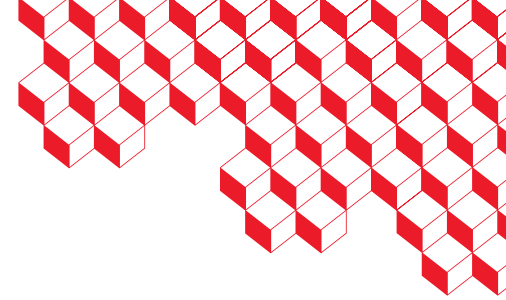




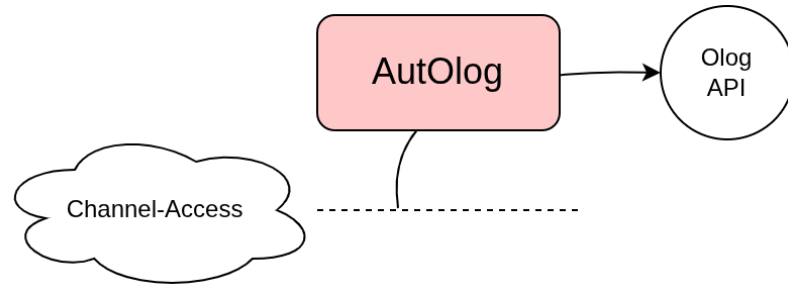
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# AutOlog

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# Description



A **Python tool** to create automatically logs into **Phoebus-Olog** server, triggered by **EPICS Process Variables**.



# Key components

- Python package manager: **Poetry**
- Continuously monitoring channel-access using:
  - **Pyepics**
  - a loop with a user-defined time interval
- Olog API client: **Requests** Python package
- Configuration file format: **TOML**



# 1. TOML definition



# TOML tables

```
[credentials]
```

```
[main_log_info]
```

```
[[autolog]]
```

```
  [[autolog.context]]
```

```
  [autolog.condition]  
    [[autolog.condition.pv]]
```

```
  [autolog.trigger]
```

*[table]*

*[[array of tables]]*

# TOML keys - example

```
[credentials]
  username = "<username>"
  password = "<password>"
  api_url = "<api_url>"

[main_log_info]
  title = "Here is the title of the log"
  description = "Here is the description of the log"
  level = "info"
  logbook = "controls"
  tags = ["Autolog", "Test"]
  check_time = 3
```

# TOML keys - example

```
# autolog instance 1
[[autolog]]

[[autolog.context]]
  description = "The context of the first autolog instance:"
  [autolog.context.pv]
    info_pv_name = "AUTOLOG-TEST:CONTEXT"
    info_pv_desc = true
    as_string = 'yes'

[autolog.condition]
  [[autolog.condition.pv]]
    condition_pv_name = "AUTOLOG-TEST:CONDITION"
    condition_pv_value = [4]

[autolog.trigger]
  trigger_pv_name = "AUTOLOG-TEST:TRIGGER-LOG"
  on_change = true
```

```
# autolog instance 2
[[autolog]]

[[autolog.context]]
  description = "The context 1 of the second autolog instance:"
  [autolog.context.pv]
    info_pv_name = "AUTOLOG-TEST:CONTEXT-1"
    as_string = 'only'
[[autolog.context]]
  description = "The context 2 of the second autolog instance:"

[autolog.condition]
  logical_condition = 'or'
  [[autolog.condition.pv]]
    condition_pv_name = "AUTOLOG-TEST:CONDITION-1"
    condition_pv_value = [0]

  [[autolog.condition.pv]]
    condition_pv_name = "AUTOLOG-TEST:CONDITION-2"
    condition_pv_value = [1]

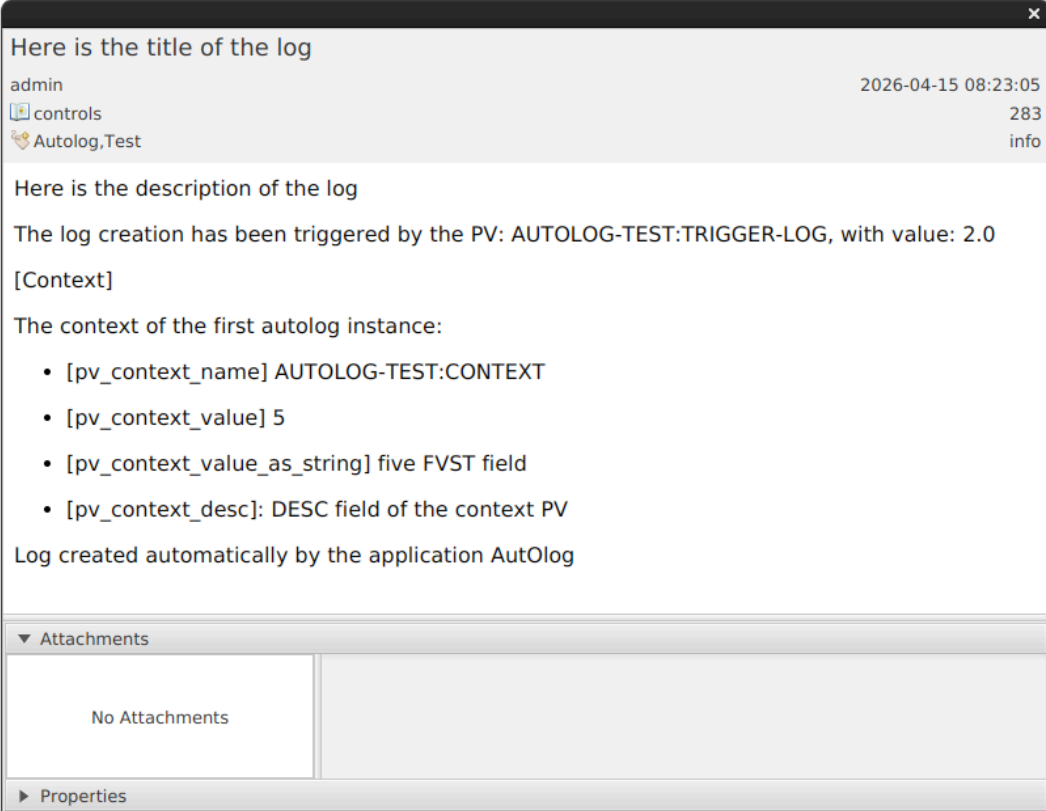
[autolog.trigger]
  trigger_pv_name = "AUTOLOG-TEST:TRIGGER-LOG-1"
  trigger_pv_value = [1,2,3,4]
```

# TOML keys - example - result

```
caget AUTOLOG-TEST:CONTEXT  
AUTOLOG-TEST:CONTEXT 5
```

```
caput AUTOLOG-TEST:CONDITION 4  
caput AUTOLOG-TEST:TRIGGER-LOG 2
```

->



Here is the title of the log

admin 2026-04-15 08:23:05  
controls 283  
Autolog,Test info

Here is the description of the log

The log creation has been triggered by the PV: AUTOLOG-TEST:TRIGGER-LOG, with value: 2.0

[Context]

The context of the first autolog instance:

- [pv\_context\_name] AUTOLOG-TEST:CONTEXT
- [pv\_context\_value] 5
- [pv\_context\_value\_as\_string] five FVST field
- [pv\_context\_desc]: DESC field of the context PV

Log created automatically by the application AutoLog

▼ Attachments

No Attachments

► Properties



# 2. Use cases

- High-level application results
  - Time of Flight so far

The screenshot displays a web application interface with a log of events on the left and a detailed view of a selected event on the right.

**Log of Events:**

Event Type	User	Timestamp
High-level application	admin	2025-07-17 10:59:56
High-level application	admin	2025-07-17 10:53:40
Destination Reached	admin	2025-07-16 17:27:48
BDM Shutbeam	admin	2025-07-16 17:26:27
Destination Reached	admin	2025-07-16 17:26:13
BDM Shutbeam	admin	2025-07-16 17:25:47
Destination Reached	admin	2025-07-16 17:25:37
BDM Shutbeam	admin	2025-07-16 17:25:07
BDM Shutbeam	admin	2025-07-16 16:57:29
Destination Reached	admin	2025-07-16 16:57:29
BDM Shutbeam	admin	2025-07-16 16:54:54
Destination Reached	admin	2025-07-16 16:54:29
BDM Shutbeam	admin	2025-07-16 16:54:24
BDM Shutbeam	admin	2025-07-15 16:34:25
Destination Reached	admin	2025-07-15 16:29:17
BDM Shutbeam	admin	2025-07-15 16:27:39
Destination Reached	admin	2025-07-14 16:50:57

**High-level application details:**

admin 2025-07-17 10:59:56  
165 info

operations

A result has been processed by an high-level application

The log creation has been triggered by the pv: SL-APP:DIA-TOF-1:BeamEnergyFinalResult, with value: 1.3336472466761486

[Context]

Time of Flight result (in MeV):

- 1.3336472466761486

At the BPM:

- SL-MBT-MAG1:DIA-BPM-1

Log created automatically by the application AutoLog

Attachments: No Attachments

Properties

- Shut beam events
  - by Machine Protection System
- Beam destination reached

Provide an overview of the accelerator activities

The screenshot displays the SARAF AutOlog interface. The main panel shows a list of events with columns for event type, user, and timestamp. The event 'Destination Reached' by 'admin' at '2026-01-12 16:08:23' is selected. A right-hand pane provides details for this event, including a description, context (MBT.DB2), and a note that the log was created automatically. The interface also includes a search bar at the top, a 'Hits per page' dropdown set to 30, and a 'Properties' section at the bottom.

Event Type	User	Timestamp
BDM Shutbeam	admin	2026-01-20 10:20:02
BDM Shutbeam	admin	2026-01-12 17:34:45
Destination Reached	admin	2026-01-12 16:08:23
BDM Shutbeam	admin	2026-01-08 15:20:30
Destination Reached	admin	2026-01-08 14:07:25
BDM Shutbeam	admin	2026-01-08 13:58:33
BDM Shutbeam	admin	2026-01-08 11:24:20
Destination Reached	admin	2026-01-08 10:37:39
BDM Shutbeam	admin	2026-01-08 10:37:16
Destination Reached	admin	2026-01-08 10:33:18
BDM Shutbeam	admin	2026-01-05 18:25:09
Destination Reached	admin	2026-01-05 17:00:20
BDM Shutbeam	admin	2026-01-05 16:59:52
Destination Reached	admin	2026-01-05 16:51:29
BDM Shutbeam	admin	2026-01-05 16:42:40
Destination Reached	admin	2026-01-05 16:40:02
BDM Shutbeam	admin	2026-01-05 16:28:44

**Destination Reached**  
admin  
operations

The beam has reached a new destination.  
The log creation has been triggered.

[Context]  
The destination is:

- MBT.DB2

Log created automatically by the application.

▼ Attachments  
No Attachments

► Properties



# Future developments

- Statistics collection on log creation
- Manage attachment files
- EPNix Packaging & nixos-test (integration tests)

Currently available at:

- <https://github.com/epics-extensions/autOlog/>



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**Thank you**

