Fabric Real-Time Analytics In-A-Day Proctor Guide

Hands-on and fundamentals learning sessions on Fabric RTA

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## Fabric Real-Time Analytics In-A-Day

Fabric RTA-In-A-Day is a hands-on, learning session aimed to provide Fabric RTA knowledge to participants having minimal or no prior exposure to the product. The topics covered in these hands-on sessions are fundamental topics relating to Fabric RTA and Kusto Query Language (KQL). The Learning sessions are divided into 2 labs meant to be delivered in any of the 2 following styles.

* Recommended: 2 days, 4 hours each (Day 1 - Lab 1, Day 2 - Labs 2-4)
* Optionally: 1 day of 8 hours (Day 1 – Labs 1-4)

If attendees are spread across multiple timezones, or fully remote, then we strongly recommend to deliver it over 2 half-days. But preferrably, no more than a day or two apart.

This document was created to help proctors to successfully deliver Fabric RTA-In-A-Day to audience and make the content self-sufficient. Proctors are encouraged to complete the labs prior to their delivery to have an end-to-end knowledge on topics, challenges, and tasks. Read further to get help on - Setting the stage for audience and their expectations, presentation, lab structure, FAQ, contribution to the content.

## What are the expectations from Proctor?

Being an instructor/proctor means that we are fully aware of the entire program and can help participants achieve success in completing the challenges, learning RTA fundamentals, working with KQL queries and earning Fabric RTA-In-A-Day badge.

Proctors are expected to:

* Block calendars to completely dedicate 8 hours’ time to Fabric RTA-In-A-Day.
* Be able to do the presentation of the content.
* Have completed the Labs & Quizzes prior to proctoring the workshop.
* Keep the sessions interactive by making it fun, ask attendees throughout the workshop what top-of-mind items they’d like to discuss or what brings them to the workshop that you can help answer and provide value towards. Use questionnaires and polls.
* Unblock any individual or group with task specific guidance.
* Ensuring maximum tasks and feedback completion rate.
* Improve the workshop by taking the feedback from participants back to Product Group.
* Improve the program by raising pull requests for bug fixes/content enhancement.

## Setting the Stage

Make sure you keep the audience’s best interests in mind when delivering the sessions. Follow a similar path that is given below for the initial 20 min.

1. Spend 2 min on the introduction of Fabric RTA-In-A-Day sessions.
2. Spend 10 min on personal and team (other instructors on the call) introduction.
3. 3. Spend 5 min to talk through the sessions Agenda and talk through the plan.

## Agenda

|  |  |
| --- | --- |
| **Part 1** | **Lab 1** (Advanced participants may proceed to Lab 2) |
| 15 min | Kick-off / Team introduction |
| 20 min | Presentation Part 1 – Fabric Introduction, RTA Overview |
| 30 min | [Challenge 1 – Create a KQL Database](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab1.md#challenge-1-create-a-kql-database) & [Challenge 2 – Load Data from Azure Storage](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab1.md#challenge-2-ingest-data-from-azure-storage-account) |
| 15 min | Break |
| 20 min | Presentation Part 1 – KQL Introduction, Schemas, Update policies |
| 30 min | [Challenge 3 – Starting with the basics of KQL](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab1.md#challenge-3-starting-with-the-basics-of-kql) |
| 30 min | [Challenge 4 – Explore and Transform Data](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab1.md#challenge-4-explore-and-transform-data) |

|  |  |
| --- | --- |
| **Part 2** | **Lab 2-4** (cover Lab 3-4 as Part 3 as an additional 60 min approx.) |
| 10 min | Day one feedback |
| 15 min | Presentation Part 2 – Advanced KQL, Visualization, Data Science |
| 30 min | [Challenge 5 – Caching and retention Policies](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab2.md#challenge-5-how-long-will-my-data-be-kept---caching-and-retention-policies) & [Challenge 6 – Control commands](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab2.md#challenge-6-metadata-objects-handling-using-control-commands) |
| 15 min | Break |
| 30 min | [Challenge 7 – Advanced KQL](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab2.md#challenge-7-going-more-advanced-with-kql) |
| 30 min | [Challenge 8 - Visualization](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab2.md#challenge-8-task-1--find-the-anomaly-value-) |
| 30 min | Lab 3 – Eventstreams |
| 30 min | Lab 4 – Data Activator (Reflex) |
| 60 min | Q&A and Closing discussions |

4. Keep the sessions interactive. Start by spending 3-4 min to

1. Get the current mood/ excitement of audience.
2. Ask the audience about their expectations from the sessions.
3. Are they familiar with Fabric RTA already? Completely new? Did they use KQL in other Azure products like ADX, Log Analytics or App Insights?
4. What roles are the audience majorly from? (Internal/External, Sellers/CSAs/GBBs/Customers/Partners)

Tip: Use Polls, Reactions, or a similar feature to drive interaction and collect data.

## Start with a Presentation

On both part 1 and part 2, participants will spend time at the start to learn certain Fabric RTI and Kusto Query Language concepts listed below. Fabric RTA-In-A-Day presentation is meant to be delivered in the following style.

**Part-1: 45 min followed by a 15 min Q&A – Presentation will include**

* Introduction to Fabric
* Value proposition and Observational analytics
* Overview of Fabric Real-Time Analytics
* Relevancy to all verticals
* Highlighted industry scenarios
* End-to-end Architecture (Eco system for ingestion, query and consumption)
* RTA Fundamentals E2E Short (Demo 1)
* Features
* KQL Database, KQL Queryset, Eventstreams, Real-Time Dashboards, Power BI & Data Activator (Demo 2)
* Introduction to Data Activator
* Eventstream & Data Activator (Demo 3)
* Resources
* Kusto Query Language introduction, concepts and basic operators
* SQL and KQL
* Schema
* Stored Functions & Update policies

**Part-2: 30 min followed by a 15 min Q&A – Presentation will include**

* Let statements & Parsing
* Time series Analysis
* Built-in ML capabilities, extensibility & integrations
* Forecasting, Anomaly Detection and more

## [Pre-requisites](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/assets/ProctorGuide.md#pre-requisites)

* <https://aka.ms/learn.kql> (not required, but recommended)
* <https://aka.ms/fabric-learn> (not required, but recommended to complete at least 1-module)
* Provisioned Fabric environment or Trial.
* See <https://aka.ms/fabric-trial> or [Provision Fabric Trial Tenant](https://github.com/microsoft/FabricRTA-in-a-Day/tree/main/assets/trialtenant).

## Hands-on Labs

Participants are required to complete 2 labs in the hands-on session to earn digital badge. Each lab is divided into 4 challenges and each challenge has a set of tasks. Some tasks are aimed at introducing the capability while others are requirements that need to be fulfilled to earn the badge. Tasks that require pasting queries in the answer sheets are marked with a “checkmark” ✅ next to the task. A quiz for each lab is linked at the start of lab on the respective GitHub pages. The quiz is open-book and multiple-choice. Participants may re-attempt and the quizzes will provide feedback to answer choices.

The Learning sessions are divided into 4 Labs.

### Lab 1

### Lab 2

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### Lab 3

* Eventstream
* Import Notebook to simulate a stream of Logs from storage
* Set eventstream destination to KQL Database
* Query table with streaming data to verify count of rows continuously increasing

### Lab 4

* Data Activator (Reflex)
* From the eventstream create a destination for Reflex
* Configure the Reflex model, trigger condition and action (email/teams msg)

## Frequently Asked Questions (FAQ):

1. *What are the eligibility criteria for badge?* Badges for “Fabric RTA in a Day” are not being issued.
2. *What do I paste in the answer sheet?* Each task in GitHub is numbered as “Challenge x, Task y”. The quizzes have the same text for each question. Answers are multiple-choice. Answer the quiz as you complete a task in the Lab. Work on the quiz in-parallel to the tasks to avoid having to go back through your scripts to find the answers. The quiz is not timed.
3. *How many hours can I spend on each challenge?* The Labs are marked with estimated durations per challenge. Although you can work at your own pace, it is recommended to leverage help from the proctor(s) and complete the challenges during the workshop. Proctors are there to help you complete all challenges in the 8 hours allotted for the workshop. However, considering introductions, presentations and break time; the total hands-on time is approximately 6 hours. If necessary, more time can be allotted by your account team.
4. *Can I take more than 8 Hours/ Complete the Labs after the sessions?* Yes, however it is recommended to complete all challenges during the workshop by leveraging help from the proctor(s).
5. *Am I allowed to discuss the questions/queries with peers?* Yes, collaborative learning is encouraged but make sure you do not simply copy/paste queries from a group discussion. Understand both the task and resulting query.
6. *Can I ask proctor(s) to help on tasks?* Yes, ask questions, get clarity, and avail help from proctors if you have been blocked with certain tasks. We encourage you to share you screen while this discussion to help other the participants as well.
7. *Is it mandatory to submit the feedback form?* No, but we encourage you to submit the feedback, so it helps us to continuously improve the workshop.
8. *I am Interested to a be an instructor/proctor for future sessions. What do I do?* You may use all the assets in the GitHub repository to help you prepare & deliver future sessions. You may also express your interest in the feedback so we may contact you.
9. *I have completed Fabric RTA-In-A-Day. What can I do to get deeper technical knowledge and more hands-on Fabric RTI features.* Try the L300: [Fabric RTA FlightStream](https://github.com/microsoft/fabric-rta-flightstream), L300: [ADX Microhack](https://aka.ms/adx.microhack), L100-L400: [Kusto Detective Agency](https://detective.kusto.io), L300: [Book PDF](https://aka.ms/mustlearnkql), L300-400: [KQL Graph Samples](https://github.com/Azure/azure-kusto-graph-samples)
10. *Where can I nominate my team/customer/partner for the program?* For Microsoft employees or Partners please write to us at [rtacat@microsoft.com](mailto:rtacat@microsoft.com). For customers, please have the Microsoft account team dispatch the Fabric RTI Upskilling Value-Based-Delivery offering.

## Contribution to the Workshop

Fabric RTA-In-A-Day is an upskilling enablement workshop accessible to everyone. To continuously improve it, we encourage the proctors to take an active part in contributing. We encourage you to contribute using any of the following approaches.

* Send a pull-request on the GitHub [repository](https://aka.ms/fabricrtainaday) with your committed changes to the content.
* Bring participants feedback to the product group and encourage them to fill-out the evaluation part of the quiz or submit issues to the GitHub repository directly.
* Discuss new ideas with product group to improve the program.
* Test new content/changes and features and provide feedback.

## Useful Resources

The following recordings will help you prepare for proctoring “Fabric RTA-In-A-Day" workshop.

* [Azure Data Explorer (ADX/Kusto) in-a-day workshop for American Airlines - part 1](https://microsoft-my.sharepoint.com/personal/hiramfleitas_microsoft_com/_layouts/15/viewer.aspx?sourcedoc=%7B92d3ab43-3e5d-45b9-9223-cbd1f67008a1%7D&referrer=MSW.Web&referrerScenario=Search-Tenant-Video.View.a9cf8285-2a93-16aa-c4f0-02fe4f27cb11)
* [Azure Data Explorer (ADX/Kusto) in-a-day workshop for American Airlines - part 2](https://microsoft-my.sharepoint.com/personal/hiramfleitas_microsoft_com/_layouts/15/viewer.aspx?sourcedoc=%7B8feaa3ed-a4f4-4adf-880a-8cdfb4cbf6d8%7D&referrer=MSW.Web&referrerScenario=Search-Tenant-Video.View.a9cf8285-2a93-16aa-c4f0-02fe4f27cb11)
* [Azure Data Explorer (ADX/Kusto) in-a-day workshop for American Airlines – part 3](https://microsoft-my.sharepoint.com/personal/hiramfleitas_microsoft_com/_layouts/15/viewer.aspx?sourcedoc=%7B62c783d3-080a-4486-b9b6-9843e1b0c18f%7D&referrer=MSW.Web&referrerScenario=Search-Tenant-Video.View.a9cf8285-2a93-16aa-c4f0-02fe4f27cb11)
* [ADX-in-a-Day Learning Session-20221212\_095120-Meeting Recording - part 1](https://microsoft.sharepoint.com/teams/customersuccessunituk/_layouts/15/viewer.aspx?sourcedoc=%7B72d748d3-c83e-4ac0-965e-ec76b15cceff%7D&referrer=MSW.Web&referrerScenario=Search-Tenant-Video.View.a9cf8285-2a93-16aa-c4f0-02fe4f27cb11)
* [ADX-in-a-Day Learning Session-20221213\_095723-Meeting Recording – part 2](https://microsoft.sharepoint.com/teams/customersuccessunituk/_layouts/15/stream.aspx?id=%2Fteams%2Fcustomersuccessunituk%2FShared%20Documents%2FApps%2FYammer%2FADX%2Din%2Da%2DDay%20Learning%20Session%2D20221213%5F095723%2DMeeting%20Recording%201%2Emp4&referrer=StreamWebApp%2EWeb&referrerScenario=AddressBarCopied%2Eview%2Ef9f84ddb%2D2510%2D4e90%2Db96b%2D28189b2d6760)

## Presentation

[Fabric Real-Time Analytics in a Day PPT slides](https://microsofteur.sharepoint.com/:p:/s/FabricVBD-5-EventsProcessing/EdrGPO2h8jVAmlkpVagMRicBO0U3qKAG0D9wW1oZ1ZVL-Q?e=foVJYa)

## Important links

* [Fabric Real-Time Analytics in a Day Landing/Home Page](https://github.com/microsoft/FabricRTA-in-a-Day#fabric-real-time-analytics-in-a-day)
* [Fabric RTA-In-A-Day Lab 1](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab1.md#lab1-kql-database-creation-data-ingestion-and-exploration)
* [Fabric RTA-In-A-Day Lab 2](https://github.com/microsoft/FabricRTA-in-a-Day/blob/main/Lab2.md#lab-2-advanced-kql-policies-and-visualization)
* [Lab 1 – Quiz](https://forms.office.com/r/bV9RCiLVuJ)
* [Lab 2 – Quiz](https://forms.office.com/r/fpSN0r7QLt)
* [Credly Badge site](https://www.credly.com/org/microsoft-azure-data-explorer/badge/azure-data-explorer-in-a-day)

## Answers

* [Answers](https://github.com/Azure/ADXIoTAnalytics/blob/main/assets/OfficialDemos/Others/AADv2.kql)