP Options Sets, Elastic IPs, Managed Prefix Lists, Endpoints, and Endpoint Services. The bottom of the screen shows the Windows taskbar with the time 8:42 PM on 11/2/2020.

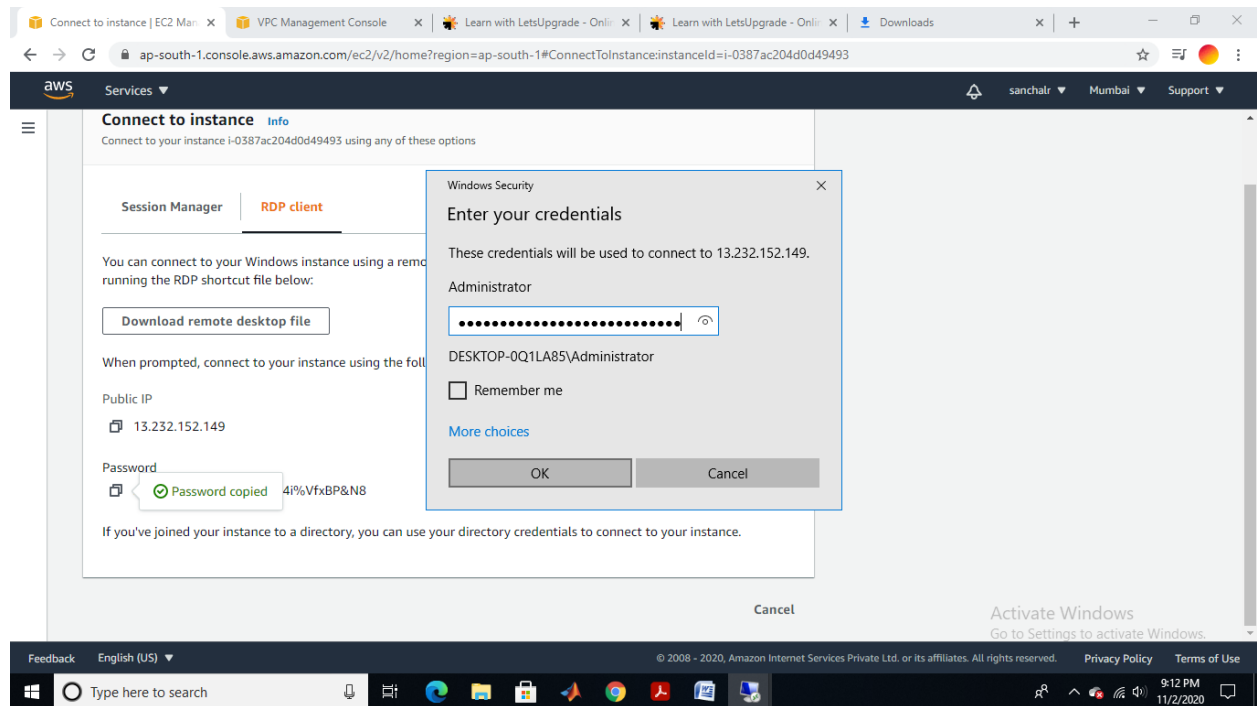
CREATE ROUTE TABLE

The screenshot shows the "Edit routes" page in the AWS VPC Management Console for Route Table **rtb-08785d07715ed3c77**. The page displays a table of routes:

Destination	Target	Status	Propagated
10.1.0.0/16	local	active	No
0.0.0.0/0	igw-0eb944815655aca37		No

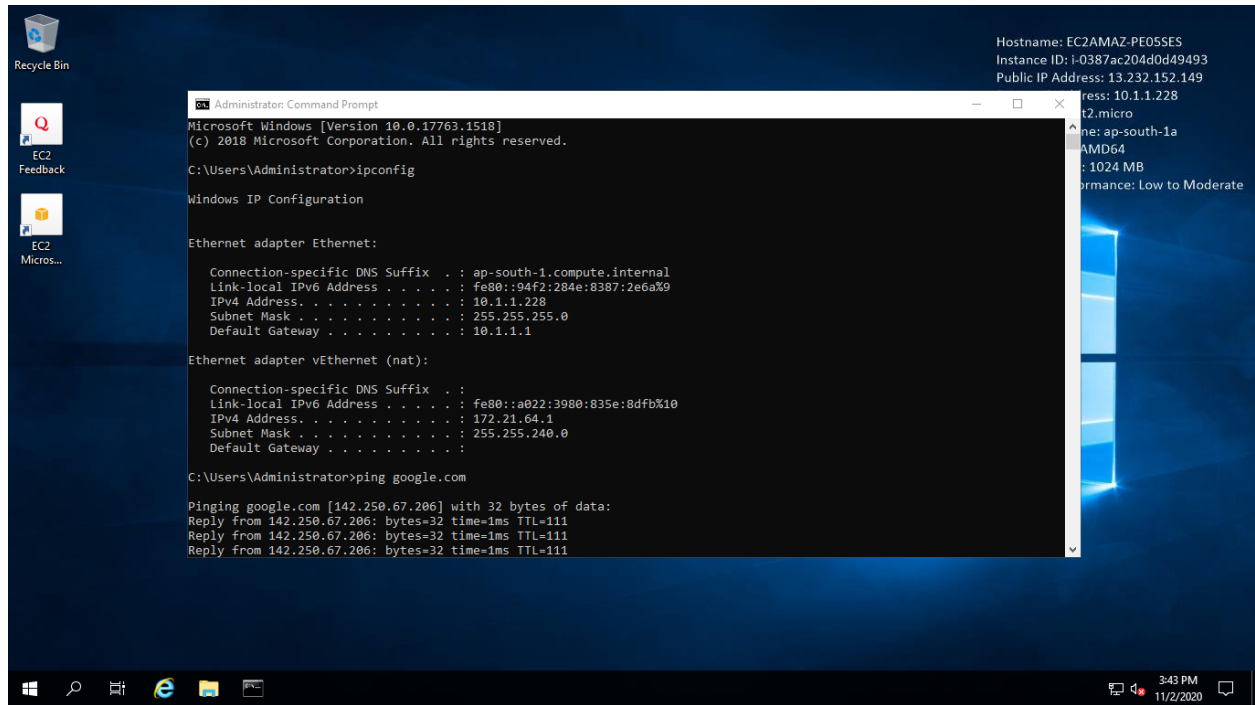
An "Add route" button is visible below the table. A tooltip for the selected route shows the target **igw-0eb944815655aca37** and its name **igw-a**. At the bottom right, there are "Cancel" and "Save routes" buttons. The bottom of the screen shows the Windows taskbar with the time 8:44 PM on 11/2/2020.

CONNECTING TO INSTANCE



VERIFICATION USING IPCONFIG

INTERNET PROTOCOL CONFIGURATION (IPCONFIG) DISPLAYS THE IP ADDRESS, SUBNET MASK, AND DEFAULT GATEWAY AND USED FOR NETWORK CONNECTIVITY.



WINDOWS EC2 INSTANCE

