

# Baking Extended Events Recipes Without Breaking a Sweat

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# Agenda

- Trace is dead
- XESmartTarget
- ~~DEMO!~~ Recipes!



Trace is dead

*It's all about Extended Events*



# Extended Events

- Replacement for SQL Trace
  - Introduced in 2008
  - Feature parity from version  $\geq$  2012
  - Rough start, many events missing, poor tooling
- Lightweight event capture infrastructure
  - Deep inside SQLLOS
  - Low performance overhead
  - Allows capturing events not available otherwise



# Extended Events

- It's all about Extended Events now
  - SQLTrace is deprecated
  - All new events get added only to Extended Events
  - Azure SQL Database and Azure Managed Instance only work with Extended Events, using blob storage
  - Tooling has improved quite a lot



# Extended Events – Concepts

## Targets

BOL describes 6 types of targets:

Name	Description
Ring buffer	Use to hold the event data in memory on a first-in first-out (FIFO) basis
Event file	Use to write event session output from complete memory buffers to disk.
Event pairing	Use to determine when a specified paired event does not occur in a matched set.
Event Tracing for Windows (ETW)	Use to correlate SQL Server events with Windows operating system or application event data.
Event counter	Counts all specified events that occur during an Extended Events session.
Histogram	Use to count the number of times that a specified event occurs

<https://docs.microsoft.com/en-us/sql/relational-databases/extended-events/targets-for-extended-events-in-sql-server?view=sql-server-ver15>



# Introducing XESmartTarget





# Introducing XESmartTarget

- Free and Open Source

<https://github.com/spaghettidba/XESmartTarget/>

- Uses the streaming API to attach to XE sessions
- Extends the capabilities of built-in targets
- Allows to automate the response to the events
- Easy to configure with .json files – no coding required
- Offers different Response Types for performing different actions



# Response Types

## 8 Response Types available

- CsvAppenderReponse
- TableAppenderReponse
- GroupedTableAppenderReponse
- ReplayResponse
- EmailResponse
- ExecuteTSQLResponse
- TelegrafAppenderReponse
- GelfTcpResponse
  
- The [documentation](#) contains all the details



# DEMO

## Baking Extended Events Recipes with XESmartTarget



Thank you!

Questions? Ask me!

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