ApacheSparkSQL, Cloudant, and the End to End Scenario

5/7 points (71%)

Quiz, 7 questions

✖ Try again once you are ready.

Required to pass: 80% or higher

You can retake this quiz up to 3 times every 8 hours.

Back to Week 2

Retake

✔ 1 / 1 points

1.
We are simulating an IoT device. What framework are we using for that?

- ◯ NodeRED

Correct
Correct

- ◯ Cloudant
- ◯ ApacheCouchDB
- ◯ ApacheSpark

✔ 1 / 1 points

2.
What statements are true about cloudant? (Select all that apply)

- ☐ Cloudant is based on ApacheCouchDB

Correct
correct

- ☐ Cloudant is a SQL database

Un-selected is correct

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- [x] Cloudant is a NoSQL database

Correct
Correct

- [x] Cloudant is a very fast and scalable key-value store

Un-selected is correct

- [x] Cloudant is meant for storing JSON documents effectively

Correct
Correct

- [x] BigCouch is a tool to inflate storage on CouchDB

Un-selected is correct

- [x] BigCouch is a component between the client and a set of CouchDB services used for horizontal scaling

Correct
Correct

✔ 1 / 1 points

3.

Please have a look at the following flow:

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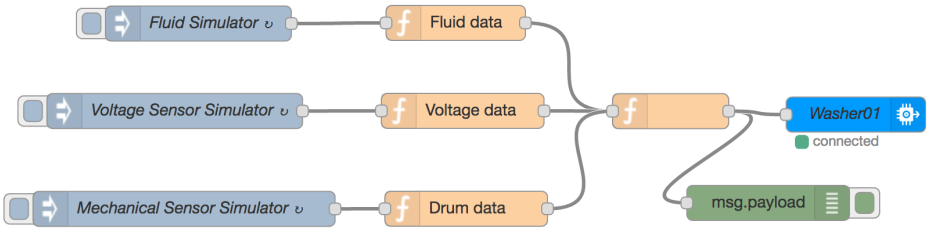

Which nodes are actually simulating sensors of a hypothetical IoT device?

- [x] Mechanical Sensor Simulator

Correct
Correct

- [ ] Voltage Data

Un-selected is correct

- [ ] Drum Data

Un-selected is correct

- [ ] Washer01

Un-selected is correct

- [x] Voltage Sensor Simulator

Correct
Correct

- [ ] msg.payload

Un-selected is correct

- [ ]

Fluid Data

ApacheSparkSQL, Cloudant, and the End to End Scenario

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Un-selected is correct

Fluid Simulator

Correct
Correct

1 / 1 points

4.
In the "End-to-End Scenario", where does all the data get stored in?

Cloudant (ApacheCouchDB)

Correct
Correct

ApacheSpark

Object Storage

OpenStack Swift

0 / 1 points

5.
What property should be used in order to let different subscribers to IoT events decide whether they want to receive a message or not based on the type of the message

Output Type

Device Type

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Device ID

This should not be selected

Incorrect. This property is used to set a unique id per device.
Please revisit Video "Overview of end-to-end scenario"

Event Type

0 / 1 points

6.

How does the Catalyst optimizer work internally?

Abbreviations:

AST - Abstract Syntax Tree

LEP - Logical Execution Plan

PEP - Physical Execution Plan

A AST is created from an SQL LEP. This AST is transformed (optimised). Then multiple PEPs are created from the optimised LEP. Finnaly, based on cost based statistics an optimal PEP is chosen to be executed.

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This should not be selected

Incorrect. Please revisit Video "ApacheSparkSQL"

A PEP is created from an SQL AST. This AST is transformed (optimised). Then multiple PEP are created from the optimised LEP. Finnaly, based on cost based statistics an optimal PEP is chosen to be executed.

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1 / 1 points

7.
What is the advantage of using ApacheSparkSQL over RDDs? (select all that apply)

- [ ] ApacheSparkSQL bypasses the RDD interface which has been proven to be very complicated

Un-selected is correct

- [ ] SQL is simpler than RDD but has some performance drawbacks

Un-selected is correct

- [ ] Catalyst and Tungsten are able to optimise the execution, so are more likely to execute more quickly than if you would had implemented something equivalent using the RDD API.

Correct
Correct

- [ ] The API is simpler and doesn't require specific functional programming skills

Correct
Correct