Lab 1: Creating a Schedule Trigger in Azure Data Factory

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🎯 Learning Objective

By the end of this lab, the learner will understand:

- What a Schedule Trigger is in Azure Data Factory.
- Why schedule triggers are used.
- How to create and configure a schedule trigger step-by-step.
- How to attach the Schedule Trigger to a pipeline.

🛼 Learning Outcome

After completing this lab, the learner will be able to:

- Automate a pipeline execution using fixed time intervals.
- Configure recurrence, start time, and time zone.
- Verify and monitor scheduled pipeline runs.

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1. Concept: What is a Schedule Trigger?

A **Schedule Trigger** is the simplest form of automation in Azure Data Factory. It runs a pipeline based on a specific time and recurrence pattern — for example:

- Every day at 2 AM
- Every 15 minutes
- Every Monday at 6 PM

Think of it as a calendar alarm: You set the time, and ADF automatically starts the pipeline for you.

Schedule triggers are perfect when your workflow depends on *time* rather than events.

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2. Hands-On Lab: Creating a Schedule Trigger

This lab is designed in a very simple, beginner-friendly style. Just follow each step one by one.

Step 1: Open Azure Data Factory Studio

1. Go to the Azure Portal.
2. Open your **Azure Data Factory** resource.
3. Click **Open Azure Data Factory Studio** (or **Author & Monitor**).

You will now be inside the ADF UI.

Step 2: Create or Select a Pipeline

If you already have a pipeline, use that. If not, create a simple test pipeline:

1. Click **Author** (left menu).
2. Click **+ (Add)** → **Pipeline**.
3. Name the pipeline: `PL_ScheduleTriggerDemo`.
4. Add any simple activity (e.g., **Wait** activity) so the pipeline is valid.
5. Click **Publish All**.

Step 3: Create a Schedule Trigger

1. Click **Manage** (gear icon on left).
2. Select **Triggers**.
3. Click **+ New**.
4. Choose **Schedule** → Click **Continue**.

Now you will see the trigger configuration window.

Step 4: Configure the Schedule Trigger

Fill the details as follows:

• **Name:** `TR_Schedule_EveryDay_6AM`
• **Description:** "Runs the demo pipeline every day at 6 AM"
• **Type:** Schedule

Now configure the schedule:

Start Date/Time

• Choose today's date.
• Time → `06:00 AM`

Time Zone

> • Choose your preferred time zone.

Recurrence

> • **Every:** 1
> • **Period:** Day

This means the trigger will run **once every day at 6 AM**.

Click **Next**.

Step 5: Attach Trigger to the Pipeline

> 1. Select your pipeline: `PL_ScheduleTriggerDemo`.
> 2. Click **OK**.
> 3. ADF will ask: "Would you like to publish changes?"
> 4. Click **Publish All**.

Your schedule trigger is now active.

Step 6: Verify the Trigger

> 1. Go to **Monitor → Pipeline Runs**.
> 2. Wait for the next scheduled time, or if you want to test immediately:
> 3. Go to **Manage → Triggers**.
> 4. Select your trigger.
> 5. Click **Trigger Now**.

This will manually run the pipeline once.

Step 7: Confirm Run Completion

Check Monitor → Pipeline Runs. You should see that the pipeline executed successfully.

🎉Congratulations!

You have successfully created your first **Schedule Trigger** in Azure Data Factory.

This is the foundation for all time-based automation in data engineering workflows.