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Register for Certification exam (https://examform.nptel.ac.in/2022_04/exam_form/dashboard)

Course outline

How does an NPTEL online course work? ()

Week 0 ()

Week 1 ()

Week 2 ()

Week 3 ()

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Week 5 ()

Week 6 ()

Week 7 ()

Week 8 ()

Week 9 : Assignment 9

Your last recorded submission was on 2022-09-26, 23:03 Due date: 2022-09-28, 23:59 IST. IST

1) ***1 point***

The OpenStack cloud simulation framework provides an interactive Graphical User Interface (GUI)

a. True

b. False

- [x] a
- [ ] b

2) ***1 point***

Virtualized resources within the OpenStack simulator that you can define, set parameters of and deploy within OpenStack are also known as

a. Instances

b. Files

c. Hypervisors

d. Sketches

- [ ] a
- [ ] b
- [x] c
- [ ] d

3) ***1 point***

If you want to connect your OpenStack instance with the external public network (like the Internet), you would need to connect the following between your instance and the public network

a. Database

b. File

c. Memory

d. Router

- ○ a
- ○ b
- ○ c
- ◉ d

4) ***1 point***

Which among the following is NOT a part of a sensor node connected to a wireless sensor network.

a. Sensing unit

b. Gaming unit

c. Processing unit

d. Communication unit

- ○ a
- ◉ b
- ○ c
- ○ d

5) ***1 point***

Consider that you have two types of sensors, soil monitoring sensor for smart farming and temperature sensor for smart industry. The concept that the correct (right) type of sensor must be deployed only at their correct and appropriate physical location suitable as per their functionalities is known as

a. Right way of deployment

b. Right place of deployment

c. Right time of deployment

d. None of these

- ○ a
- ◉ b
- ○ c
- ○ d

6) ***1 point***

Live Interactive Session ()

Problem Solving Session ()

Sensor-as-a-Service (Se-aaS) is an exciting new concept that brings the service models of cloud computing to traditional IoT sensor networks. In this aspect, which among the following forms an essential component of a Se-aaS architecture.

a. Sensor marketing

b. Sensor division

c. Sensor virtualization

d. Sensor manufacturing

- ○ a
- ◉ b
- ○ c
- ○ d

7) ***1 point***

Considering the end-to-end architecture of a WSN, from the physical sensor nodes right up to the users, sensor-cloud supports different entities to have ownership of the different layers and components simultaneously.

a. True

b. False

- ○ a
- ◉ b

8) ***1 point***

In sensor cloud architecture the Sensor Cloud Service Provider (SCSP) is logically situated at the following position of the architecture

a. In the same level as the physical sensors

b. In between the physical sensors and the user layer

c. In the same level as the users

d. None of these

- ○ a
- ◉ b
- ○ c
- ○ d

9) ***1 point***

In sensor cloud, the association between virtual sensor instances and the corresponding physical sensors follows

a. one to one mapping

b. one to many mapping

c. many to one mapping

d. many to many mapping

- ○ a
- ◉ b
- ○ c
- ○ d

10) ***1 point***

Dynamic caching mechanism improves the flexibility and efficiency of sensor cloud.

a. True

b. False

- ○ a
- ◉ b

11) ***1 point***

With respect to the caching based architecture of a sensor cloud, the External Cache (EC) has a direct data connection with which among the following

a. The Internal Cache (IC)

b. The user applications

c. Physical sensors

d. Both physical sensors and Internal Cache (IC)

- ◉ a
- ○ b
- ○ c
- ○ d

12) ***1 point***

Data from an IoT device is transferred to cloud via a network, which is then processed at the cloud and then a response is sent back to the IoT device from the cloud after processing. The time it takes for one-way data transfer between the node and cloud is 10s and the data processing time at the cloud is 'x' seconds. It takes a total of 25s for the entire to and fro transfer of data between the sensor and cloud along with processing at the cloud. What is the value of x?

a. 10s

b. 5s

c. 15s

d. 20s

- ○ a
- ○ b
- ◉ c
- ○ d

13) ***1 point***

There are two types of sensor data, A and B. A is time sensitive that is required to be processed immediately, while B is not time sensitive and can tolerate longer time for processing. As per the standard utilities of cloud and fog computing, which among the following options show the correct processing locations for A and B.

a. A:Cloud, B: Fog

b. A: Fog, B: Cloud

c. None of these

d. Both of these

- ○ a
- ◉ b
- ○ c
- ○ d

14) ***1 point***

There can be multiple fog nodes in between the physical sensor layer at the bottom and the cloud layer at the top.

a: True

b. False

- ◉ a
- ○ b

15) ***1 point***

Which among the following is/are a potential problem and challenge in fog computing?

a. Power consumption

b. Data security

c. Reliability

d. All of these

- ○ a
- ○ b
- ○ c
- ◉ d

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers