HOTSPOT

You create a new IoT device named device1 on iothub1. The primary key value assigned to device1 is Uihuih76hbHb.

How should you complete the device connection string? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

`HostName=` [ ] `.` [ ] `;DeviceId=` [ ] `:SharedAccessKey=Uihuih76hbHb`

azure-devices.net	azure-devices.net	azure-devices.net
criticalep	criticalep	criticalep
device1	device1	device1
iothub1	iothub1	iothub1
tracestate	tracestate	tracestate

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure IoT solution that includes an Azure IoT hub, a Device Provisioning Service instance, and 1,000 connected IoT devices.

All the IoT devices are provisioned automatically by using one enrollment group.

You need to temporarily disable the IoT devices from the connecting to the IoT hub.

Solution: From the Device Provisioning Service, you disable the enrollment group, and you disable device entries in the identity registry of the IoT hub to which the IoT devices are provisioned.

Does the solution meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure IoT solution that includes an Azure IoT hub, a Device Provisioning Service instance, and 1,000 connected IoT devices.

All the IoT devices are provisioned automatically by using one enrollment group.

You need to temporarily disable the IoT devices from the connecting to the IoT hub.

Solution: You delete the enrollment group from the Device Provisioning Service.

Does the solution meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure IoT solution that includes an Azure IoT hub, a Device Provisioning Service instance, and 1,000 connected IoT devices.

All the IoT devices are provisioned automatically by using one enrollment group.

You need to temporarily disable the IoT devices from the connecting to the IoT hub.

Solution: From the IoT hub, you change the credentials for the shared access policy of the IoT devices.

Does the solution meet the goal?

- A. Yes
- B. No

HOTSPOT

You have an Azure IoT hub.

You plan to deploy 1,000 IoT devices by using automatic device management.

The device twin is shown below.


```
{
  "deviceId": "ContosoHyperDriveEngine1",
  "etag": "AAAAAAAAAAw=",
  "deviceEtag": "MTYyNDk20kw",
  "status": "enabled",
  "statusUpdateTime": "0001-01-01t00:00:00Z",
  "connectionTime": "Disconnected",
  "lastActivityTime": "0001-01-01T00:00:00Z",
  "cloudToDeviceMessageCount": 0,
  "authenticationType": "sas",
  "x509Thumbprint": {
    "primaryThumbprint": null,
    "secondaryThumbprint": null
  },
  "version": 13,
  "tags": {
    "engine": {
      "warpCorVersion": "1.2.65b",
      "warpDriveType": "WM105a"
    }
  },
  "properties": {
    "desired": {
      "$metadata": {
        "$lastUpdated": "2019-10-17T18:43:33.7599556Z"
      },
      "version": 1
    },
    "reported": {
      "$metadata": {
        "$lastUpdated": "2019-10-17T18:43:33.7599556Z"
      },
      "version": 1
    }
  }
}
```


You need to configure automatic device management for the deployment.

Which target Condition and Device Twin Path should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Target Condition:

- properties.desired.warpDriveType='WM105a'
- properties.reported.warpDriveType='WM105a'
- tags.engine.warpDriveType='WM105a'

Device Twin Path:

- properties.desired.warpOperating
- properties.reported.warpOperating
- properties.warpOperating

You plan to deploy a standard tier Azure IoT hub.

You need to perform an over-the-air (OTA) update on devices that will connect to the IoT hub by using scheduled jobs.

What should you use?

- A. a device-to-cloud message
- B. the device twin reported properties
- C. a cloud-to-device message
- D. a direct method

You have an IoT device that gathers data in a CSV file named Sensors.csv.

You deploy an Azure IoT hub that is accessible at ContosoHub.azure-devices.net.

You need to ensure that Sensors.csv is uploaded to the IoT hub.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Upload Sensors.csv by using the IoT Hub REST API.
- [ ] B. From the Azure subscription, select the IoT hub, select **Message routing**, and then configure a route to storage.
- [ ] C. From the Azure subscription, select the IoT hub, select **File upload**, and then configure a storage container.
- [ ] D. Configure the device to use a `GET` request to ContosoHub.azure-devices.net/devices/ContosoDevice1/files/notifications.

You plan to deploy an Azure IoT hub.

The IoT hub must support the following:

- Three Azure IoT Edge devices
- 2,500 IoT devices

Each IoT device will spend a 6 KB message every five seconds.

You need to size the IoT hub to support the devices. The solution must minimize costs.

What should you choose?

A. one unit of the S1 tier

B. one unit of the B2 tier

C. one unit of the B1 tier

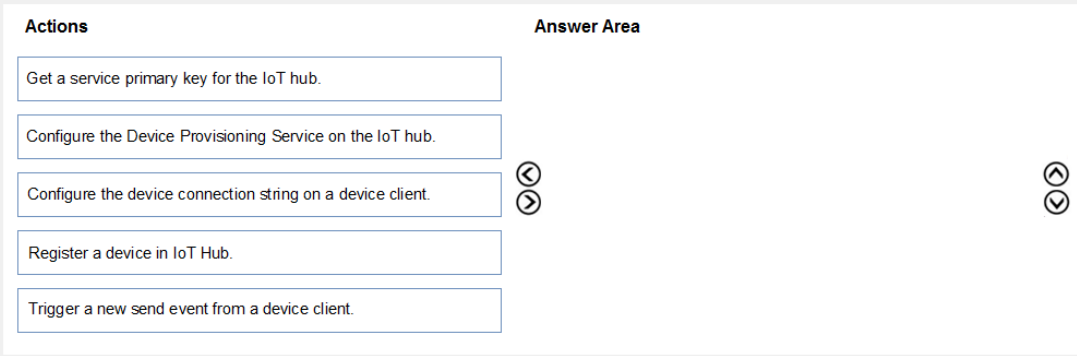
D. one unit of the S3 tier

DRAG DROP

You deploy an Azure IoT hub.

You need to demonstrate that the IoT hub can receive messages from a device.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



DRAG DROP

You have an Azure IoT hub.

You plan to attach three types of IoT devices as shown in the following table.

Name	Specification	Note
Transparent Field Gateway Device	High-power device with a fast processor and 4 GB of RAM	Will connect to multiple devices, each with its own credentials, by using the same TLS connection.
Low Resource Device	Low resource specifications, battery-operated, and 512 KB of RAM	Will connect directly to an IoT hub and will **NOT** connect to any other devices. Will use cloud-to-device messages.
Limited Sensor Device	Extremely low-power device with a limited microcontroller (MCU) and 256 KB of RAM	Will **NOT** support the Azure SDK. Messages must be as small as possible.

You need to select the appropriate communication protocol for each device.

What should you select? To answer, drag the appropriate protocols to the correct devices. Each protocol may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Protocols

AMQP

HTTPS

MQTT

Answer Area

Device	Protocol
Transparent Field Gateway Device:	Protocol
Low Resource Device:	Protocol
Limited Sensor Device:	Protocol

You create an Azure IoT hub by running the following command.

```
az iot hub create --resource-group MyResourceGroup --name MyIotHub --sku B1 --location westus --partition-count 4
```

What does MylotHub support?

- A. Device Provisioning Service
- B. cloud-to-device messaging
- C. Azure IoT Edge
- D. device twins

You have an existing Azure IoT hub.

You need to connect physical IoT devices to the IoT hub.

You are connecting the devices through a firewall that allows only port 443 and port 80.

Which three communication protocols can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- [ ] A. MQTT over WebSocket
- [ ] B. AMQP
- [ ] C. AMQP over WebSocket
- [ ] D. MQTT
- [ ] E. HTTPS

You have an Azure IoT solution that includes an Azure IoT hub and 100 Azure IoT Edge devices.

You plan to deploy the IoT Edge devices to external networks. The firewalls of the external networks only allow traffic on port 80 and port 443.

You need to ensure that the devices can connect to the IoT hub. The solution must minimize costs.

What should you do?

- A. Configure the upstream protocol of the devices to use MQTT over TCP.
- B. Configure the upstream protocol of the devices to use MQTT over WebSocket.
- C. Connect the external networks to the IoT solution by using ExpressRoute.
- D. Integrate cellular communication hardware onto the devices and avoid the use of the external networks.

You have 100 devices that connect to an Azure IoT hub named Hub1. The devices connect by using a symmetric key.

You deploy an IoT hub named Hub2.

You need to migrate 10 devices from Hub1 to Hub2. The solution must ensure that the devices retain the existing symmetric key.

What should you do?

- A. Add a desired property to the device twin of Hub2. Update the endpoint of the 10 devices to use Hub2.
- B. Add a desired property to the device twin of Hub1. Recreate the device identity on Hub2.
- C. Recreate the device identity on Hub2. Update the endpoint of the 10 devices to use Hub2.
- D. Disable the 10 devices on Hub1. Update the endpoint of the 10 devices to use Hub2.

What should you do to identify the cause of the connectivity issues?

- A. Send cloud-to-device messages to the IoT devices.
- B. Use the heartbeat pattern to send messages from the IoT devices to iothub1.
- C. Monitor the connection status of the device twin by using an Azure function.
- D. Enable the collection of the Connections diagnostic logs and set up alerts for the connected devices count metric.

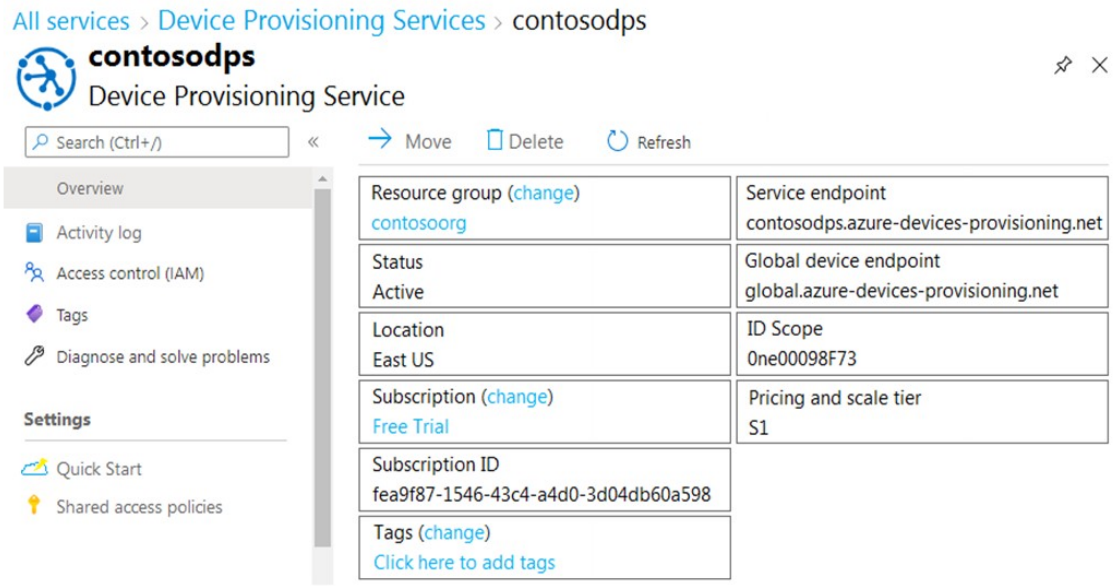
HOTSPOT

You are writing code to provision IoT devices by using the Device Provisioning Service.

Which two details from the Overview blade of the Device Provisioning Service are required to provision a new IoT client device? To answer, select the appropriate detail in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area



Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have devices that connect to an Azure IoT hub. Each device has a fixed GPS location that includes latitude and longitude.

You discover that a device entry in the identity registry of the IoT hub is missing the GPS location.

You need to configure the GPS location for the device entry. The solution must prevent the changes from being propagated to the physical device.

Solution: You add the desired properties to the device twin.

Does the solution meet the goal?

- A. Yes
- B. No

You have three Azure IoT hubs named Hub1, Hub2, and Hub3, a Device Provisioning Service instance, and an IoT device named Device1.

Each IoT hub is deployed to a separate Azure region.

Device enrollment uses the Lowest latency allocation policy.

The Device Provisioning Service uses the Lowest latency allocation policy.

Device1 is auto-provisioned to Hub1 by using the Device Provisioning Service.

Device1 regularly moves between regions.

You need to ensure that Device1 always connects to the IoT hub that has the lowest latency.

What should you do?

- A. Configure device attestation that uses X.509 certificates.
- B. Implement device certificate rolling.
- C. Disenroll and reenroll Device1.
- D. Configure the re-provisioning policy.

You have an Azure subscription that contains a resource group named RG1.

You need to deploy the Device Provisioning Service. The solution must ensure that the Device Provisioning Service can accept new device enrollments.

You create a Device Provisioning Service instance.

Which two actions should you perform next? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- ☐ A. From the **Linked IoT hubs** blade of the Device Provisioning Service, link an Azure IoT hub.
- ☐ B. From the Azure portal, create a new Azure IoT hub.
- ☐ C. From the Manage allocation policy blade of the Device Provisioning Service, configure an allocation policy.
- ☐ D. From the Certificates blade of the Device Provisioning Service, upload an X.509 certificate to the Device Provisioning Service.

You have 10,000 IoT devices that connect to an Azure IoT hub. The devices do not support over-the-air (OTA) updates.

You need to decommission 1,000 devices. The solution must prevent connections and autoenrollment for the decommissioned devices.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- ☐ A. Update the `connectionState` device twin property on all the devices.
- ☐ B. Blacklist the X.509 root certification authority (CA) certificate for the enrollment group.
- ☐ C. Delete the enrollment entry for the devices.
- ☐ D. Remove the identity certificate from the hardware security module (HSM) of the devices.
- ☐ E. Delete the device identity from the device registry of the IoT hub.

HOTSPOT

You have an Azure IoT Central application that has a custom device template.

You need to configure the device template to support the following activities:

- Return the reported power consumption.
- Configure the desired fan speed.
- Run the device reset routine.
- Read the fan serial number.

Which option should you use for each activity? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

Answer Area

Return the reported power consumption: [ ]

Configure the desired fan speed: [ ]

Read the fan serial number: [ ]

Run the device reset routine: [ ]

Command
Measurement
Properties
Settings

DRAG DROP

You have an Azure IoT Central application that includes a Device Provisioning Service instance.

You need to connect IoT devices to the application without first registering the devices.

In which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

Actions	Answer Area
Flash unique credentials to the devices.	
Obtain the credentials.	
Generate device credentials.	
Associate the devices to a template and approve the connections.	
Connect the devices to IoT Central.	

You have an Azure IoT Central application.

You need to connect an IoT device to the application.

Which two settings do you require in IoT Central to configure the device? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Group SAS Primary Key
- [ ] B. the IoT hub name
- [ ] C. Scope ID
- [ ] D. Application Name
- [ ] E. Device ID

You have an existing Azure IoT hub.

You use IoT Hub jobs to schedule long running tasks on connected devices.

Which three operations do the IoT Hub jobs support directly? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Trigger Azure functions.
- [ ] B. Invoke direct methods.
- [ ] C. Update desired properties.
- [ ] D. Send cloud-to-device messages.
- [ ] E. Disable IoT device registry entries.
- [ ] F. Update tags.

You have an Azure IoT hub.

You need to recommend a solution to scale the IoT hub automatically.

What should you include in the recommendation?

- A. Create an SMS alert in IoT Hub for the Total number of messages used metric.
- B. Create an Azure function that retrieves the quota metrics of the IoT hub.
- C. Configure autoscaling in Azure Monitor.
- D. Emit custom metrics from the IoT device code and create an Azure Automation runbook alert.

You have an Azure IoT hub that uses a Device Provisioning Service instance.

You create a new individual device enrollment that uses symmetric key attestation.

Which detail from the enrollment is required to auto provision the device by using the Device Provisioning Service?

- A. the registration ID of the enrollment
- B. the primary key of the enrollment
- C. the device identity of the IoT hub
- D. the hostname of the IoT hub

You have an Azure IoT hub that uses a Device Provisioning Service instance to automate the deployment of Azure IoT Edge devices.

The IoT Edge devices have a Trusted Platform Module (TPM) 2.0 chip.

From the Azure portal, you plan to add an individual enrollment to the Device Provisioning Service that will use the TPM of the IoT Edge devices as the attestation mechanism.

Which detail should you obtain before you can create the enrollment?

- A. the scope ID and the Device Provisioning Service endpoint
- B. the primary key of the Device Provisioning Service shared access policy and the global device endpoint
- C. the X.509 device certificate and the certificate chain
- D. the endorsement key and the registration ID

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have devices that connect to an Azure IoT hub. Each device has a fixed GPS location that includes latitude and longitude.

You discover that a device entry in the identity registry of the IoT hub is missing the GPS location.

You need to configure the GPS location for the device entry. The solution must prevent the changes from being propagated to the physical device.

Solution: You use an Azure policy to apply tags to a resource group.

Does the solution meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have devices that connect to an Azure IoT hub. Each device has a fixed GPS location that includes latitude and longitude.

You discover that a device entry in the identity registry of the IoT hub is missing the GPS location.

You need to configure the GPS location for the device entry. The solution must prevent the changes from being propagated to the physical device.

Solution: You add tags to the device twin.

Does the solution meet the goal?

- A. Yes
- B. No

You have an existing Azure IoT hub.

You use IoT Hub jobs to schedule long running tasks on connected devices.

Which two operations do the IoT Hub jobs support directly? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Trigger Azure functions.
- [ ] B. Invoke direct methods.
- [ ] C. Update desired properties.
- [ ] D. Send cloud-to-device messages.
- [ ] E. Disable IoT device registry entries.

You have 1,000 IoT devices that connect to an Azure IoT hub.

Each device has a property tag named city that is used to store the location of the device.

You need to update the properties on all the devices located at an office in the city of Seattle as quickly as possible. Any new devices in the Seattle office that are added to the IoT hub must receive the updated properties also.

What should you do?

- A. From Automatic Device Management, create an IoT device configuration.
- B. From the IoT hub, generate a query for the target devices.
- C. Create a scheduled job by using the IoT Hub service SDKs.
- D. Deploy an Azure IoT Edge transparent gateway to the Seattle office and deploy an Azure Stream Analytics edge job.

You have an Azure IoT Central application.

You add an IoT device named Oven1 to the application. Oven1 uses an IoT Central template for industrial ovens.

You need to send an email to the managers group at your company as soon as the oven temperature falls below 400 degrees.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Create a SendGrid account in the same resource group as the IoT Central application.
- [ ] B. Add a condition that has Time Aggregation set to Off.
- [ ] C. Add a condition that has Aggregation set to Minimum.
- [ ] D. Add the Manager role to the IoT Central application.
- [ ] E. From IoT Central, create a telemetry rule for the template.

You have an Azure IoT solution that includes multiple Azure IoT hubs in different geographic locations and a single Device Provision Service instance.

You need to configure device enrollment to assign devices to the appropriate IoT hub based on the following requirements:

- The registration ID of the device
- The geographic location of the device

The load between the IoT hubs in the same geographic location must be balanced.

What should you use to assign the devices to the IoT hubs?

A. Static configuration (via enrollment list only)

B. Lowest latency

C. Evenly weighted distribution

D. Custom (Use Azure Function)

You are developing an Azure IoT Central application.

You add a new custom device template to the application.

You need to add a fixed location value to the device template. The value must be updated by the physical IoT device, read-only to device operators, and not graphed by IoT Central.

What should you add to the device template?

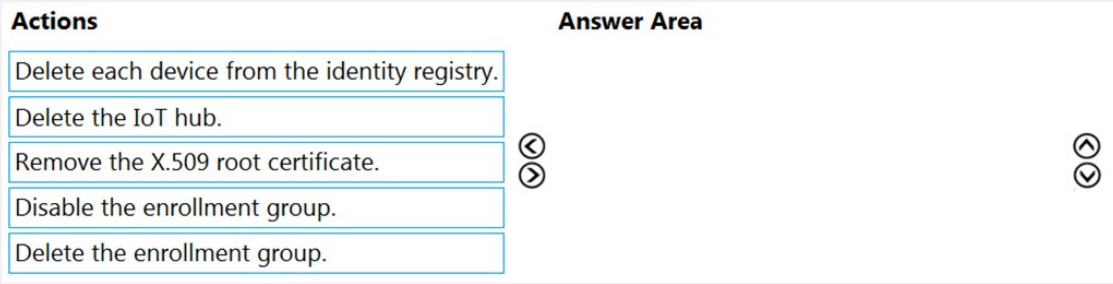
- A. a Location property
- B. a Location telemetry
- C. a Cloud property

DRAG DROP

You have an Azure IoT solution that includes an Azure IoT hub, a Device Provisioning Service instance, and 1,000 connected IoT devices. The IoT devices are allocated to tour enrollment groups. Each enrollment group is configured to use certificate attestation.

You need to decommission all the devices in a single enrollment group and the enrollment group itself.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



You have an Azure IoT hub that uses a Device Provision Service instance.

You plan to deploy 100 IoT devices.

You need to confirm the identity of the devices by using the Device Provision Service.

Which three device attestation mechanisms can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- [ ] A. X.509 certificates
- [ ] B. Trusted Platform Module (TPM) 2.0
- [ ] C. Trusted Platform Module (TPM) 1.2
- [ ] D. Symmetric key
- [ ] E. Device Identity Composition Engine (DICE)

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a Standard tier Azure IoT hub and a fleet of IoT devices.

The devices connect to the IoT hub by using either Message Queuing Telemetry Transport (MQTT) or Advanced Message Queuing Protocol (AMQP).

You need to send data to the IoT devices and each device must respond. Each device will require three minutes to process the data and respond.

Solution: You update the twin desired property and check the corresponding reported property.

Does this meet the goal?

- A. Yes
- B. No

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You have a Standard tier Azure IoT hub and a fleet of IoT devices.

The devices connect to the IoT hub by using either Message Queuing Telemetry Transport (MQTT) or Advanced Message Queuing Protocol (AMQP).

You need to send data to the IoT devices and each device must respond. Each device will require three minutes to process the data and respond.

Solution: You use direct methods and check the response.

Does this meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a Standard tier Azure IoT hub and a fleet of IoT devices.

The devices connect to the IoT hub by using either Message Queuing Telemetry Transport (MQTT) or Advanced Message Queuing Protocol (AMQP).

You need to send data to the IoT devices and each device must respond. Each device will require three minutes to process the data and respond.

Solution: You use cloud-to-device messages and watch the cloud-to-device feedback endpoint for successful acknowledgement.

Does this meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure IoT solution that includes an Azure IoT hub, a Device Provisioning Service instance, and 1,000 connected IoT devices.

All the IoT devices are provisioned automatically by using one enrollment group.

You need to temporarily disable the IoT devices from connecting to the IoT hub.

Solution: You disconnect the Device Provisioning Service from the IoT hub.

Does this meet the goal?

- A. Yes
- B. No

DRAG DROP

You need to install the Azure IoT Edge runtime on a new device that runs Windows 10 IoT Enterprise.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

From an elevated PowerShell prompt, run the following command.

```
.{Invoke-WebRequest -useb https://aka.ms/
 iotedge-win} |
  Invoke-Expression; Initialize-IoTEdge
```

From Azure IoT Hub, create an IoT Edge device.

From a Bash prompt, run the following commands.

```
curl https://packages.
microsoft.com/keys/microsoft.asc |
 gpg --dearmor > microsoft.gpg
sudo cp ./microsoft.gpg /etc/apt/trusted.gpg.d/
```

From an elevated PowerShell prompt, run the following command.

```
.{Invoke-WebRequest -useb https://aka.ms/
 iotedge-win} |
  Invoke-Expression; Deploy-IoTEdge
```

Enter the IoT Edge device connection string.

From a Bash prompt, run the following commands.

```
sudo apt-get install moby-engine
```

Answer Area

You have an Azure IoT solution that includes an Azure IoT Hub named Hub1 and an Azure IoT Edge device named Edge1. Edge1 connects to Hub1.

You need to deploy a temperature module to Edge1.

What should you do?

A. From the Azure portal, navigate to Hub1 and select IoT Edge. Select **Edge1**, and then select **Manage Child Devices**. From a Bash prompt, run the following command:
```
az iot edge set-modules -device-id Edge1 -hub-name Hub1 -content C:\deploymentMan1.json
```

B. Create an IoT Edge deployment manifest that specifies the temperature module and the route to `$upstream`. From a Bash prompt, run the following command:
```
az iot hub monitor-events-device-id Edge1 -hub-name Hub1
```

C. From the Azure portal, navigate to Hub1 and select IoT Edge. Select **Edge1**, select **Device Twin**, and then set the deployment manifest as a desired property. From a Bash prompt, run the following command:
```
az iot hub monitor-events-device-id Edge1 -hub-name Hub1
```

D. Create an IoT Edge deployment manifest that specifies the temperature module and the route to `$upstream`. From a Bash prompt, run the following command:
```
az iot edge set-modules -device-id Edge1 -hub-name Hub1 -content C:\deploymentMan1.json
```

DRAG DROP

Your company is creating a new camera security system that will use Azure IoT Hub.

You plan to use an Azure IoT Edge device that will run Ubuntu Server 18.04.

You need to configure the IoT Edge device.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

- Create an individual device enrollment by using the Device Provisioning Service.
- Run the following commands.

```
sudo apt-get install moby-engine
sudo apt-get install moby-cli
sudo apt-get install iotedge
```

- Add the connection string to the /etc/iotedge/config.yaml file, and then run the following command.

```
sudo systemctl restart iotedge
```

- Install the IoT edge repository for Ubuntu Server 18.04 on the physical device. From IoT Hub, create a new IoT Edge device.
- From IoT Hub, create an IoT Edge device registry entry.

Answer Area

You have the devices shown in the following table.

Name	Type	Hardware configuration
Device1	Azure Sphere microcontroller unit (MCU)	4 MB of RAM ARM processor
Device2	Raspberry Pi single board computer (SBC)	1 GB of RAM ARM processor
Device3	Desktop computer	8 GB of RAM x64 processor
Device4	Apple iPhone	4 GB of RAM ARM processor

You are implementing a proof of concept (POC) for an Azure IoT solution.

You need to deploy an Azure IoT Edge device as part of the POC.

On which two devices can you deploy IOT Edge? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Device1
- [ ] B. Device2
- [ ] C. Device3
- [ ] D. Device4

HOTSPOT

You have the following device twin for the IoT device.


```
{
  "deviceId": "device1",
  "etag": "AAAAAAAAAAk=",
  "deviceEtag": "NDcwMTU4Mzk=",
  "status": "enabled",
  "statusUpdateTime": "0001-01-01T00:00:00Z",
  "connectionState": "Disconnected",
  "lastActivityTime": "2019-10-21T22:45:57.9732805Z",
  "cloudToDeviceMessageCount": 0,
  "authenticationType": "sas",
  "x509Thumbprint": {
    "primaryThumbprint": null,
    "secondaryThumbprint": null
  },
  "version": 17,
  "properties": {
    "desired": {
      "$metadata": {
        "$lastUpdated": "2019-10-24T19:40:46.4809147Z",
        "$lastUpdatedVersion": 9
      },
      "$version": 9
    },
    "reported": {
      "fanSpeed": 73,
      "$metadata": {
        "$lastUpdated": "2019-10-24T19:41:28.8839751Z",
        " fanSpeed": {
        "$lastUpdated": "2019-10-24T19:41:28.8839751Z"
        }
      },
      "$version": 8
    }
  },
  "capabilities": {
    "iotEdge": false
  }
}
```


For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Statements	Yes	No
You can add a property that contains multiple nested values to the device twin.	○	○
The device twin will set `fanSpeed` for the physical IoT device to `73`.	○	○
You can change the device identity of the physical IoT device by modifying the `deviceId` property.	○	○

You are deploying an Azure IoT Edge solution that includes multiple IoT Edge devices.

You need to configure module-to-module routing.

To which section of the deployment manifest should you add the routes?

- A. `storeAndForwardConfiguration`
- B. `$edgeHub`
- C. `modules`
- D. `systemModules`

You have an IoT device that has the following configurations:

- Hardware: Raspberry Pi
- Operating system: Raspbian

You need to deploy Azure IoT Edge to the device.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. Update the IoT Edge runtime.
- [ ] B. Install the IoT Edge security daemon.
- [ ] C. Run the `Deploy-IoTEdge` PowerShell cmdlet on the IoT Edge device.
- [ ] D. Install the container runtime.

You develop a custom Azure IoT Edge module named temperature-module.

You publish temperature-module to a private container registry named mycr.azurecr.io

You need to build a deployment manifest for the IoT Edge device that will run temperature-module.

Which three container images should you define in the manifest? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. `mcr.microsoft.com/azureiotedge-simulated-temperature-sensor:1.0`
- [ ] B. `mcr.microsoft.com/azureiotedge-agent:1.0`
- [ ] C. `mcr.microsoft.com/iotedgedev:2.0`
- [ ] D. `mycr.azurecr.io/temperature-module:latest`
- [ ] E. `mcr.microsoft.com/azureiotedge-hub:1.0`

You plan to deploy Azure Time Series Insights.

What should you create on iothub1 before you deploy Time Series Insights?

- A. a new message route
- B. a new consumer group
- C. a new shared access policy
- D. an IP filter rule

How should you complete the `GROUP BY` clause to meet the Streaming Analytics requirements?

- A. `GROUP BY HoppingWindow(Second, 60, 30)`
- B. `GROUP BY TumblingWindow(Second, 30)`
- C. `GROUP BY SlidingWindow(Second, 30)`
- D. `GROUP BY SessionWindow(Second, 30, 60)`

HOTSPOT

You need to use message enrichment to add additional device information to messages sent from the IoT gateway devices when the reported temperature exceeds a critical threshold.

How should you configure the enrich message values? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

$iothubname	desired.pressure
$twin	fanSpeed.reported
$twin.properties	reported.fanSpeed
$twin.results	temperature
$twin.tags	temperature.reported

You need to configure Stream Analytics to meet the POV requirements.

What are two ways to achieve the goal? Each correct answer presents a complete solution.

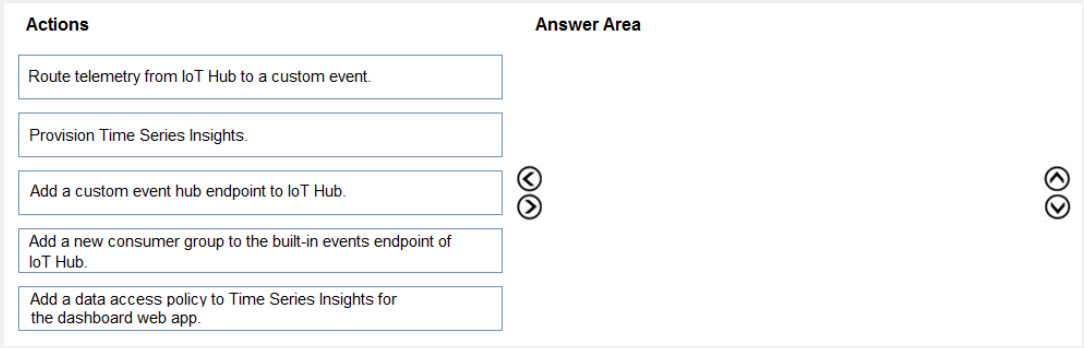
NOTE: Each correct selection is worth one point.

- [ ] A. From IoT Hub, create a custom event hub endpoint, and then configure the endpoint as an input to Stream Analytics.
- [ ] B. Create a Stream Analytics module, and then deploy the module to all IoT Edge devices in the fleet.
- [ ] C. Create an input in Stream Analytics that uses the built-in events endpoint of IoT Hub as the source.
- [ ] D. Route telemetry to an Azure Blob storage custom endpoint, and then configure the Blob storage as a reference input for Stream Analytics.

DRAG DROP

You need to add Time Series Insights to the solution to meet the pilot requirements.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



You need to store the real-time alerts generated by Stream Analytics to meet the technical requirements.

Which type of Stream Analytics output should you configure?

- A. Azure Blob storage
- B. Microsoft Power BI
- C. Azure Cosmos DB
- D. Azure SQL Database

You need to recommend the format of telemetry messages to meet the POV requirements.

What should you recommend?

A. XML

B. Avro

C. JSON

During the POV phase, telemetry from IoT Hub stops flowing to the hot path. The cold path continues to work.

What should you do to restore the hot path?

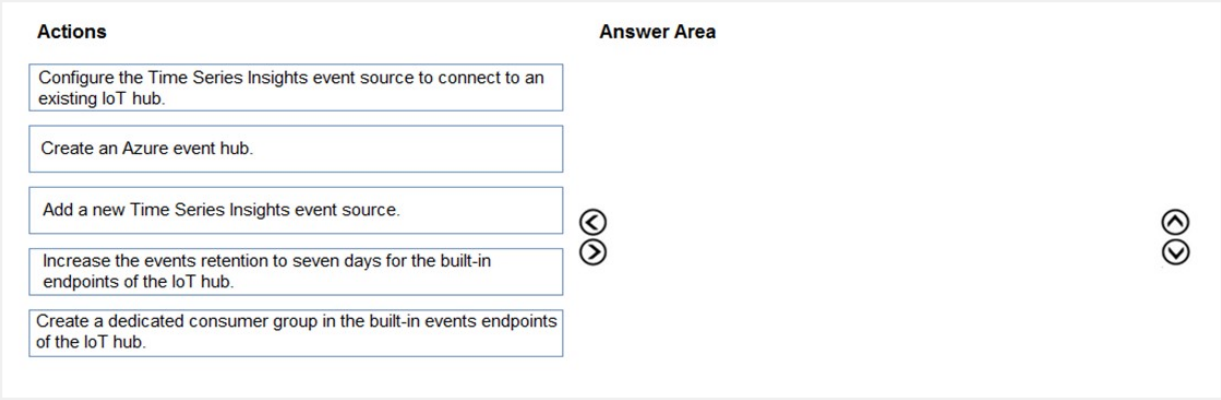
- A. Disable the fallback route.
- B. Run the Test all routes action.
- C. Create an explicit route for the hot path.
- D. Modify cold-route to send only some telemetry data to the cold path.

DRAG DROP

You have an instance of Azure Time Series Insights and an Azure IoT hub that receives streaming telemetry from IoT devices.

You need to configure Time Series Insights to receive telemetry from the devices.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



You have 1,000 devices that connect to a standard tier Azure IoT hub.

All the devices are commissioned and send telemetry events to the built-in IoT Hub endpoint.

You configure message enrichment on the events endpoint and set the enrichment value to `$twin.tags.ipV4`.

When you inspect messages on the events endpoint, you discover that all the messages are stamped with a string of "`$twin.tags.ipV4`".

What are two possible causes of the issue? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- ☐ A. The `ipV4` tag is a restricted twin property that is unavailable for message enrichment.
- ☐ B. A standard tier IoT hub does not support device twin properties in message enrichments.
- ☐ C. The device sending the message has no device twin.
- ☐ D. Message enrichment cannot be added to messages going to a built-in endpoint.
- ☐ E. The device twin path used for the value of the enrichment does not exist.
- ☐ F. The device twin property value used for message enrichment is set to "`$twin.tags.ipV4`".

You have an Azure IoT hub.

You plan to implement IoT Hub events by using Azure Event Grid.

You need to send an email when the following events occur:

- Device Created
- Device Deleted
- Device Connected
- Device Disconnected

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. From the IoT hub, configure an event subscription that has API management as the Endpoint Type.
- [ ] B. From the IoT hub, configure an event subscription that has Web Hook as the Endpoint Type.
- [ ] C. Create an Azure logic app that has a Request trigger.
- [ ] D. From the IoT hub, configure an event subscription that has Service Bus Queue as the Endpoint Type.
- [ ] E. Create an Azure logic app that has a scheduled trigger.

HOTSPOT

You create an Azure Stream Analytics job that has the following query.

```
SELECT
    Count(*) AS dailyCount,
    System.Timestamp() AS time
INTO FunctionOutput
FROM IotHubInput TIMESTAMP BY deviceTime
GROUP BY TumblingWindow(hour, 24)
```

The job is configured to have an Azure IoT Hub input and an output to an Azure function.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

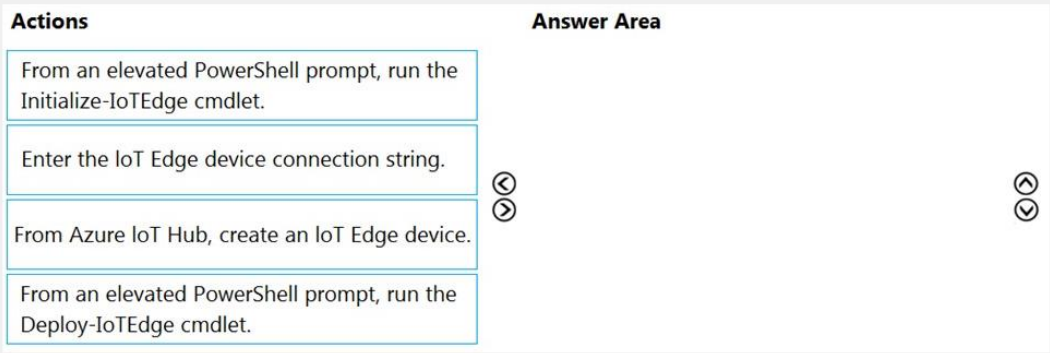
Answer Area

Statements	Yes	No
The function will be invoked at midnight UTC.	○	○
The function will be invoked only when the IoT hub receives telemetry.	○	○
When the Stream Analytics job is restarted, the function can be invoked more than once in a 24-hour period.	○	○

DRAG DROP

You need to install the Azure IoT Edge runtime on a new device that runs Windows 10 IoT Enterprise.

In which order should you perform the actions? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure Stream Analytics job that receives input from an Azure IoT hub and sends the outputs to Azure Blob storage. The job has compatibility level 1.1 and six streaming units.

You have the following query for the job.

```
SELECT COUNT(*) AS Count, TollBoothID
INTO BlobOutput
FROM IotHubInput
GROUP BY TumblingWindow(minute, 3), TollBoothID
```

You plan to increase the streaming unit count to 12.

You need to optimize the job to take advantage of the additional streaming units and increase the throughput.

Solution: You change the query to the following.

```
WITH Step1 AS (
SELECT COUNT(*) AS Count, TollBoothID, PartitionID
FROM IoTHubInput PARTITION BY PartitionID
GROUP BY TumblingWindow(minute, 3), TollBoothID, PartitionID
)
SELECT SUM(Count) AS Count, TollBoothID
INTO BlobOutput
FROM Step1
GROUP BY TumblingWindow(minute, 3), TollBoothID
```

Does this meet the goal?

- A. Yes
- B. No

Note: This question is part of 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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```
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INTO BlobOutput
FROM IotHubInput
GROUP BY TumblingWindow(minute, 3), TollBoothID
```

You plan to increase the streaming unit count to 12.

You need to optimize the job to take advantage of the additional streaming units and increase the throughput.

Solution: You change the query to the following.

```
SELECT COUNT(*) AS Count, TollBoothID
INTO BlobOutput
FROM IotHubInput PARTITION BY PartitionID
GROUP BY TumblingWindow(minute, 3), TollBoothID, PartitionID
```

Does this meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have an Azure Stream Analytics job that receives input from an Azure IoT hub and sends the outputs to Azure Blob storage. The job has compatibility level 1.1 and six streaming units.

You have the following query for the job.

```
SELECT COUNT(*) AS Count, TollBoothID
INTO BlobOutput
FROM IotHubInput
GROUP BY TumblingWindow(minute, 3), TollBoothID
```

You plan to increase the streaming unit count to 12.

You need to optimize the job to take advantage of the additional streaming units and increase the throughput.

Solution: You change the compatibility level of the job to 1.2.

Does this meet the goal?

- A. Yes
- B. No

You have 100 devices that connect to an Azure IoT hub.

You plan to use Azure functions to process all the telemetry messages from the devices before storing the messages.

You need to configure the functions binding for the IoT hub.

Which two configuration details should you use to configure the binding? Each correct answer presents part of the solution.

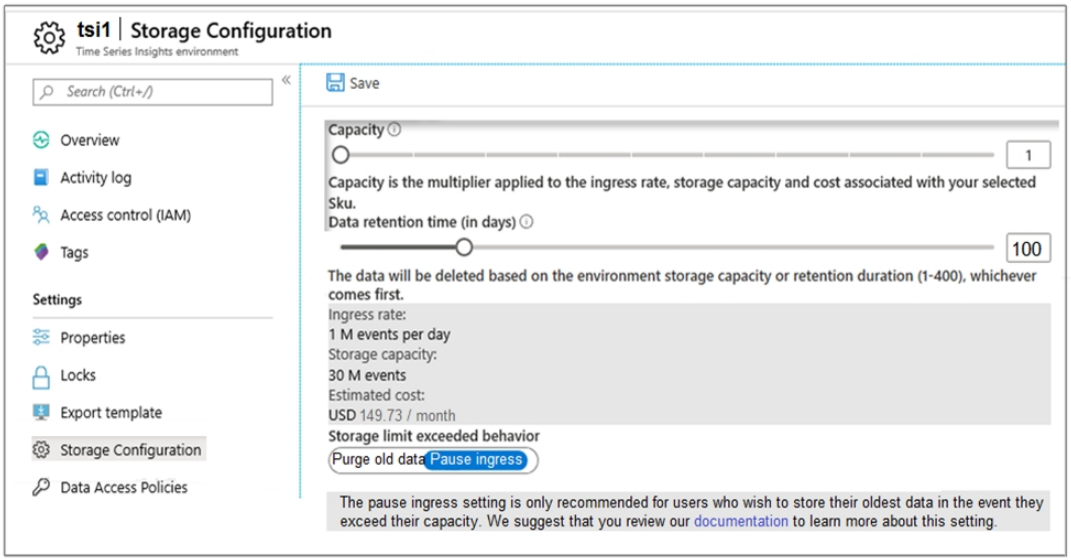
NOTE: Each correct selection is worth one point.

- [ ] A. the name of the resource group that contains the IoT hub
- [ ] B. the IoT hub's connection string shared access key that has Service connect permissions
- [ ] C. the connection string of the Azure Event Hub-compatible endpoint from the IoT Hub built-in endpoints
- [ ] D. the Azure Event-Hub compatible name

HOTSPOT

You have an Azure IoT hub named Hub1 and an Azure Time Series Insights environment named tsi1. Tsi1 connects to Hub1. The solution has been operational for 6 months.

Tsi1 is configured as shown in the following exhibit.



Hub1 receives 1 million messages per day. Each message is up to 1 KB and is formatted as JSON.

Hub1 has seven days of retained telemetry.

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Answer Area

Statement	Yes	No
Tsi1 will display 100 days of telemetry.	○	○
Tsi1 will display telemetry that arrived three months ago.	○	○
Tsi1 will display real-time data after the Time Series Insights environment has been connected to the event source of Hub1 for two days.	○	○

You need to enable telemetry message tracing through the entire IoT solution.

What should you do?

- A. Monitor device lifecycle events.
- B. Upload IoT device logs by using the File upload feature.
- C. Enable the DeviceTelemetry diagnostic log and stream the log data to an Azure event hub.
- D. Implement distributed tracing.

During the POV phase, you connect a device to IoT Hub and start sending telemetry messages.

You need to verify the content of the messages received by IoT Hub during the POV phase.

What should you use?

- A. the Monitoring settings of IoT Hub or a Postman call to the IoT Hub REST API
- B. Azure Monitor or Azure Log Analytics
- C. Microsoft Visual Studio Code that uses the IoT Hub Toolkit or Azure CLI that uses the IoT Hub extension
- D. Splunk or Grafana

You have 10 IoT devices that connect to an Azure IoT hub named Hub1.

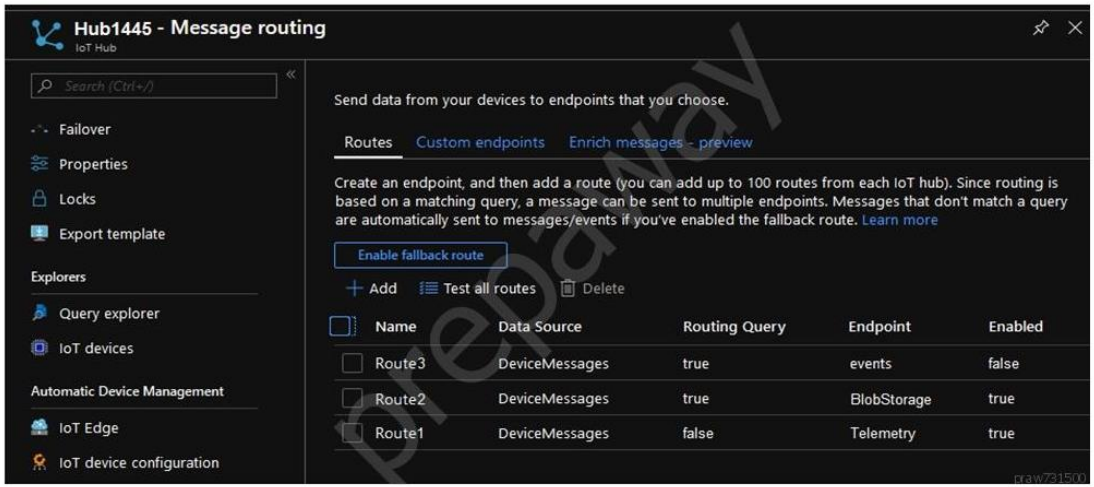
From Azure Cloud Shell, you run `az iot hub monitor-events --hub-name Hub1` and receive the following error message: "az iot hub: 'monitor-events' is not in the 'az iot hub' command group. See 'az iot hub --help'."

You need to ensure that you can run the command successfully.

What should you run first?

- A. `az iot hub monitor-feedback --hub-name Hub1`
- B. `az iot hub generate-sas-token --hub-name Hub1`
- C. `az iot hub configuration list --hub-name Hub1`
- D. `az extension add -name azure-cli-iot-ext`

You have an Azure Stream Analytics job that connects to an Azure IoT hub named Hub1445 as a streaming data source. Hub1445 is configured as shown in the exhibit.



The Stream Analytics job fails to receive any messages from the IoT hub.

What should you do to resolve the issue?

- A. Change the Route1 route query to **true**.
- B. Enable the Route3 route.
- C. Disable the Route2 route.
- D. Enable the fallback route.

You are troubleshooting an Azure IoT hub.

You discover that some telemetry messages are dropped before they reach downstream processing.

You suspect that IoT Hub throttling is the root cause.

Which log in the Diagnostics settings of the IoT hub should you use to capture the throttling error events?

- A. Routes
- B. DeviceTelemetry
- C. Connections
- D. C2DCommands

You have 20 devices that connect to an Azure IoT hub.

You open **Azure Monitor** as shown in the exhibit.

You discover that telemetry is not being received from five IoT devices.

You need to identify the names of the devices that are not generating telemetry and visualize the data.

What should you do first?

- A. Add the Number of throttling errors metric and archive the logs to an Azure storage account.
- B. Configure diagnostics for Routes and stream the logs to Azure Event Hubs.
- C. Add the Telemetry messages sent metric and archive the logs to an Azure Storage account.
- D. Configure diagnostics for Connections and send the logs to Azure Log Analytics.

You have an Azure IoT solution that includes a standard tier Azure IoT hub and an IoT device.

The device sends one 100-KB device-to-cloud message every hour.

You need to calculate the total daily message consumption of the device.

What is the total daily message consumption of the device?

- A. 24
- B. 600
- C. 2,400
- D. 4,800

You have 1,000 devices that connect to an Azure IoT hub.

You are performing a scheduled check of deployed IoT devices.

You plan to run the following command from the Azure CLI prompt.

```
az iot hub query --hub-name hub1 --query-command "SELECT * FROM devices WHERE connectionState = 'Disconnected'"
```

What does the command return?

- A. the Device Disconnected events
- B. the device twins
- C. the Connections logs
- D. the device credentials

You have an Azure IoT solution that includes several Azure IoT hubs.

A new alerting feature was recently added to the IoT devices. The feature uses a new device twin reported property named `alertCondition`.

You need to send alerts to an Azure Service Bus queue named MessageAlerts. The alerts must include `alertCondition` and the name of the IoT hub.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

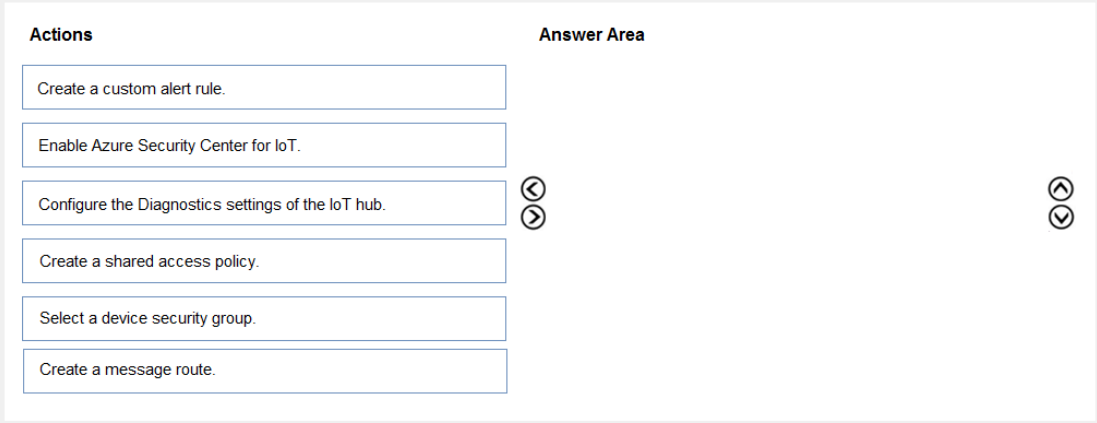
- [ ] A. Configure File upload for each IoT hub. Configure the device to send a file to an Azure Storage container that contains the device name and status message.
- [ ] B. Add the following message enrichments:
  ```
  Name = iotHubName
  Value = $twin.tag.location
  Endpoint = MessageAlerts
  ```
- [ ] C. Create an IoT Hub routing rule that has a data source of Device Twin Change Events and select the endpoint for MessageAlerts.
- [ ] D. Add the following message enrichments:
  ```
  Name = iotHubName
  Value = $iothubname
  Endpoint = MessageAlerts
  ```
- [ ] E. Create an IoT Hub routing rule that has a data source of Device Telemetry Messages and select the endpoint for MessageAlerts.

DRAG DROP

You have 100 devices that connect to an Azure IoT hub.

You need to be notified about failed local logins to a subset of the devices.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.



You have an Azure IoT solution that includes a basic tier Azure IoT hub named Hub1 and a Raspberry Pi device named Device1. Device1 connects to Hub1.

You back up Device1 and restore the backup to a new Raspberry Pi device.

When you start the new Raspberry Pi device, you receive the following error message in the diagnostic logs of `Hub1: "409002 LinkCreationConflict."`

You need to ensure that Device1 and the new Raspberry Pi device can run simultaneously without error.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. On the new Raspberry Pi device, modify the connection string.
- [ ] B. From Hub1, modify the device shared access policy.
- [ ] C. Upgrade Hub1 to the standard tier.
- [ ] D. From Hub1, create a new consumer group.
- [ ] E. From Hub1, create a new IoT device.

You have 1,000 devices that connect to an Azure IoT hub.

You discover that some of the devices fail to send data to the IoT hub.

You need to ensure that you can use Azure Monitor to troubleshoot the device connectivity issues.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. From the Diagnostics settings of the IoT hub, select **Archive to a storage account.**
- [ ] B. Collect the DeviceTelemetry, Connections, and Routes logs.
- [ ] C. Collect all metrics.
- [ ] D. From the Diagnostics settings of the IoT hub, select **Send to Log Analytic.**
- [ ] E. Collect the JobsOperations, DeviceStreams, and FileUploadOperations logs.

You have an Azure IoT solution that includes an Azure IoT hub.

You plan to deploy 10,000 IoT devices.

You need to validate the performance of the IoT solution while 10,000 concurrently connected devices stream telemetry. The solution must minimize effort.

What should you deploy?

- A. an Azure IoT Device Simulation from Azure IoT Solution Accelerator
- B. an Azure function, an IoT Hub device SDK, and a timer trigger
- C. Azure IoT Central application and a template for the retail industry
- D. an Azure IoT Edge gateway configured as a protocol translation gateway

You have an Azure IoT Central application that monitors 100 IoT devices.

You need to generate alerts when the temperature of a device exceeds 100 degrees. The solution must meet the following requirements:

- Minimize costs
- Minimize deployment time

What should you do?

A. Perform a data export to Azure Service Bus.

B. Create an email property in the device templates.

C. Perform a data export to Azure Blob storage and create an Azure function.

D. Create a rule that uses an email action.

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have 20 IoT devices deployed across two floors of a building. The devices on the first floor must be set to 60 degrees. The devices on the second floor must be set to 80 degrees.

The device twins are configured to use a tag that identifies the floor on which the twins are located.

You create the following automatic configuration for the devices on the first floor.

```
{
    "id": "first_floor_devices",
    "schemaVersion": null,
    "labels": {
     "Version": "1"
    },
    "content": {
     "deviceContent": {
         "properties.desired.ac": {
          "temperature": 60
         }
      }
    },
    "targetCondition": "tags.floor-'first'",
    "createdTimeUtc": "2020-12-08T04:06:56.651Z",
    "lastUpdatedTimeUtc":  "2020-12-08T04:06:56.651Z",
    "priority": 1,
...
}
```


You create the following automatic configuration for the devices on the second floor.

```
{
    "id": "second_floor_devices",
    "schemaVersion": null,
    "labels": {
     "Version": "1"
    },
    "content": {
     "deviceContent": {
         "properties.desired.ac": {
          "temperature": 80
         }
      }
    },
    "targetCondition": "*",
    "createdTimeUtc": "2020-12-08T04:11:08.561Z",
    "lastUpdatedTimeUtc":  "2020-12-09T18:50:55.070Z",
    "priority": 10,
...
}
```


The IoT devices on the first floor report that the temperature is set to 80 degrees.

You need to ensure that the first-floor devices are set to the correct temperature.

Solution: In the automatic configuration for the second-floor devices, you set `targetCondition` to `"tags.floor='second'"`.

Does this meet the goal?

- A. Yes
- B. No

Note: This question is part of 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.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

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The device twins are configured to use a tag that identifies the floor on which the twins are located.

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```
{
    "id": "first_floor_devices",
    "schemaVersion": null,
    "labels": {
     "Version": "1"
    },
    "content": {
     "deviceContent": {
         "properties.desired.ac": {
          "temperature": 60
         }
       }
    },
    "targetCondition": "tags.floor-'first'",
    "createdTimeUtc": "2020-12-08T04:06:56.651Z",
    "lastUpdatedTimeUtc":  "2020-12-08T04:06:56.651Z",
    "priority": 1,
...
}
```

You create the following automatic configuration for the devices on the second floor.

```
{
    "id": "second_floor_devices",
    "schemaVersion": null,
    "labels": {
     "Version": "1"
    },
    "content": {
     "deviceContent": {
         "properties.desired.ac": {
          "temperature": 80
         }
       }
    },
    "targetCondition": "*",
    "createdTimeUtc": "2020-12-08T04:11:08.561Z",
    "lastUpdatedTimeUtc":  "2020-12-09T18:50:55.070Z",
    "priority": 10,
...
}
```

The IoT devices on the first floor report that the temperature is set to 80 degrees.

You need to ensure that the first-floor devices are set to the correct temperature.

Solution: In the automatic configuration for the second-floor devices, you set `Version` to `2`.

Does this meet the goal?

- A. Yes
- B. No

You use Azure Security Center in an Azure IoT solution.

You need to exclude some security events. The solution must minimize development effort.

What should you do?

- A. Create an Azure function to filter security messages.
- B. Add a configuration to the code of the physical IoT device.
- C. Add configuration details to the device twin object.
- D. Create an azureiotsecurity module twin and add configuration details to the module twin object.

You have an Azure IoT hub that uses a Device Provisioning Service instance.

You have 1,000 legacy IoT devices that only support MAC address or serial number identities. The devices do **NOT** have a security feature that can be used to securely identify the device or a hardware security module (HSM).

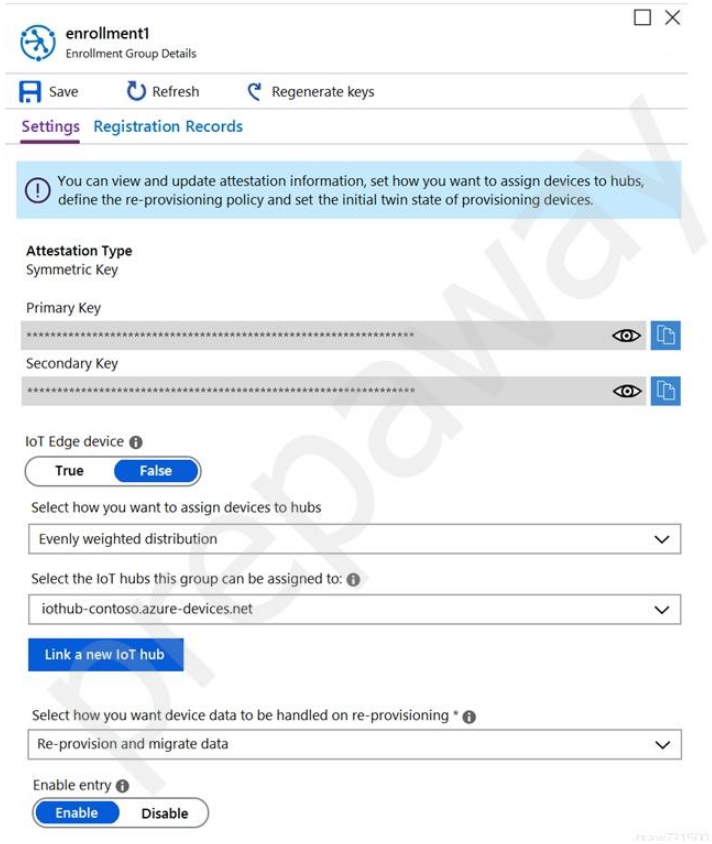
You plan to deploy the devices to a secure environment.

You need to configure the Device Provisioning Service instance to ensure that all the devices are identified securely before they receive updates.

Which attestation mechanism should you choose?

- A. Trusted Platform Module (TPM) 1.2 attestation
- B. symmetric key attestation
- C. X.509 certificates

From the Device Provisioning Service, you create an enrollment as shown in the exhibit.



You need to deploy a new IoT device.

What should you use as the device identity during attestation?

- A. a self-signed X.509 certificate
- B. the random string of alphanumeric characters
- C. the HMAC-SHA256 hash of the device's registration ID
- D. the endorsement key of the device's Trusted Platform Module (TPM)

DRAG DROP

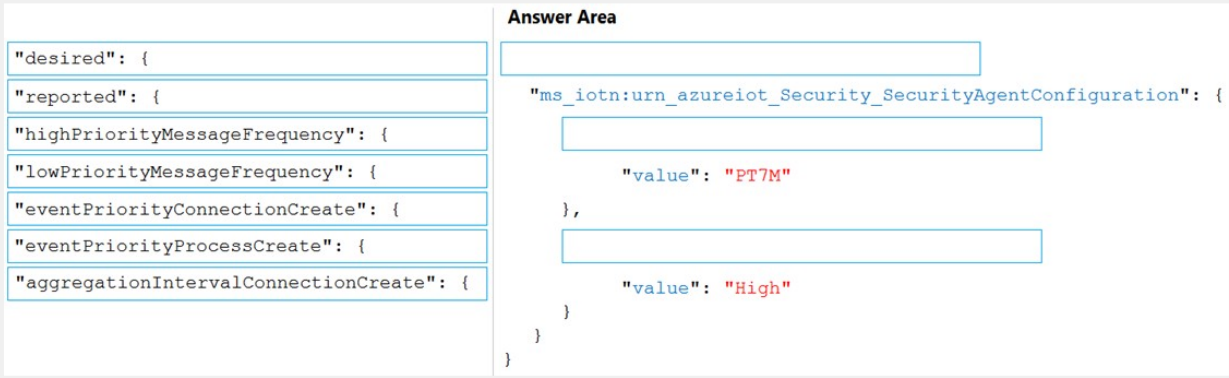
You have an Azure IoT Edge solution.

You plan to deploy an Azure Security Center for IoT security agent. You need to configure the security agent to meet the following requirements:

- Connection events must be reported as high priority.
- High priority events must be collected every seven minutes.

How should you configure the `azureiotsecurity` module twin? To answer, drag the appropriate values to the correct locations. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.



You have an Azure IoT hub that has a hostname of contoso-hub.azure-devices.net and an MCU-based IoT device named Device1. Device1 does **NOT** support Azure IoT SDKs.

You plan to connect Device1 to the IoT hub by using the Message Queuing Telemetry Transport (MQTT) protocol and to authenticate by using X.509 certificates.

You need to ensure that Device1 can authenticate to the IoT hub.

What should you do?

- A. Create an Azure key vault and enable the encryption of data at rest for the IoT hub by using a customer-managed key.
- B. Enable a hardware security module (HSM) on Device1.
- C. From the Azure portal, create an IoT Hub Device Provisioning Service (DPS) instance and add a certificate enrollment for Device1.
- D. Add the DigiCert Baltimore Root Certificate to Device1.

HOTSPOT

You are planning a proof of concept (POC) that will use an Azure IoT hub.

You have two self-signed client authentication certificates named Cert1 and Cert2. Cert1 has a basic constraint that contains `Subject Type=CA`. Cert2 has a basic constraint that contains `Subject Type=End Entity`.

You need to identify which certificates to use.

What should you identify? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Answer Area

Certificate you can use to authenticate a leaf device to IoT Hub during testing:

- Cert1 only
- Cert2 only
- Both Cert1 and Cert2
- Neither certificate

Certificate that you can upload to IoT Hub as a verified certificate:

- Cert1 only
- Cert2 only
- Both Cert1 and Cert2
- Neither certificate

You have an Azure IoT Edge device.

You need to modify the credentials used to access the container registry.

What should you modify?

- A. the $edgeHub module twin
- B. the IoT Edge module
- C. the $edgeAgent module twin
- D. the Azure IoT Hub device twin

You enable Azure Security Center for IoT.

You need to onboard a device to Azure Security Center.

What should you do?

- A. Add the azureiotsecurity module identity to the Azure IoT Hub device identity.
- B. Open incoming TCP port 8883 on the device.
- C. Modify the connection string of the device.
- D. Install an X.509 certificate on the hardware security module (HSM) of the device.

You have an Azure IoT solution that includes an Azure IoT hub, 100 Azure IoT Edge devices, and 500 leaf devices.

You need to perform a key rotation across the devices.

Which three types of entities should you update? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- [ ] A. the $edgeHub module identity
- [ ] B. the $edgeAgent module identity
- [ ] C. the leaf module identities
- [ ] D. the IoT Edge device identities
- [ ] E. the iothubowner policy credentials
- [ ] F. the leaf device identities

You have an Azure IoT hub that is being taken from prototype to production.

You plan to connect IoT devices to the IoT hub. The devices have hardware security modules (HSMs).

You need to use the most secure authentication method between the devices and the IoT hub. Company policy prohibits the use of internally generated certificates.

Which authentication method should you use?

- A. an X.509 self-signed certificate
- B. a certificate thumbprint
- C. a symmetric key
- D. An X.509 certificate signed by a root certification authority (CA).

DRAG DROP

You have an Azure IoT solution that includes an Azure IoT hub.

You receive a root certification authority (CA) certificate from the security department at your company.

You need to configure the IoT hub to use the root CA certificate.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.