< Previous Unit 5 of 6 ⌄ Next >

✓ 100 XP ▶

Exercise - Instrument the application

5 minutes

Sandbox activated! Time remaining: **1 hr 17 min**

You have used 2 of 10 sandboxes for today. More sandboxes will be available tomorrow.

You can generate custom events and metrics from an app by using the `TelemetryClient` object from the Application Insights SDK.

For the video app, the development team has added and initialized the SDK in their code and is ready to start adding logic to generate data about application-specific events and measurements.

In this exercise, you'll instrument your code with a custom event, run it to generate event occurrences, and view the results in the Azure portal.

Add an action to the app

In this exercise, we'll track an event based on a user action. We'll present a **Like** button to users of the video app. When they select it, the code that runs will track an occurrence of an event called `Liked` as part of its work.

Let's add the button and action on the main page of the app.

1. Open the Cloud Shell editor if it isn't open already.

   Bash Copy

   ```bash
   cd videowebapp
   code .
   ```

2. Use the file navigator of the Azure Cloud Shell editor to open *Views/Home/Index.cshtml*.

3. At the bottom of the file, paste in the following code to add a button:

   HTML Copy

   ```html
   <div>
       @using (Html.BeginForm("Like","Home"))
   ```

```
    {
        <input type="submit" value="Like" />
        <div>@ViewBag.Message</div>
    }
</div>
```

4. Use the file navigator to open *Controllers/HomeController.cs*.

5. To add an action that will run in response to the button click, add the following method inside the `HomeController` class:

C# Copy

```
[HttpPost]
public ActionResult Like(string button)
{
    ViewBag.Message = "Thank you for your response";
    return View("Index");
}
```

Instantiate the TelemetryClient object and track metrics

Now that we have a button in our app and some code that will run when a user selects it, we can add code that uses the Application Insights SDK to send telemetry.

1. Still working in *HomeController.cs*, at the top of the code file, add the `ApplicationInsights` using statement:

C# Copy

```
using Microsoft.ApplicationInsights;
```

2. At the top of the `HomeController` class, create a `TelemetryClient` field named `aiClient`:

C# Copy

```
private TelemetryClient aiClient;
```

3. Add a constructor to the `HomeController` class that accepts a `TelemetryClient` object and assign it to your `aiClient` field:

C# Copy

```
public HomeController(TelemetryClient aiClient)
{
    this.aiClient = aiClient;
}
```

4. Within the **Like** action, before the two existing lines of code, call `TrackEvent` on `aiClient`:

C# Copy

```
this.aiClient.TrackEvent("LikeClicked");
```

5. Save any open files and close the code editor.

Deploy the web app and generate data

Run the following commands in the Cloud Shell from within the *videowebapp* folder to build the application and deploy it to App Service.

Azure CLI Copy

```
dotnet publish -o pub
cd pub
zip -r site.zip *

az webapp deployment source config-zip \
    --src site.zip \
    --resource-group learn-5313c38b-841c-406a-9fc0-1dcc595fbb96 \
    --name <your-App-Service-name>
```

Run the app and generate telemetry data

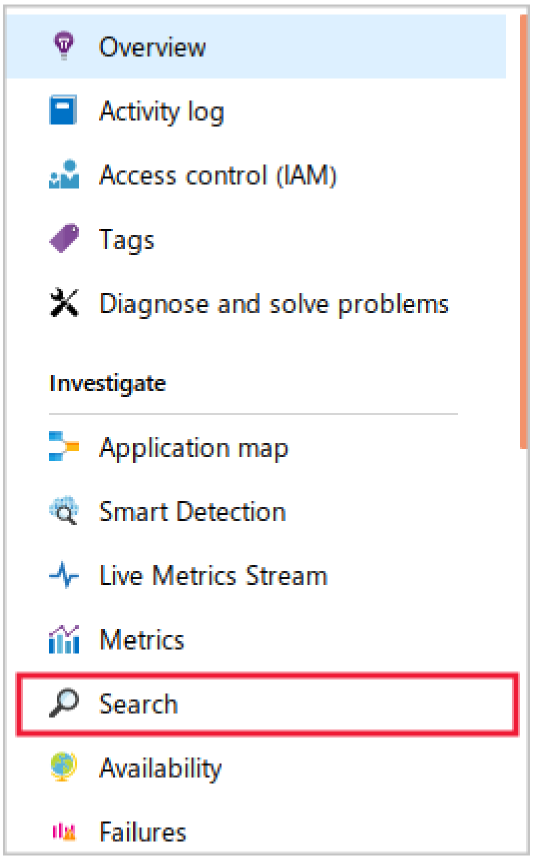
1. When the deployment is complete, switch to the Azure portal. Use the **All resources** view to navigate to your web app.
2. On the **Overview** page for your web app, select **Browse**. The web app opens in a new tab.
3. Select the **Like** button near the bottom of the page. The page will reload and display the "Thank you for your response" message. Select the **Like** button a few more times to simulate multiple clicks entering the app.
4. Close the browser tab and return to the Azure portal.

View information in the Azure portal

We can use the Application Insights search tool to locate and display the events we just created. Take the following steps:

1. On the navigation menu of the window for your web app, select **Application Insights**. In the window that opens, select **View Application Insights data** to go to the app's Application Insights resource.

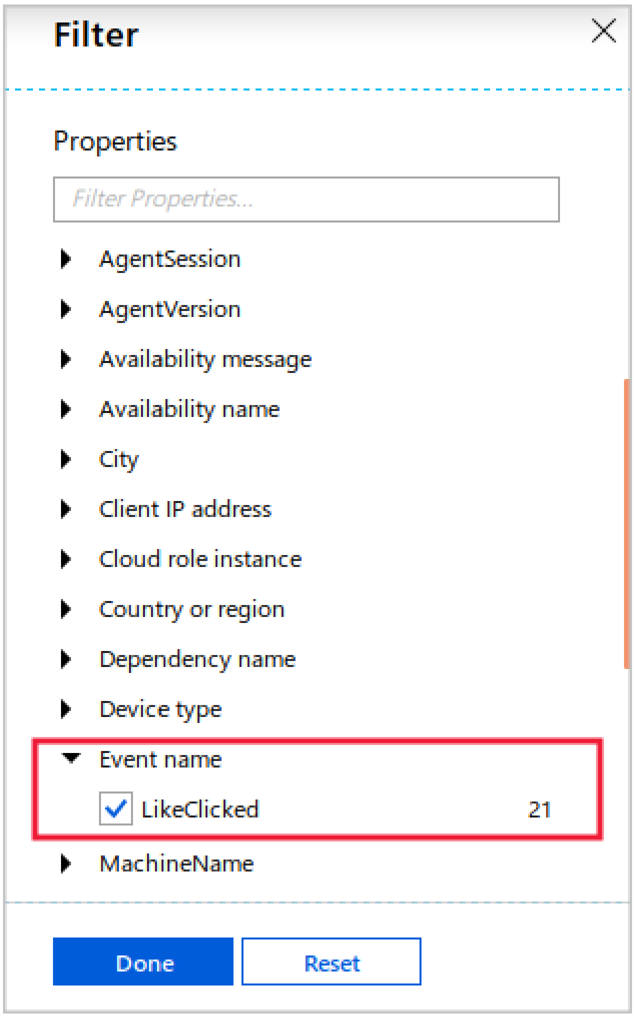
2. On the navigation menu, select **Search**.



3. At the top of the window, select **Filters** and then select **Clear filters**.

4. In the **Filter** window, scroll down to the **Properties** section, and then expand **Event name**.

5. Select **LikeClicked** and then select **Done**.



ⓘ Note

If **LikeClicked** isn't available in the **Event names** section, close the **Filter** window, select the **Refresh** button near the top of the Application Insights window, and wait a moment before re-opening the **Filter** window to try again. Telemetry data generated by your app is buffered and sent to the Application Insights resource in bursts. It might not arrive for a minute or two after the event has occurred. Until the first occurrence of the `LikeClicked` event arrives, it won't be available for filtering.

6. Close the **Filter** window. The search tool shows all the `LikeClicked` events you recorded in a timeline and a list.

Next unit: Summary

Continue >

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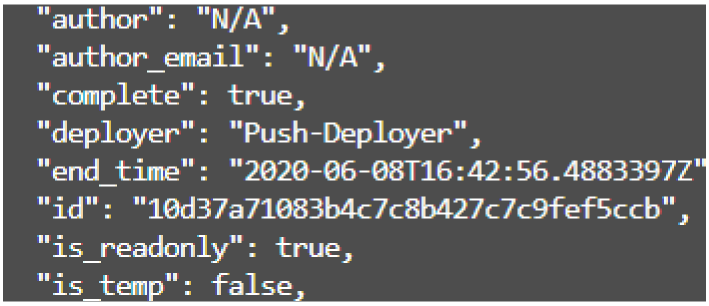
Azure Cloud Shell



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