Week 8: Assignment 8

The due date for submitting this assignment has passed.

Due on 2025-03-19, 23:59 IST.

Assignment submitted on 2025-03-10, 23:45 IST

1) What distinguishes Context as a Service (CaaS) from On-Demand Data Processing (ODP) in edge computing? ***1 point***

- ODP processes data in a batch-processing model, while CaaS processes data in real-time.
- ODP provides pre-installed methods for request/response processing, while CaaS offers customized data provision methods.
- ODP is exclusively for SaaS providers, while CaaS is exclusively for IaaS providers.
- ODP focuses on permanent data storage, while CaaS is limited to temporary data analysis

Yes, the answer is correct.
Score: 1

Accepted Answers:
ODP provides pre-installed methods for request/response processing, while CaaS offers customized data provision methods.

2) What is the primary advantage of using GPUs in edge computing? ***1 point***

- Reducing network latency
- Increasing data storage
- Accelerating machine learning computations
- Simplifying software deployment

Yes, the answer is correct.
Score: 1

Accepted Answers:
Accelerating machine learning computations

3) Which algorithm is used for long-term optimal resource allocation in edge-cloud systems? ***1 point***

- Genetic Algorithm
- Markov Decision Process (MDP)
- Linear Regression
- Naive Bayes

Yes, the answer is correct.
Score: 1
Accepted Answers:
Markov Decision Process (MDP)

4) How does computing acceleration in edge computing improve performance? ***1 point***

- By using caching to speed up the delivery of multimedia content.
- By using GPUs and FPGAs for faster computation and flexibility in program deployment.
- By creating dynamic routing paths for data transmission.
- By optimizing power consumption in IoT devices.

Yes, the answer is correct.
Score: 1
Accepted Answers:
By using GPUs and FPGAs for faster computation and flexibility in program deployment.

5) Which task offloading objective focuses on balancing computational loads across servers? ***1 point***

- Load Balance
- Data Variety
- Device Mobility
- Privacy Preservation

Yes, the answer is correct.
Score: 1
Accepted Answers:
Load Balance

6) What is the primary advantage of using GPUs in edge computing? ***1 point***

- Reducing network latency
- Increasing data storage
- Simplifying software deployment
- Accelerating machine learning computations

Yes, the answer is correct.
Score: 1
Accepted Answers:
Accelerating machine learning computations

7) What is a key feature of networking acceleration in edge computing? ***1 point***

(assessment?name=100)

Feedback For Week 8 (unit?unit=78&lesson=101)

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- [x] Edge nodes use network virtualization to enable multiple routing tables and software defined networking (SDN).
- [ ] Edge nodes rely on GPUs and FPGAs for fast inferencing and computation.
- [ ] Edge nodes enable fast processing by providing caching for content delivery.
- [ ] Edge nodes ensure the secure transfer of data streams between IoT devices and the cloud

Yes, the answer is correct.
Score: 1
Accepted Answers:
Edge nodes use network virtualization to enable multiple routing tables and software defined networking (SDN).

8) What does the record list H in edge-cloud computing track? ***1 point***

- [ ] The total cost of computation
- [x] The history of resource allocations
- [ ] The number of active users
- [ ] The remaining VMs in each time slot

Yes, the answer is correct.
Score: 1
Accepted Answers:
The history of resource allocations

9) What is the primary goal of Collaborative Edge-Cloud (CEC) computing? ***1 point***

- [ ] To maximize data redundancy
- [x] To minimize long-term operation costs while meeting user demands
- [ ] To eliminate the need for public cloud services
- [ ] To improve the security of cloud storage

No, the answer is incorrect.
Score: 0
Accepted Answers:
To eliminate the need for public cloud services

10) Which pricing mode in public cloud provides the lowest cost for users with predictable, long-term demands? ***1 point***

- [ ] On-Demand Instance
- [ ] Dynamic Pricing
- [ ] Spot Instance
- [x] Reserved Instance

Yes, the answer is correct.
Score: 1
Accepted Answers:
Reserved Instance