vagy 'no' használatával.)

Saját válasz

AWS-10. If we were to launch an EC2 instance in one of the private subnets (if there are more than one, it does not matter in which one), would it be able to reach the public internet? Answer with 'yes' or 'no'.

2 pont

(Ha indítanánk egy EC2 példányt az egyik privát alhálóban (amennyiben több van, akkkor bármelyikben), akkor az EC2 példány képes lenne elérni a publikus internetet? Válaszoljon 'yes' vagy 'no' használatával.)

Saját válasz NO

Vissza Következő Űrlap tartalmának

AWS-8. Can you access the public internet from this EC2 instance, e.g., by pinging google.com? Answer with 'yes' or 'no'. 1 pont

(El lehet érni a publikus internetet erről az EC2 példányról, pl. a google.com pingelhető lehet a példányról? Válaszoljon 'yes' vagy 'no' használatával.)

Saját válasz NO

AWS-9. If we were to add another EC2 instance in the same subnet and security group could the two instances reach each other at any port? Answer with 'yes' or 'no'. 2 pont

(Ha egy másik EC2 példányt adnánk hozzá ehhez az alhálóhoz és security group-hoz, akkor ez a két példány el tudná érni egymást bármelyik porton? Válaszoljon 'yes' vagy 'no' használatával.)

Saját válasz YES

Development of Cloud Native Network Functions - exam - AWS practice

In this part of the exam you will work on the resources that had your Neptun ID in its CloudFormation link.
(A vizsga ezen részében azokkal az AWS resource-okkal fogunk dolgozni, melyket a második CloudFormation deployment hozott létre -- aminek a linkjében szerepelt a Neptun kód.)

AWS-1. A VPC has been deployed under the name 'vitmac12-aws-exam-<date>-<Neptun ID>-vpc'. What is its IPv4 CIDR block? 1 pont

(Egy VPC-t telepítettünk a 'vitmac12-aws-exam-<dátum>-<Neptun kód>-vpc' név alatt. Mi az IPv4 CIDR tartománya?)

Saját válasz

AWS-2. What Availability Zones (AZ) does this VPC cover currently, i.e., in 2 pont

AWS-2. What Availability Zones (AZ) does this VPC cover currently, i.e., in which AZs does it have subnets? Check its resource map and list the AZs in alphabetical order, separate items with a single ',' without whitespaces. 2 pont

(Milyen Availability Zone-okat (AZ) fed le jelenleg ez a VPC, azaz az alhálózatai milyen AZ-kben vannak jelen? Ellenőrizze a VPC resource map-jét és adja meg az AZ-ket betűrendben, a tagoláshoz használjon kizárólag vesszőket, szóközöket ne!)

Saját válasz

AWS-3. How many public subnets does this VPC have? Write the number in the field below. Help: think about what makes a subnet public. 2 pont

(Hány publikus alhálója van ennek a VPC-nek? Adja meg ezt a számot a lenti mezőben. Segítség: gondolja át,

AWS-3. How many public subnets does this VPC have? Write the number in the field below. Help: think about what makes a subnet public. 2 pont

(Hány publikus alhálója van ennek a VPC-nek? Adja meg ezt a számot a lenti mezőben. Segítség: gondolja át, mi határozza meg azt, hogy egy alháló publikus, vagy sem!)

Saját válasz

AWS-4. How many private subnets does this VPC have? 1 pont

(Hány privát alhálója van ennek a VPC-nek?)

Saját válasz

AWS-5. One of the subnets is named like this: 'vitmac12-aws- 1 pont

AWS-5. One of the subnets is named like this: 'vitmac12-aws-exam-<date>-<Neptun ID>-sn-1', i.e., it ends with a '1'. What is its IPv4 CIDR block? 1 pont

(Az egyik alháló neve a következő sémát követi: 'vitmac12-aws-exam-<dátum>-<Neptun kód>-sn-1', azaz '1'-re végződik. Mi ennek az alhálónak az IPv4 CIDR tartománya?)

Saját válasz

AWS-6. In what availability zone is this subnet? Insert its name in the field below. 1 pont

(Melyik availability zone-ban van ez az alháló? Másolja be a nevét a lenti mezőbe!)

Saját válasz

AWS-7. An EC2 instance has been deployed under the name 'vitmac12-aws-exam-<date>-<Neptun ID>-instance'. Check its security group. Based on the rules, can HTTP(S) traffic originating from outside of the AWS cloud reach the instance using the any of the ports usually used for HTTP(S) traffic? Answer with 'yes' or 'no'. 3 pont

(Egy EC2 példányt telepítettünk 'vitmac12-aws-exam-<dátum>-<Neptun kód>-instance' névvel. Ellenőrize a példány security group-ját! Az abban található szabályok alapján elérheti-e az AWS felhőn kívülről érkező HTTP(S) forgalom a példányt, a szokásos HTTP(S) forgalom kiszolgálásához használt protok valamelyikén? Válaszoljon 'yes' vagy 'no' használatával.)

Saját válasz

AWS-8. Can you access the public internet from this EC2 instance, e.g., 1 pont

solution, use the following command:
./cccli task test exam-1-task-2.yaml
You will receive a token when you have at least 3 successful tests (out of 5), which you can submit, and get points according to the following:

- 5 successful tests = 8 points
- 4 successful tests = 6 points
- 3 successful tests = 4 points
- below that: no token = 0 points

Delete the task:
When you are done with the task, delete it, using:
./cccli task delete exam-1-task-2.yaml

Copy the token you received after the evaluation!

Saját válasz

Kubernetes-2 (max. 8 points)

8 pont

There is an existing deployment in the Kubernetes cluster. It is designed to be scalable, however there is currently no HPA deployed to manage the automatic scaling of the deployment.
Modify the HPA configuration defined in the **exam-1-task-2-HPA-EXAMPLE.yaml** file and deploy to the cluster.
- The HPA should be named **hpa-for-scalable-webserver**
- There should be at least two replicas
- Maximum 5 replicas is allowed
- Configure the threshold in a way, that the average CPU utilization is 75%
- Configure the HPA to point to your deployment

Start the task:
Create the environment for task 2 by executing the following command:
./cccli task create exam-1-task-2.yaml

Evaluate the task:
When you want to evaluate your solution, use the following command:
./cccli task test exam-1-task-2.yaml
You will receive a token when you have at least 3 successful tests (out of 5), which you can submit, and get points according to the following:

- 5 successful tests = 8 points
- 4 successful tests = 6 points
- 3 successful tests = 4 points
- below that: no token = 0 points

Kubernetes-1 (max. 2 points) 2 pont

The devops team deployed a deployment in the Kubernetes cluster. They noticed that only one Pod started, although, they wanted three.
Your task is to update the deployment to have 3 Pod replicas.

Start the task:
Create the environment for task 1 by executing the following command:
./cccli task create exam-1-task-1.yaml

Evaluate the task:
When you want to evaluate your solution, use the following command:
./cccli task test exam-1-task-1.yaml
You will receive a token when you successfully solve the task, this token should be copied here!

Delete the task:
When you are done with the task, delete it, using:
./cccli task delete exam-1-task-1.yaml

Copy the token you received after the evaluation!

Saját válasz

- [ ] The current (average) CPU usage of a Kubernetes pod can be queried.
- [ ] Prometheus and Amazon CloudWatch can collect only single dimensional metrics.

In event-driven programming... (select true statements) 1 pont

- [ ] ...we cannot achieve scalability or responsiveness.
- [x] ...we can realize synchronous and asynchronous push models.
- [x] ...the program responds to events by executing predefined event handlers.
- [ ] ...event handlers are always directly called by event sources, they can never pull for messages.

Vissza Következő Űrlap tartalmának törlése

What are some true statements about Kubernetes pods? 1 pont

- [x] Pods are the smallest deployable unit of computing in Kubernetes.
- [x] Pods are made up of containers.
- [ ] You cannot limit the CPU usage of a pod.
- [ ] All pods can always directly access every file in the host machine's file system.

What is true about monitoring? 1 pont

- [ ] Prometheus cannot do operations on the collected metrics.
- [ ] Prometheus can trace applications.
- [ ] Amazon CloudWatch can work only with logs and not with metrics.
- [x] The current (average) CPU usage of a Kubernetes pod can be queried.
- [ ] Prometheus and Amazon CloudWatch can collect only single dimensional metrics.

services of the machine with IP address 10.0.0.153 accessible from the outside

What is/are the result(s) of the following command? Select the true statement(s)? 1 pont

```
$ iptables -t nat -A POSTROUTING -s 10.0.0.0/8 -o eth2 \
           -j MASQUERADE
```

- [ ] Adding a new address translation rule to the beginning of the NAT table's POSTROUTING chain, allowing the internal 10.0.0.0/8 network to egress to the external network
- [x] Adding a new NAT rule to translate addresses from the 10.0.0.0/8 network when packets are sent out on the eth2 interface
- [ ] Adding a new address translation rule to the NAT table, which replaces 10.0.0.0/8 addresses if the packet arrived on the eth2 interface
- [ ] Setting up port forwarding, the 10.0.0.0/8 range becomes accessible from the outside

What are some true statements about Kubernetes pods? 1 pont

separation.

What is/are the result(s) of the following command? Select the true statement(s)? 1 pont

```
$ iptables -t nat -A PREROUTING -d 192.168.168.10 -p tcp --dport 2222 \
           -j DNAT --to-destination 10.0.0.153:22
```

- [x] Adding a new NAT rule to the nat table to expose TCP port 22 of an internal machine to an external network
- [x] Adding a NAT rule to replace the destination IP address 192.168.168.10 for packets arriving on TCP port 2222
- [ ] Setting up port forwarding to make TCP and UDP port 22 of the machine with IP address 10.0.0.153 accessible from an external network
- [ ] Setting up port forwarding, making all services of the machine with IP address 10.0.0.153 accessible from the outside

What is/are the result(s) of the following command? Select the true statement(s)? 1 pont

What are some of the advantages of edge computing? 1 pont

- [x] It can decrease processing latency compared to device to cloud communication.
- [ ] It causes higher device battery drain.
- [x] It can increase the processing capabilities of IoT devices.
- [ ] It has low equ management requirements.

What are key features of Software Defined Networking? 1 pont

- [ ] Offers open interfaces between the control and data planes.
- [ ] Decreases the latency of all packet forwarding operations.
- [ ] SDN-enabled devices can be realized only on specialized hardware.
- [ ] Provides control and data plane separation.

```
subscription_arn = sns.subscribe(
  TopicArn = <SNS topic ARN>,
  Protocol = 'lambda',
  Endpoint = '<ARN of Lambda
function>'
)['SubscriptionArn']

sns.set_subscription_attributes(
  SubscriptionArn = subscription_arn,
  AttributeName = 'FilterPolicy'
  AttributeValue = '{"SensorID":
["0001", "0002"]}'
)
```

- [x] We subscribe to the topic with a Lambda function that we set up using its ARN. When a message arrives to the topic that has a "SensorID" of "0001" or "0002", we trigger the Lambda function.
- [ ] Once SNS triggers our Lambda function using a message that corresponds to the 'FilterPolicy' no other subscribers of the same topic will receive the message during the visibility timeout period.
- [ ] When any message arrives to the topic, we trigger the Lambda function given by its ARN.
- [ ] We are subscribing to a queue topic.

We are subscribing to an AWS SNS topic using the following code snippet. What statement/statements is/are true? 1 pont

```
subscription_arn = sns.subscribe(
  TopicArn = <SNS topic ARN>,
  Protocol = 'lambda',
  Endpoint = '<ARN of Lambda function>'
)['SubscriptionArn']

sns.set_subscription_attributes(
  SubscriptionArn = subscription_arn,
  AttributeName = 'FilterPolicy'
  AttributeValue = '{"SensorID": ["0001", "0002"]}'
)
```

- [x] We subscribe to the topic with a Lambda function that we set up using its ARN. When a message arrives to the topic that has a "SensorID" of "0001" or "0002", we trigger the Lambda function.
- [ ] Once SNS triggers our Lambda function using a message that corresponds to the 'FilterPolicy' no other subscribers of the same topic will receive the message during the visibility timeout period.
- [ ] When any message arrives to the topic, we trigger the Lambda function given by its ARN.