

CAEN

Tools for Discovery



Electronic Instrumentation

WP4.3 - Common Tools for Facilities QC: Data Management, Traceability & Activation Meas.

FERDINANDO GIORDANO –

AIDAINNOVA FINAL ANNUAL MEETING (PRAGUE 2025)

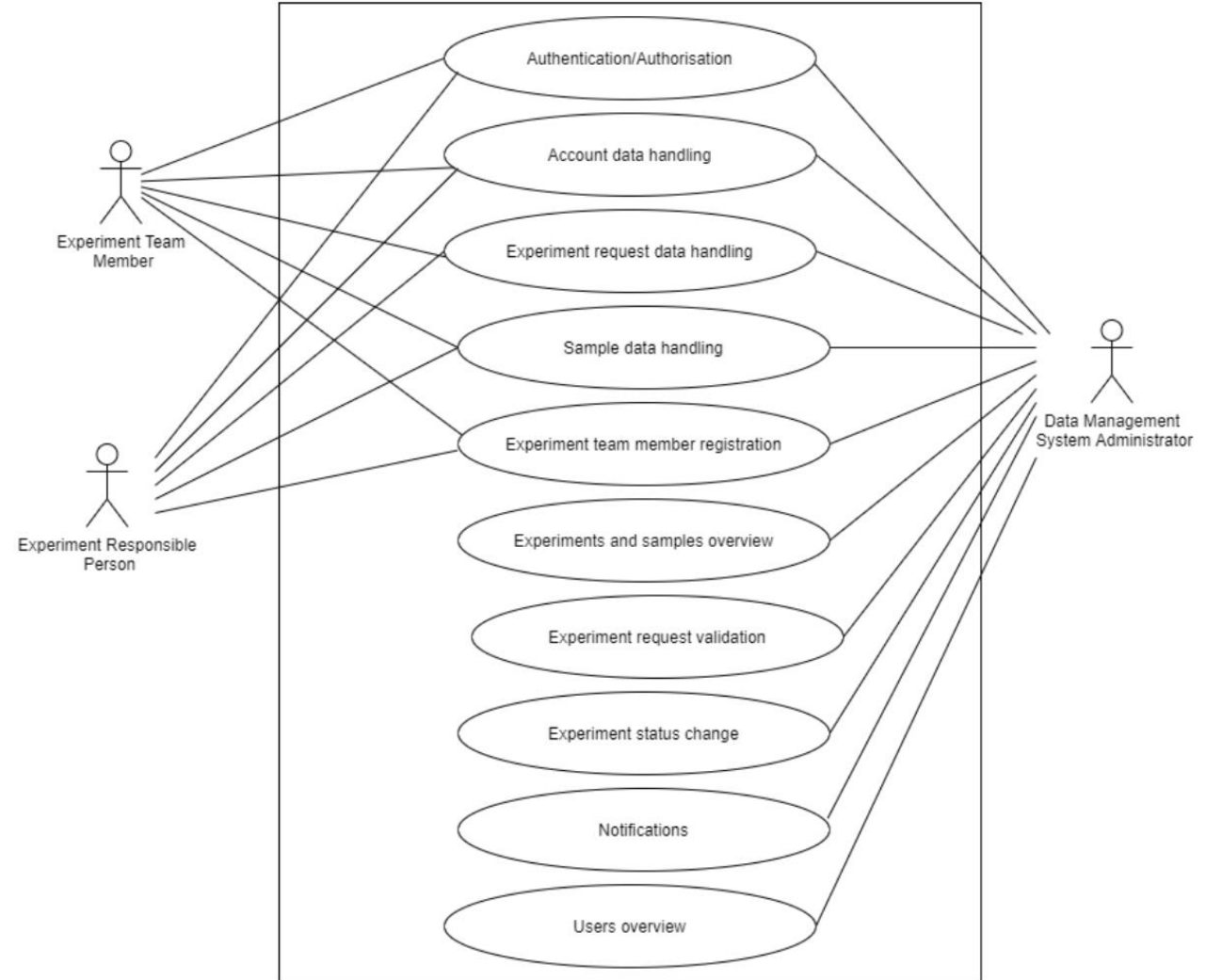


Summary

- ❑ Short intro
- ❑ Change of site
- ❑ Implementation

Introduction to needs

This is a small overview of all parameters and actions to be available to different type of users.





Deployment and facility dependent

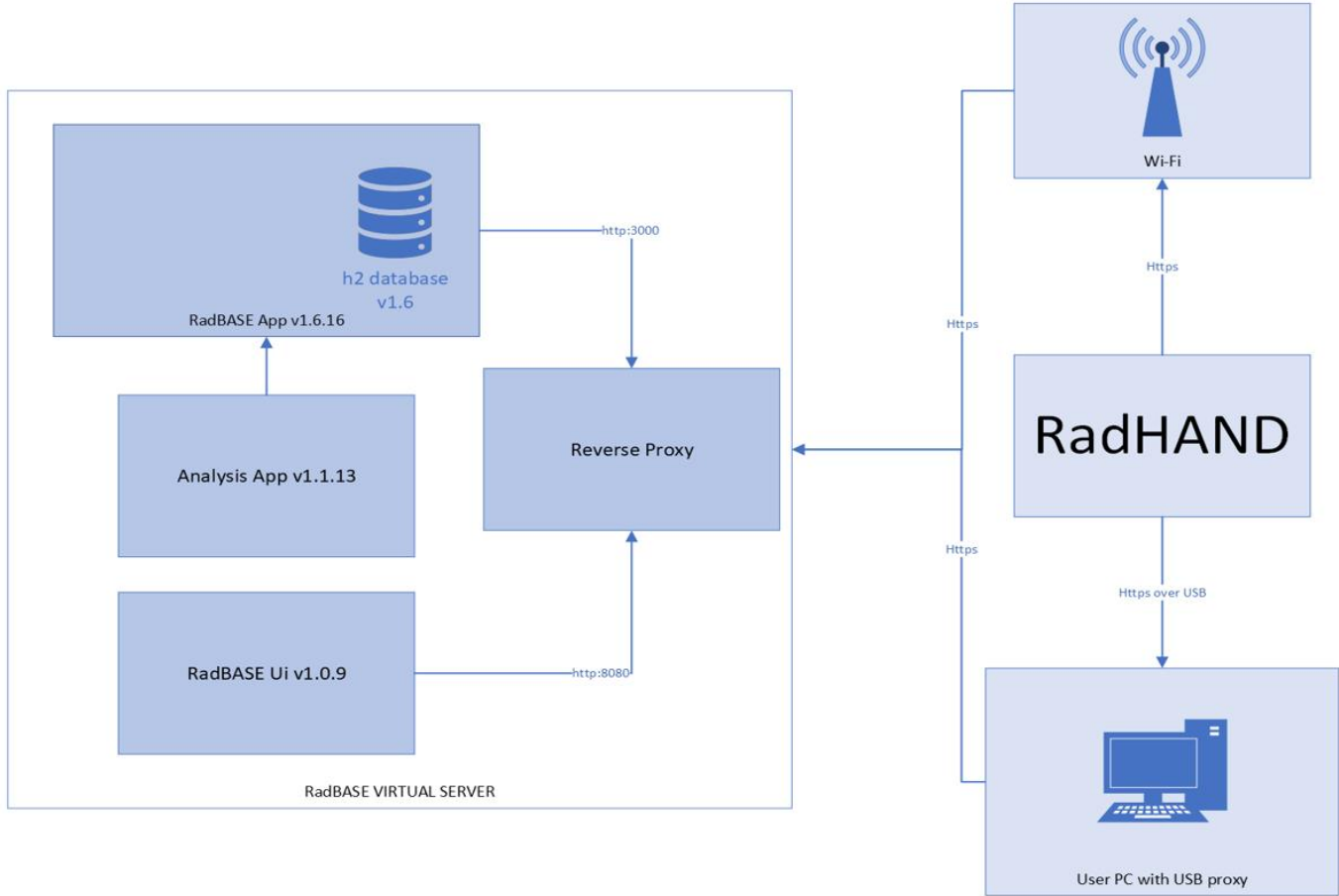
Since the start of AIDAInnova we have closely worked with various laboratories: ENEA, CERN and most recently Fermilab.

Some require user authentication, others database (DB) physics location, and so on.

Particularly cumbersome have been the procedures to connect the main RadHand device to the facilities local network and internet, since the demo DB is installed on CAEN servers in Viareggio.



DataBase – RadHand connections





IRRAD Data Manager

ENE A FNG

Signed in as: salvatore.fiore@enea.it

Logout

Home Experiments Info Admin Help

FRASCATI
NEUTRON
GENERATOR

AIDA 2020

IRRAD Data Manager

Home / Experiments

Actions

Filters

Create

Validate

Users

Change Status

Update visibility

Samples

Update

Clone

Contact Responsibles

Delete

Upload Attachment

View Details


<input type="checkbox"/>	ID	Experiment title	Availability	No. registered/ declared samples	Radiation/ Nu.Coll. Length Occupancy (%)	No. Users	Responsible person	Visibility	Status
<input type="checkbox"/>	1	test3 (DD - 2.45 MeV)	02/06/2022	2/1	0.318 0.468	1	giovanni.mariano@enea.it	Private	Validated
			2/1	0.318 / 0.468					

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CAEN DataBase

 RadBASE

Accounts ▾

Items ▾

Locations ▾

Devices ▾

Tasks ▾


Utility ▾

Profile

Logout

Welcome to RadBASE

UI v1.0.9 API v1.6.14



Last 25 Error Events

No error event has been registered.

Last 25 Info Events

Date/Time	Description	Tags	Account
28-04-2025 06:49:40	fermilab_test	location creation	fermilab
18-04-2025 21:56:17	Item{epc=, name=e2801105200070dbd52a0913, category=null}	item update	23166
18-04-2025 21:56:17	7eccabd5-6c9e-40fe-921f-96519e1a5264.n42	resource creation	23166
18-04-2025 21:56:16	Item{epc=, name=e2801105200070dbd52a0913, category=null}	item update	23166
18-04-2025 21:56:16	15f9e416-5016-4325-b821-ef64a835c088.n42	resource creation	23166
18-04-2025 21:56:16	18dedad2-8d43-48b4-83b1-8c2c3ddac584.jpg	resource creation	23166
18-04-2025 21:56:14	Item{epc=, name=e2801105200070dbd52a0913, category=sample}	item creation	23166

RadBASE

Accounts -

Items -

Locations -

Devices -

Tasks -

Utility -


Profile

Logout

Measurement reports

Date/time	Location	Account	Notes
19-07-2023 14:44:45 +0200	IRRAD	admin	<div>View</div>
30-11-2023 09:46:24 +0100	IRRAD	admin	<div>View</div>

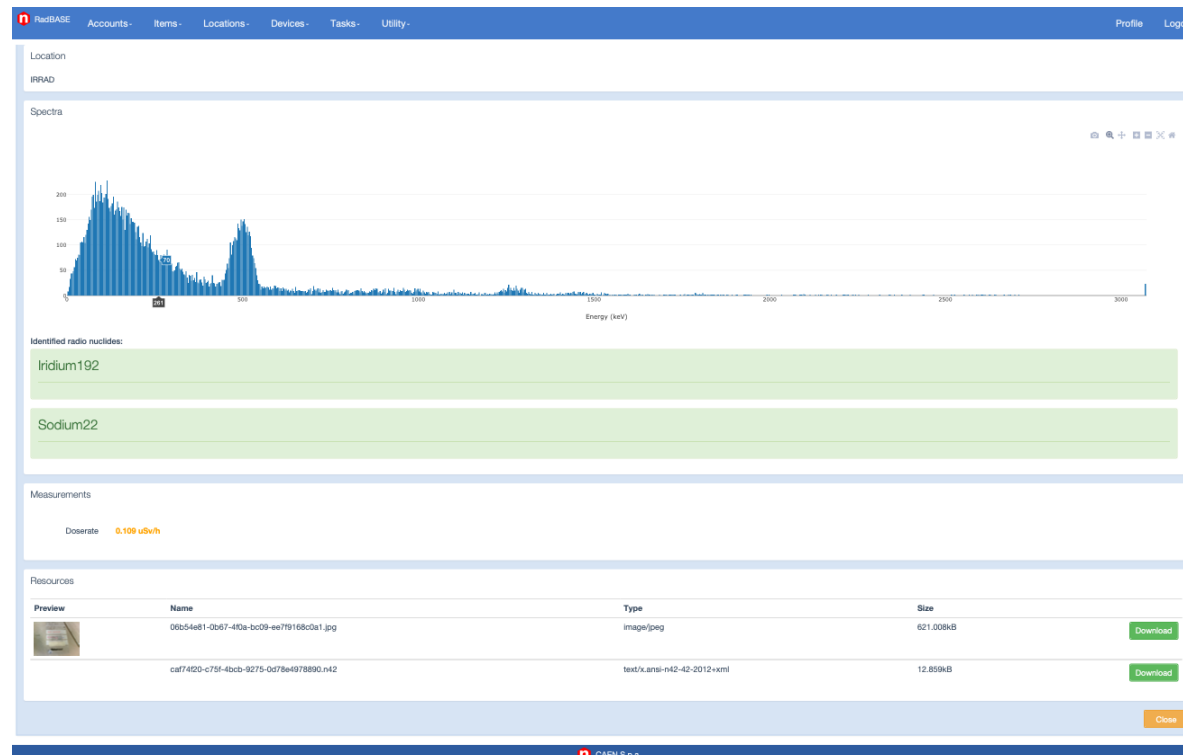
Resources

Preview	Name	Type	Size	
	06b54e81-0b67-4f0a-bc09-ee7f9168c0a1.jpg	Image/jpeg	621.008kB	<div>Download</div>
	caf74f20-c75f-4bc9-9275-0d78e4978890.n42	text/x.ansi-n42-42-2012+xml	12.859kB	<div>Download</div>
	a8d71122-ce70-4f8b-b940-c94e849c3ffb.n42	text/x.ansi-n42-42-2012+xml	12.496kB	<div>Download</div>

Close

CAEN S.p.A.

DB Item



DB Measurment

DB Locations

We created two locations for our tests, IRRAD at CERN and then Fermilab.

RadBASE

Accounts-Items-Locations-Devices-Tasks-Utility-

ProfileLogout

List of Locations

RFID tag

Name

Parent

Location Type

Filter

All

ID	NAME	TYPE	PARENT	RFID TAG	
1	IRRAD	facility		x	<div>RemoveEditDetail</div>
33	fermilab_test	facility		x	<div>RemoveEditDetail</div>

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CAEN S.p.a.

IRRAD Data Manager



test-irrad-management-page.web.cern.ch/samples_manager/caen/131/

Python package ind...

CERN Accelerating science

Signed in as: federico.ravotti@cern.ch Sign out Directory

Home Experiments Boxes Compounds Dosimeters Activities Dosimetry Results Fluence Factors CAEN List Users Irradiations Jira Info Help

IRRAD Data Manager

Home / Measures

Measurement ID	Dose rate	Uncertainty	Distance	Created at
99	3.136 uSv/h	0.0	Contact	2025-04-18T19:45:30.985Z
100	1.197 uSv/h	0.0	30cm	2025-04-18T19:50:34.341Z
101	0.158 uSv/h	0.0	1m	2025-04-18T19:52:17.09Z

Spectrum ID	Radionuclides
99	Cesium137
100	Sodium22
101	Sodium22 Iodine123

IRRAD Data Manager synchronization

DATA FROM CAEN-DB
HAS BEEN
SUCCESSFULLY
IMPORTED IN THE
IRRAD DATA MANAGER



Final test facility

The implementation is currently undergoing testing at the final demonstration site at Fermilab. The selection of this site was influenced by various changes that occurred since the initial proposal, where the final demonstration was anticipated to take place at ENEA-FNG.

Fortunately, we received assistance from our colleagues at Fermilab, who demonstrated genuine interest in our work package and decided to adopt our solution.



End of task activities

We are collaborating with Fermilab to further validate our platform. Testing is scheduled to conclude by summer, after which we will proceed with the drafting of deliverable 4.3 to ensure timely submission.



Thank you for your attention

Any question/curiosity? Please write to Ferdinando.Giordano@caen.it



Backup slides
