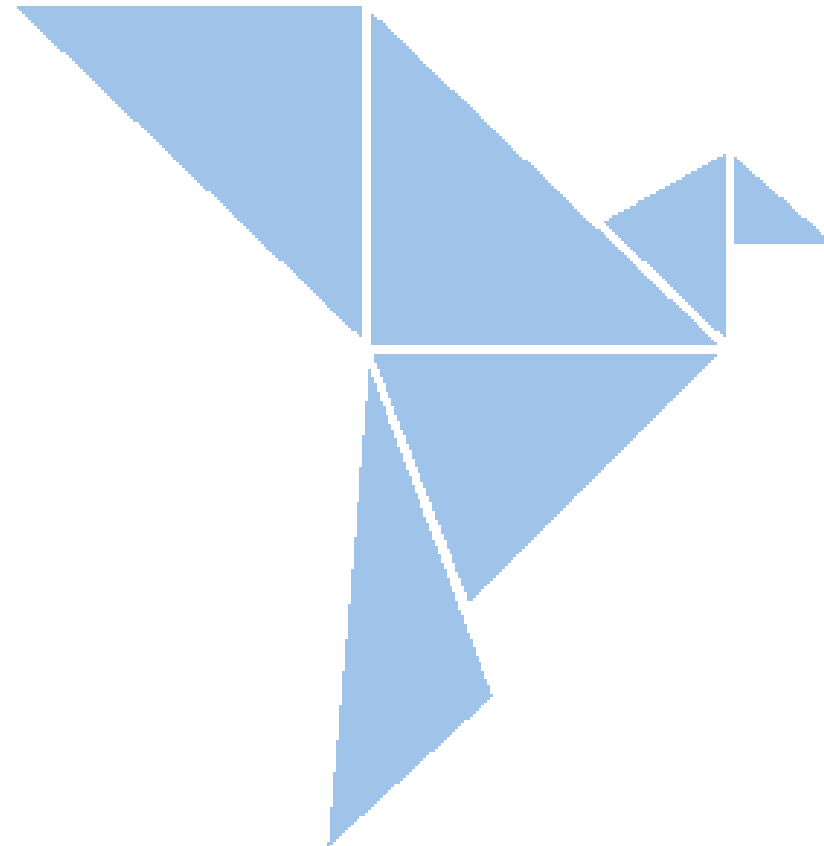


Meetup

02.12.2025

- Welcome / Intro
- Breakout Sessions to Topics of Interest
 - Primer
 - Webtools & Python
 - PAC-DISCO
- Tasks from Last Meetup
- Status of Building Blocks



Welcome to the LabFREED Meetup

About the Meetup

- Monthly, informal gathering of the community
- A space to **exchange ideas, share experiences, and connect**
- Kick off collaborations, explore new building blocks, and dream big (while starting small)
- Everyone welcome – whether curious newcomer or active contributor



Your Expectations For Today



Tasks From Last Meetup

Task	Who	State
Demo PAC-DISCO	Reto	Prepared
Demo webtools	Reto	Prepared
Demo Python Library	Reto	Prepared

Get started with LabFREED



PAC-ID Generation

- [PAC-ID Generator](https://pac.mettorius.com/)

[HTTPS://PAC.METTORIUS.COM/-MS/AAQAD/X6766M/CAS:64-17-5](https://pac.mettorius.com/-MS/AAQAD/X6766M/CAS:64-17-5)

PAC-ID Generator

Contributed by [BUCHI](#)

Identifier

Issuer

METTORIUS.COM

MUST be a valid domain name according to **RFC 1035**.

Primary Category

DEVICE ✓

Model Number (240) *

T-800

Serial Number (21) *

ABC123

Additional ID Segments

X:908/Y:00

Segments must be separated by /. For readability / can be surrounded with spaces.

Issuing System

Issuing System

DEVICE ✓

Model Number (240) *

T-800

Serial Number (21) *

ABC123

Additional ID Segments

X:908/Y:00

Segments must be separated by /. For readability / can be surrounded with spaces.

Extensions

Display Name

Enter Display Name

The display name can consist of any Unicode characters.

Summary

SUM\$TREX/DATE\$T.D:20250305T100043+TEMP\$KEL:295

The Summary must be a valid T-REX string.

Additional Extensions

FOO\$MYEXT/ABAHEWUZTQ3456A5FAS

Enter additional extensions, separated by *. Each extension must be valid (won't be checked) and specify name and type

Generate

Creation of Resolver Config

- [PAC-ID Resolver Tester](#)
- Create Resolver Config for internal Use Cases
- The suppliers Services are available, too

PAC-ID Generator

Contributed by 

Identifier

Issuer

MUST be a valid domain name according to **RFC 1035**.

Primary Category

Model Number (240) *

Serial Number (21) *

Additional ID Segments

Segments must be separated by /. For readability / can be surrounded with spaces.

Issuing System

Issuing System

Model Number (240) *

Serial Number (21) *

Additional ID Segments

Segments must be separated by /. For readability / can be surrounded with spaces.

Extensions

Display Name

The display name can consist of any Unicode characters.

Summary

The Summary must be a valid T-REX string.

Additional Extensions

Enter additional extensions, separated by *. Each extension must be valid (won't be checked) and specify name and type

Generate

And now in Python

- Create file with resolver config for internal use cases
- The suppliers Services are available, too

PAC-ID Generator

Contributed by [BUCHI](#)

Identifier

Issuer

MUST be a valid domain name according to **RFC 1035**.

Primary Category



Model Number (240) *

Serial Number (21) *

Additional ID Segments

Segments must be separated by /. For readability / can be surrounded with spaces.

Issuing System

Issuing System



Model Number (240) *

Serial Number (21) *

Additional ID Segments

Segments must be separated by /. For readability / can be surrounded with spaces.

Extensions

Display Name

The display name can consist of any Unicode characters.

Summary

The Summary must be a valid T-REX string.

Additional Extensions

Enter additional extensions, separated by *. Each extension must be valid (won't be checked) and specify name and type

Generate

PAC-DISCO



Contextual driven interactions between Data Collector and Lab Devices

< 3/5 in Work-up

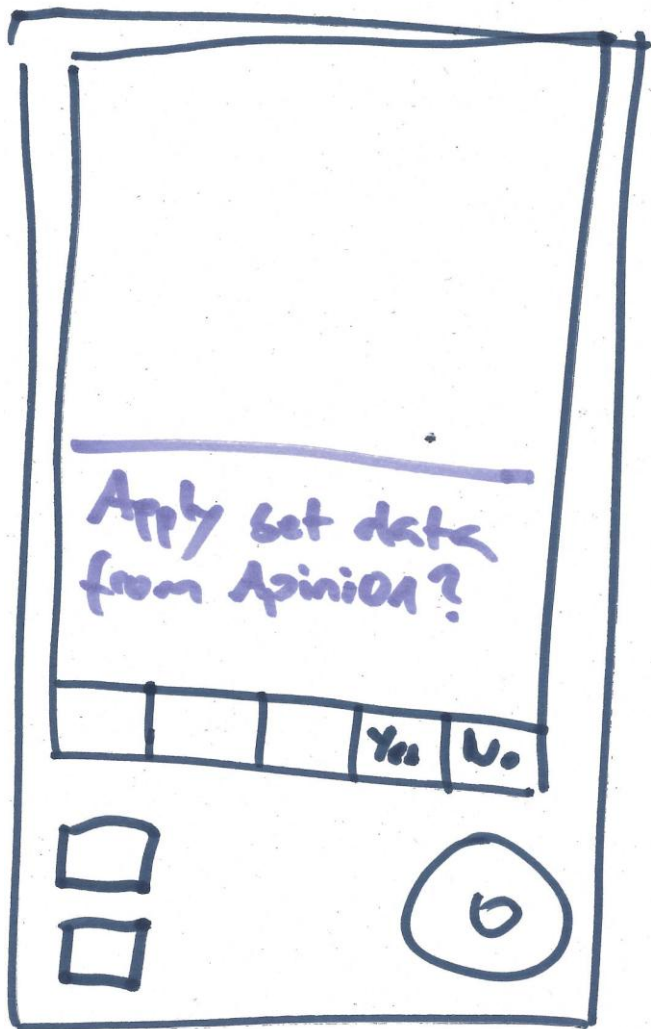
Remove solvent on Rotavapor with a vacuum of 123 mbar, cooling at 10°C and heating at 50°C.

Apply run data of nearby Rotation?

Yes No



...goes both ways



We largely re-use PAC-ID and T-REX

Announcements / Services are designed in line with PAC-ID segments:

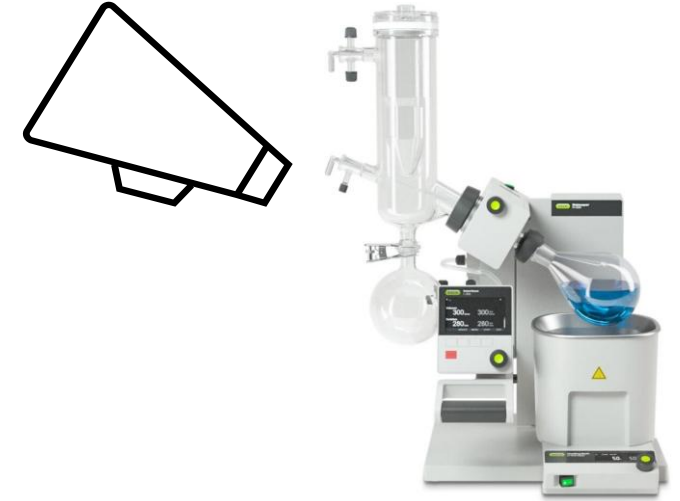
- MD (Material Device): General presence announcement permanently sent by the device
- DM (Data Method): Device is ready to take a method
- DP (Data Progress): Device is running
- DR (Data Result): Device recently completed a run and has a result to transfer

Data is transferred as PAC-ID and extension (e.g. T-REX)

<HTTPS://PAC.BUCHI.COM/-DR/RNR:24-02-23-15-22-15/V0210/-MD/240:R-300/21:1000294262>

[*B80BWILWCSQ00TTJZ302R0E3T586ECTWZ4*START\\$T.D:20240223T1522+DURATION\\$MIN:5+BATH\\$CEL:19+MODE\\$T.A:TIMER](#)

Designed to largely tech-agnostic, could also be done with something else than Bluetooth as long as it provides announcements and a way to transfer PAC-ID's



Progress on Building Blocks



PAC-ID Attributes

DRAFT Specifications Released

Discussion points:

- JSON-LD / RDF compatibility
- Request type GET or POST

PAC-ID Attributes

⚠ Warning

Draft Specification

This document is in draft state. Contents are subject to change.

We invite you to join the discussion [on Discord](#).

Main topics in need for clarification:

- Reconsider a simple GET request on the cost of only being able to request attributes for one PAC-ID at a time. The parameters (language_preferences, etc) are not contested and would become query parameters.
- Investigate whether it would make sense to model attributes as RDF triplets and use Json-LD for serialization for improving interoperability and tool support.

In a Nutshell

`PAC-ID Attributes` standardizes a generic, vendor-neutral web service interface for retrieving metadata about an item identified with a PAC-ID. With this mechanism, software-systems dealing with `PAC-ID`s can show metadata (e.g. boiling point of a substance) to the user, without implementing vendor specific protocols. Attributes might also be used programmatically (e.g. loading an instrument method based on a boiling point)

Introduction

`PAC-ID`s expose only minimal human-readable information (issuer, category, item ID). However, user-facing applications require additional metadata—such as a display name or physical properties. Embedding such data in the `PAC-ID` is undesirable due to size, internationalization complexity and mutability issues.

To address this, `PAC-ID Attributes` defines a neutral, standardized web service interface for retrieving item metadata. This approach decouples data consumers from provider-specific implementations, enabling consistent, interoperable access regardless of the underlying issuer. While issuers may still offer proprietary APIs, the standardized web service provides a common, vendor-neutral mechanism usable across systems.

Terminology

Term	Description
------	-------------

Packages

No packages published
[Publish your first package](#)

Contributors 3

 retothuerer

 apinilabs-pascal

 apinilabs-manuel

Next Meetup

Jan 2nd, 2025 at 16:00 CET

 [Register](#)



Resources

- [Our Website](#)
- [Our Discord](#)
- [Specifications of Building Blocks](#)
- [Tools to Experiment With Building Blocks](#)
- [Python Implementation of LabFREED](#)

