# Question20 Develop streaming solutions - D

Case Study

**Instructions**  
  
This case study contains a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.  
  
Note: You cannot go back or review questions of this type on the actual certification exam.

## Question 20.1-

You are using Azure Stream Analytics (ASA) to process real-time defect detection events from your factory’s production lines.  
  
You need to select the right windowing function in your ASA job’s SELECT query, so that you can:

* Group events per line if they occur within specific time intervals between each other, but not exceeding maximum duration time set for the window.
* Filter out periods of time when no defects are reported.
* Count each event only once.

Solution: In the ASA job query, you group events by using the session window.   
  
Does this solution meet the goal?

No

Yes

## Question 20.2-

You are using Azure Stream Analytics (ASA) to process real-time defect detection events from your factory’s production lines.  
  
You need to select the right windowing function in your ASA job’s SELECT query, so that you can:

* Group events per line if they occur within specific time intervals between each other, but not exceeding maximum duration time set for the window.
* Filter out periods of time when no defects are reported.
* Count each event only once.

Solution: In the ASA job query, you group events by using the tumbling window.  
  
Does this solution meet the goal?

No

Yes

## Question 20.3-

You are using Azure Stream Analytics (ASA) to process real-time defect detection events from your factory’s production lines.  
  
You need to select the right windowing function in your ASA job’s SELECT query, so that you can:

* Group events per line if they occur within specific time intervals between each other, but not exceeding maximum duration time set for the window.
* Filter out periods of time when no defects are reported.
* Count each event only once.

Solution: In the ASA job query, you group events by using the hopping window.   
  
Does this solution meet the goal?

No

Yes

## Question 20.4-

You are using Azure Stream Analytics (ASA) to process real-time defect detection events from your factory’s production lines.  
  
You need to select the right windowing function in your ASA job’s SELECT query, so that you can:

* Group events per line if they occur within specific time intervals between each other, but not exceeding maximum duration time set for the window.
* Filter out periods of time when no defects are reported.
* Count each event only once.

Solution: In the ASA job query, you group events by using the sliding window.   
  
Does this solution meet the goal?

Yes

No

# Question24 Develop streaming solutions

Case Study

**Instructions**  
  
This case study contains a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.  
  
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## Question 24.1-

You are a data engineer for an autonomous vehicle manufacturer. Each vehicle contains a transmitter that submits sensor data over Advanced Message Queuing Protocol (AMQP). You want to retrieve the sensor data in real time so that you can extract relevant information, transform it, and then send it to Power BI.  
  
You need to implement the solution.  
  
Solution:  
  
You do the following:

* Create an Event Hub instance.
* Create a Stream Analytics job that uses a query to extract data.

Does this solution meet the goal?

Yes

No

Question 24.2-

You are a data engineer for an autonomous vehicle manufacturer. Each vehicle contains a transmitter that submits sensor data over Advanced Message Queuing Protocol (AMQP). You want to retrieve the sensor data in real time so that you can extract relevant information, transform it, and then send it to Power BI.  
  
You need to implement the solution.  
  
Solution:  
  
You do the following:

* Create an IoT Hub instance.
* Create a Stream Analytics job that uses a query to extract data.

Does this solution meet the goal?

Yes

No

## Question 24.3-

You are a data engineer for an autonomous vehicle manufacturer. Each vehicle contains a transmitter that submits sensor data over Advanced Message Queuing Protocol (AMQP). You want to retrieve the sensor data in real time so that you can extract relevant information, transform it, and then send it to Power BI.  
  
You need to implement the solution.  
  
Solution:  
  
You do the following:

* Create an Azure Databricks instance.
* Create an Azure Automation runbook that extracts and queries data from Databricks.

Does this solution meet the goal?

No

Yes

## Question 24.4-

You are a data engineer for an autonomous vehicle manufacturer. Each vehicle contains a transmitter that submits sensor data over Advanced Message Queuing Protocol (AMQP). You want to retrieve the sensor data in real time so that you can extract relevant information, transform it, and then send it to Power BI.  
  
You need to implement the solution.  
  
Solution:  
  
You do the following:

* Create an Azure Relay service.
* Create an Azure Function app that extracts and queries data from Azure Relay.

Does this solution meet the goal?

. Question 4

Yes

No

# Question28 Develop streaming solutions

Case Study

Complete the Case Study

* Overview

Company A delivers exams to test centers around the world. Each test center uses a web application that displays exam content. Exam content is retrieved from a web API hosted as an Azure App Service.

* Problem

It appears that some test centers are passing substantially more candidates than others. An investigation is underway to determine whether or not some test centers are allowing candidates to cheat on exams. It appears that the suspected cheating also occurs around the same time of day. You must be able to determine the number of pass results that occur at a test center within 20 minutes of each other.

* Solution

The IT Director wants you to implement a solution that sends exam data to Azure as soon as the candidate completes the exam. Data includes the candidate's name, ID, test center number, exam number, score, date, time, and length of exam. You must have this data sent to Power BI so that the business investigator can determine whether or not a physical investigation at the test centers in question should be made. Because you are proficient in SQL, you want to use a solution that allows you to take advantage of your SQL skills. You also want to provide test data for analysis before the real data is received.

* Question 1
* Question 2
* Question 3
* Question 4
* Question 5

## Question 28.1-

You need to have the test center web application send exam data to Azure.  
  
Which technology should you choose to receive the data?

Azure Relay

Azure Databricks

Event Grid

Event Hub

## Question 28.2-

You need to choose the technology to query the data, filter it, and send it to Power BI.  
  
Which technology should you choose?

WebJob

HDInsight

Function app

Stream Analytics

## Question 28.3-

You need to choose the windowing function that is most appropriate.  
  
Which windowing function should you use?

Sliding

Hopping

Tumbling

Session

## Question 28.4-

You need to add test data for analysis in Azure.  
  
Which two data formats should you use? Each correct answer presents a complete solution.

YAML

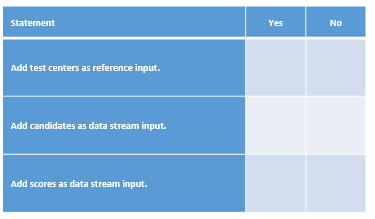
JSON

CSV

XML

## Question 28.5-

You are specifying the input data source for the solution that queries the data, filters it, and sends it to Power BI.  
  
What should you do?  
  
For each of the following statements, select Yes if the statement is true. Otherwise, select No.



# Question33 Develop streaming solutions

Case Study

Complete the Case Study

* Solution Evaluation
* Question 1
* Question 2
* Question 3
* Question 4

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## Question 33.1-

You use Azure Stream Analytics to stream real-time IoT sensor data for a brewery company.  
  
You need to use a window function with a fixed-size. Events should belong to a single window.  
  
Solution: You analyze the stream with a session window function.

Does the solution meet the goal?

No

Yes

## Question 33.2-

You use Azure Stream Analytics to stream real-time IoT sensor data for a brewery company.  
  
You need to use a window function with a fixed-size. Events could belong to more than one window.  
  
Solution: You analyze the stream with a tumbling window function.  
  
Does the solution meet the goal?

No

Yes

## Question 33.3-

You use Azure Stream Analytics to stream real-time IoT sensor data for a brewery company.  
  
You need to use a window function with a fixed-size. Events could belong to more than one window.  
  
Solution: You analyze the stream with a hopping window function.  
  
Does the solution meet the goal?

Yes

No

## Question 33.4-

You use Azure Stream Analytics to stream real-time IoT sensor data for a brewery company.  
  
You need to use a window function with a fixed-size. Events could belong to more than one window.  
  
Solution: You analyze the stream with a sliding window function.  
  
Does the solution meet the goal?

No

Yes

# Question108 Develop streaming solutions - D

You are a data engineer for your company. You are creating a Stream Analytics query. You want to use a windowing function that allows you to capture events that repeat and that do not overlap. You also want to capture time periods when there are no events.  
  
You need to choose the appropriate windowing function.  
  
Which windowing function should you choose?

Choose the correct answer

Session

Tumbling

Sliding

Hopping

# Question109 Develop streaming solutions-

A car manufacturer implements an IoT solution in its production line. The solution uses Azure IoT Hub to connect and manage IoT devices. The IoT devices are capable of running Docker images.  
  
You need to deploy an Azure Stream Analytics job to provide real-time analytics.   
  
The solution must minimize latency and bandwidth usage between the job and IoT devices. The Stream Analytics job needs to stream events to the IoT Hub. In the future, an Azure function will be implemented to process data from the IoT Hub.  
  
Which five actions should you perform in sequence? To answer, move the appropriate actions from the list of possible actions to the answer area and arrange them in the correct order.

Create a list in the correct order

Possible actions

Actions in order

* Configure Streaming Units (SUs).
* Create a Stream Analytics job with cloud hosting.
* Create an Azure Blob Storage container.
* Create a Stream Analytics job with edge hosting.
* Configure the Azure Blob Storage container as save location for the job definition.
* Set up an IoT Edge environment on the IoT devices and add a Stream Analytics module.
* Configure routes in IoT Edge.

# Question111 Develop streaming solutions-

You need to implement an event processing solution using Azure Stream Analytics to analyze phone calls and identify fraudulent calls.  
  
This solution must ingest phone calls from an Azure Event hub, analyze the data in real time, and visualize the fraudulent calls with Power BI.  
  
You need to implement the Stream Analytics job.  
  
Which four actions should you perform? To answer, move the appropriate actions from the list of possible actions to the answer area and arrange them in any order.

Create a list in any order

Possible actions

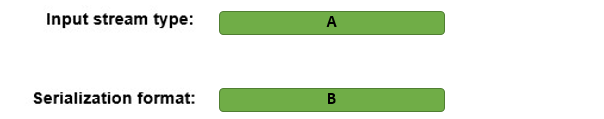
Actions to perform

* Configure Azure Blob Storage as the reference input.
* Set up Azure Blob Storage as the stream output.
* Configure Azure Event Hubs as the stream input.
* Define a query to identify fraudulent calls.
* Set up Power BI as the stream output.
* Start the job.

# Question112 Develop streaming solutions-

Your company is implementing Azure Stream Analytics to analyze a continuous flow of data from a social media platform.  
  
This incoming social media data stream uses an Azure service that is compatible with Apache Kafka protocols and streams events in binary format. The social media platform provides a Schema Registry to define the data schema. The data stream platform is managed by the social media company.  
  
You need to create a new input stream in Azure Stream Analytics to directly consume the social media data stream.  
  
Which input stream type and event serialization format should you implement to meet the requirements? To answer, select the appropriate options from the drop-down menus.

Choose the correct options



A)

1. Blob Storage
2. Event Hub
3. IOT Hub

B)

1. Avro
2. CSV
3. JSON