PiLAB

User Manual

Version1-1

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1. Introduction

PiLAB software is designed to improve experimental workflows for the POLSTAT3500 reaction system.
It automates the tracking of key parameters like temperature and stirring, reducing the need for manual checks and saving lab time. This makes managing complex reactions easier and ensures reliable results. The software helps increase productivity, allowing researchers to focus on analysis instead of repetitive tasks, improving lab efficiency.

PiLAB also includes tools for secure data management, fully compliant with FDA 21 CFR Part 11 for electronic records. It offers real-time monitoring and remote control via an easy-to-use online interface, ensuring safe, compliant, and efficient lab operations

Web-Based Architecture

No Client Software Required: Eliminates the need for installing client software on a PC. Browser Access: PiLAB can be accessed from any PC through a Chrome browser.

1.1. Audit Trails

Comprehensive Tracking: Maintains detailed records of all actions and changes.

1.2. Reports

Electronic Signatures: Supports electronic signatures for report authentication.

1.3. Customized Print Reports

Tailored Output: Provides options for customized print reports to meet specific needs.

1.4. User Management

Account Administration: Facilitates the creation and management of user accounts.

1.5. Role Management

Access Control: Allows assignment and management of user roles and permissions.

1.6. Compliance

21 CFR Part 11 Support: Ensures compliance with regulatory requirements for electronic records and signatures.

1.7. Historical Data and Analysis

Data Retention: Supports storage and analysis of historical data for review and decision-making.

1.8. Auto Backups

Automated Backup: Provides automatic backup of data to ensure data integrity and availability.

1.9. Backup Review Option

Backup Verification: Allows for review and verification of backup data.

1.10. Recipe Builder

The recipe builder is essentially a series of steps designed for starting an experiment.

2. Installation Details

2.1. System Requirements

Software

Operating System : Windows 10 Pro with 64 bit Operating system, Windows 2012R2Server and Windows 2016 Server.

Other Software's : PostGreSQL
JAVA
Software License (License is bound to the hardware of the server)PiLABMaster
PiLABVerify

Hardware

- Intel® Core ™ i5-6500 CPU @3.20GHz or Higher Processor
- 16GB RAM
- 1 TB Hard drive
- Ethernet port 1 No
- USB ports 1 No

2.2. Installation Procedure for PiLAB

2.2.1. Installation of PostgreSQL

PostgreSQL is a database, which is used to store the data of the application.

NOTE:

- Before going to install PostgreSQL server system must have internet.

- Connect the USB/CD-drive to the system then click on that in that select PiLAB folder.
- Then select postgresql-9.5.7-1-windows-x64.
- Then right click on the postgresql-9.5.7-1-windows-x64 file then select Run as administrator.
- For this setup installation system must have internet connection to download the setup file andalso all the certificates related to the setup of Microsoft visual C++ 2013 Redistributable (x64)– 12.0.40660.
- Click on Next.
- Click on Next.
- You can give password in these fields, after that click on next.
- Click on Next.
- Setup is installing, wait for few seconds this will take some time.
- Uncheck the check box and then click on finish.
- Then go to start menu and in that search for pgadmin.

- Click on PostgreSQL.9.5 (local host: 5432) then it will ask for password. Enter the passwordthen click on OK.
- Right click on the database then select new database.
- Give polsoftdb as database name and also create another database with the database namesample.
- Then click on OK.
- Refer IQ document for installation

2.2.2. Installation of JAVA

NOTE:

- Software will not work unless you have Java installed. Java is fast and secure

- Open PiLAB folder which is available in USB/CD-drive folder in that selectjdk1.8.
- Select the folder jdk-8u131-windows-x64 and right click on that then click on Run asadministrator.
- Click on next.
- Click on next.
- Java is installing this will take few seconds.
- Java successfully installed.
- After installation of java you need to set java path. Go to computer then select the PC and rightclick on that click on properties then go to advanced system settings.
- Click on advanced system settings.
- Click on Environment Variables.
- Click on new button in User variables.
- Select the path where java is installed and copy this path.
- Enter JAVA_HOME in variable name field and paste the path (Java installation path).
- Click on OK.
- Click on new button in System variables.
- Enter JAVA_HOME in variable name field and paste the path (java installation path).
- Click on OK.
- Click on OK.
- Java path is successfully configured. You can verify by entering javac in command prompt itshow the details as below screen.
- Select the folder name as jCEPolicyJDK8 and copy both the files from USB drive.
- The copied files need to paste into a location like this C:\ProgramFiles\Java\ jdk1.8.0_131\jre\lib\security and also paste the files with another location C:\Program Files\Java\jre1.8.0_121\lib\security.
- Replace the existing files with new files.
- Click on continue.
- Both files will be replaced.
- In software serial port is used so if you want to use the port dependencies have to installwithout installing dependencies serial port can’t use.
- Go to PiLAB which is available on USB/CD-drive folder, go to Dependencies folder thenselect rxtxParallel.dll and rxtxSerial.dll files.

- Copy rxtxParallel.dll and rxtxSerial.dll files.
- Paste rxtxParallel.dll and rxtxSerial.dll to C:\Program Files\Java\jdk1.8.0_131\jre\bin then clickon continue.
- It will ask for permission just click on continue then rxtxParallel and rxtxSerial files arecopied.
- Paste rxtxParallel.dll and rxtxSerial.dll to C:\Program Files\Java\jre1.8.0_171\bin then click oncontinue.
- Go to PiLAB folder then go to Dependencies folder copy RXTXComm.jar file.
- Paste RXTXComm.jar to C:\Program Files\Java\jdk1.8.0_131\jre\lib\ext andC:\Program Files\Java\jre1.8.0_171\lib\ext.
- Refer IQ document for installation

2.2.3. Installation of PiLABMaster

- Go to the folder PiLAB which is available in USB/CD-Drive folder in that select Servicesfolder.
- Create a folder in "C:" drive where you want to install the services. Give a folder namewith PiLAB.
- Copy PiLABMaster.exe, PiLABMaster.war and PiLABMaster.xml file.
- You can verify the paths in PiLABMaster.xml file.
- Paste the selected folders to C:\PiLAB.
- Then open command prompt (Run as administrator). User must have administrator privileges.
- Then go to folder where PiLABMaster.exe file is available (C:\PiLAB) by using commandprompt PiLABMaster.exe install you can install PiLABMaster service file.
- Click on start button search by services. In Services you can see PiLABMaster installed as aservice.
- Right click on the PiLAB service there are various options available click on start.
- PiLAB service is started running.
- Refer IQ document for installation.

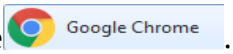
2.2.4. Installation of PiLABVerify

- PiLAB verify software used for verification of backup file.
- Go to PiLAB folder which is available in USB/CD-Drive folder in that folder selectServices folder.
- Select PiLABVerify.exe, PiLABVerify.war and PiLABVerify.xml file and copy these files.
- Paste the folders in C:\PiLAB.
- You can verify the path and port in PiLABVerify.xml file.
- Then open command prompt (Run as administrator). User must have administrator privileges.
- Then go to folder where PiLABVerify.exe (C:\PiLAB) file is available by using commandPiLABVerify.exe install you can install PiLABVerify service file.
- Go to start menu search for services click on services then search for PiLABVerify service.
- By right click on the PiLABVerify service there are various options available click on start.
- PiLABVerify service is started running.
- Refer IQ document for installation.

2.2.5. License File

- To run PiLAB software License file is required without License application won't run
- Open USB/CD-Drive folder in that License folder is available copy it. Paste the folder into thePC where service files are available (C:\PiLAB).
- You can verify the License file by entering the IP Address and port in the browser(default port: 8080). Application login form will open.

3. Login / Logout Procedure

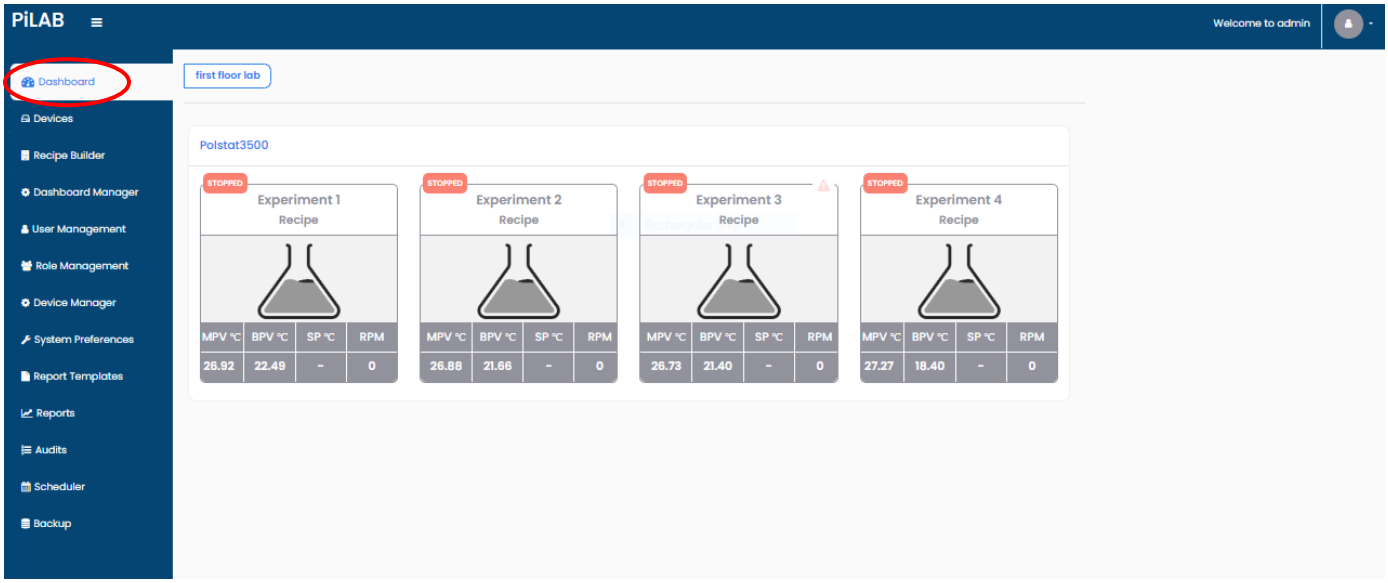
- Click on start (Windows) button on windows screen.
- Navigate to Google Chrome browser and click on chrome 

.
- Click on address bar and enter the IP address with port number. IP address is the IPaddressof the PiLAB running PC and port number is 8080 by default (Ex: 192.168.2.24:8080).
- Upon entering the IP address with port number, then PiLAB Login screen shall be appeared(Note: Wait for 2 minutes upon start of PiLABMaster service).
- Enter the username, password at the respective fields.
- Click on **'Sign in'** button, then PiLAB screen shall be appeared only if the entered username, password is correct and user information shall be displayed on top right corner of the web pagewith drop down.
- If wrong password entered, the screen shall be appeared with alert message **"Failed to sign in! 3more attempts left".** (As per '**Failed Access attempts'** in System preference page).
- If wrong username entered, the screen shall be appeared with alert message **"Failed to signin! we do not know such user".**
- If user wants to logout from the PiLAB screen, click on drop down list at user and select the **'Sign out'**.
- Click on '**Sign out'** and then login screen shall be appeared.

4. Dashboard

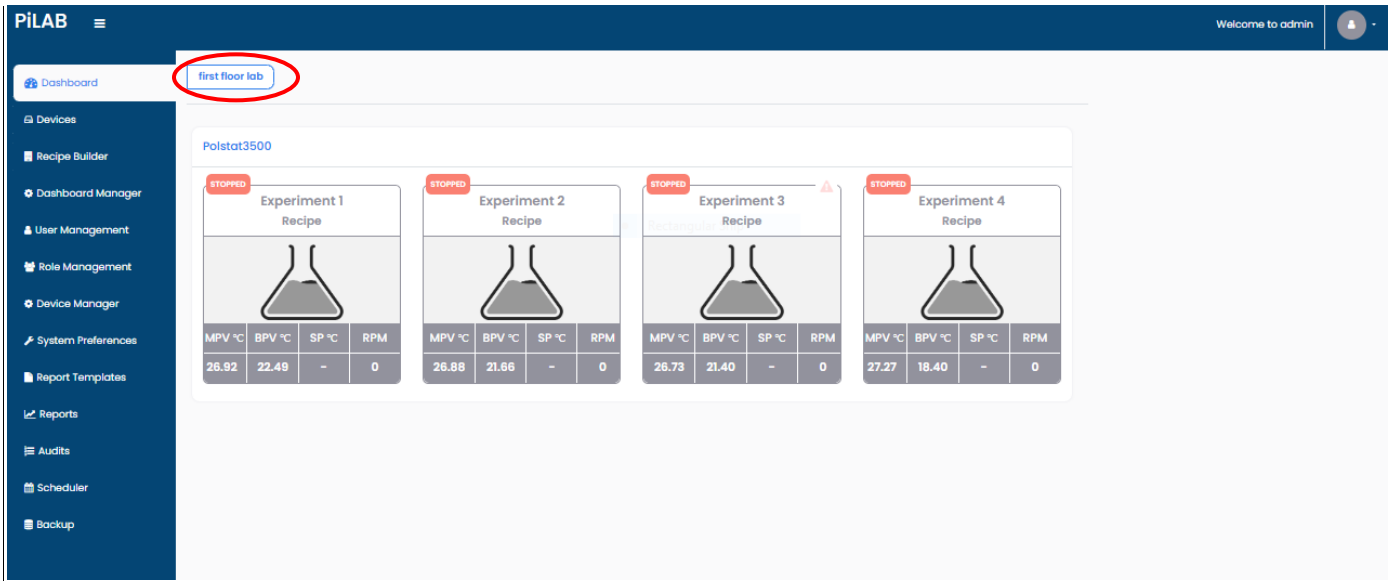
1. Dashboard Page

- When we login to PiLAB or when we click on dashboard screen below screen will display.



2. Areas Tab

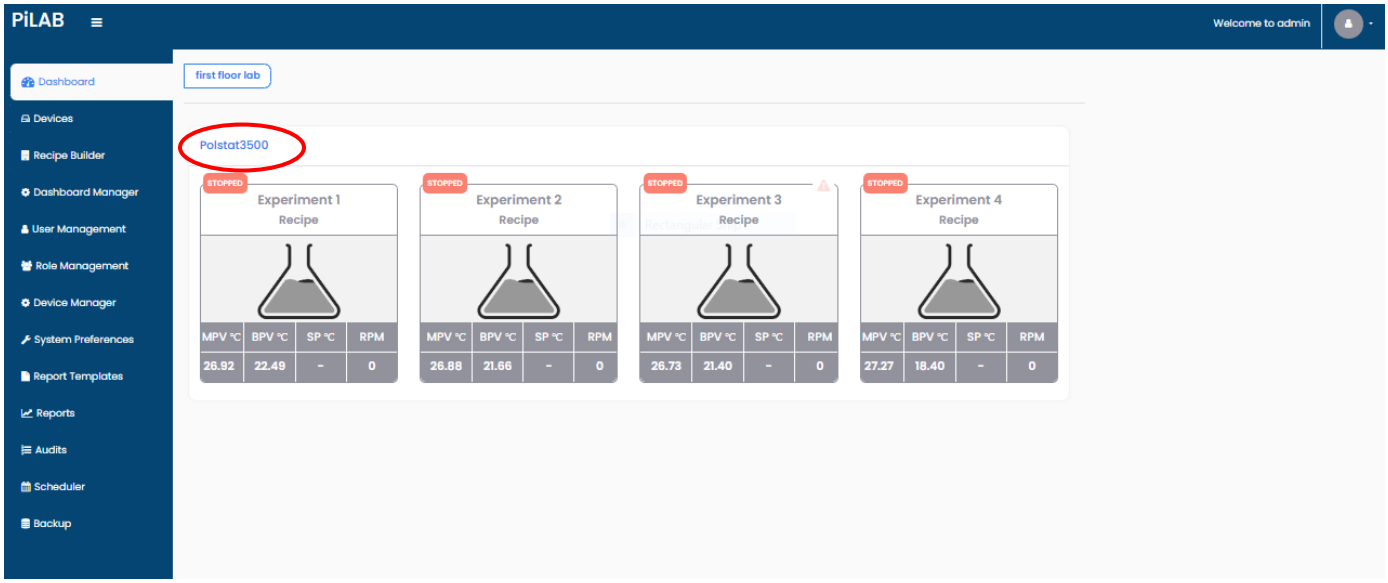
- Areas Tab describe as Placement of devices in areas or devices located in which place.
- If we click on areas tab, devices will display as shown here.



3. Blocks

3.1 Name of the Device

- Every device having unique name, will display on top of the device block as shown here.

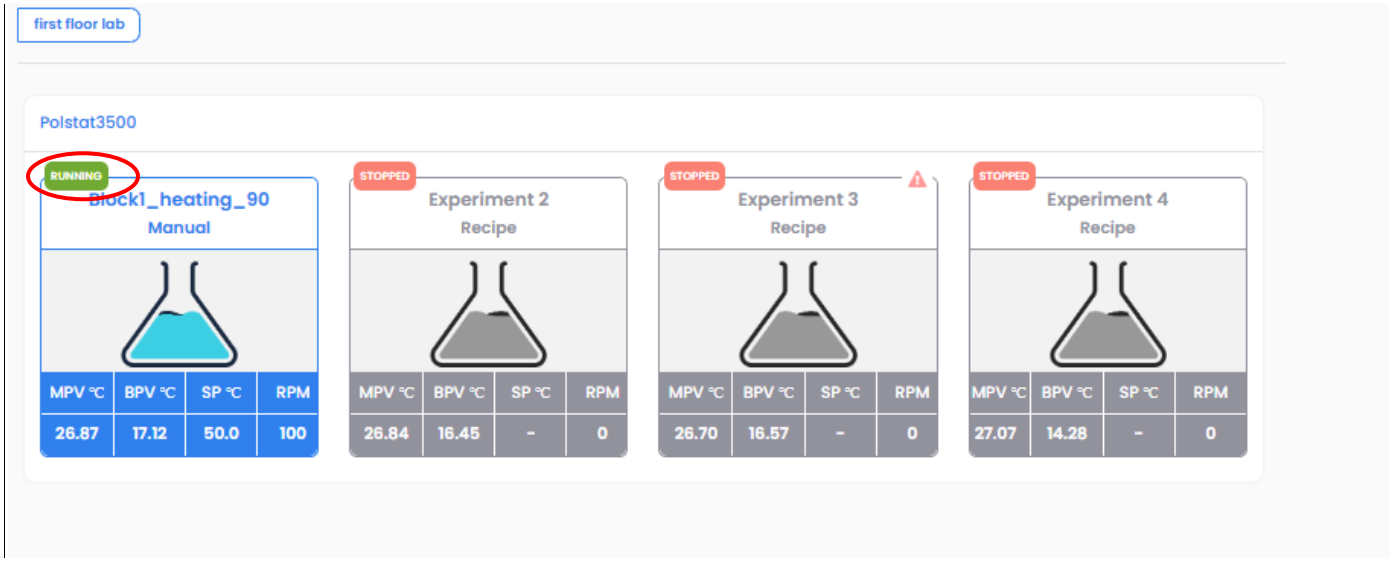


3.2 Interact with Specific Block

We can see current status of experiment in home screen.

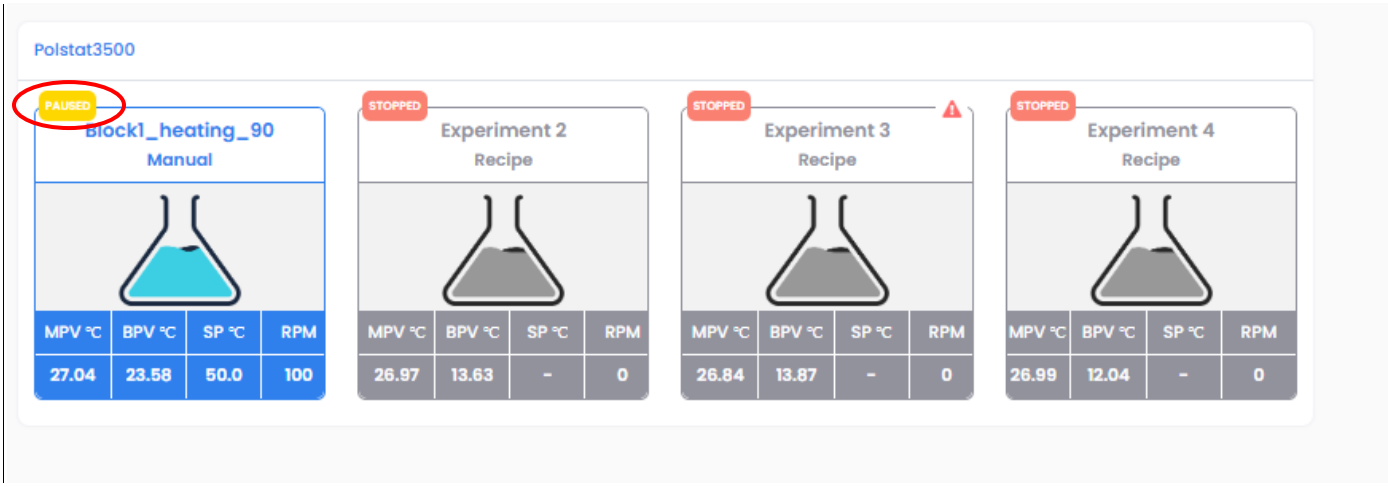
3.2.1 Running

- Status Running means experiment is started in particular block.
- Running status will display with green color on top of block as shown here.



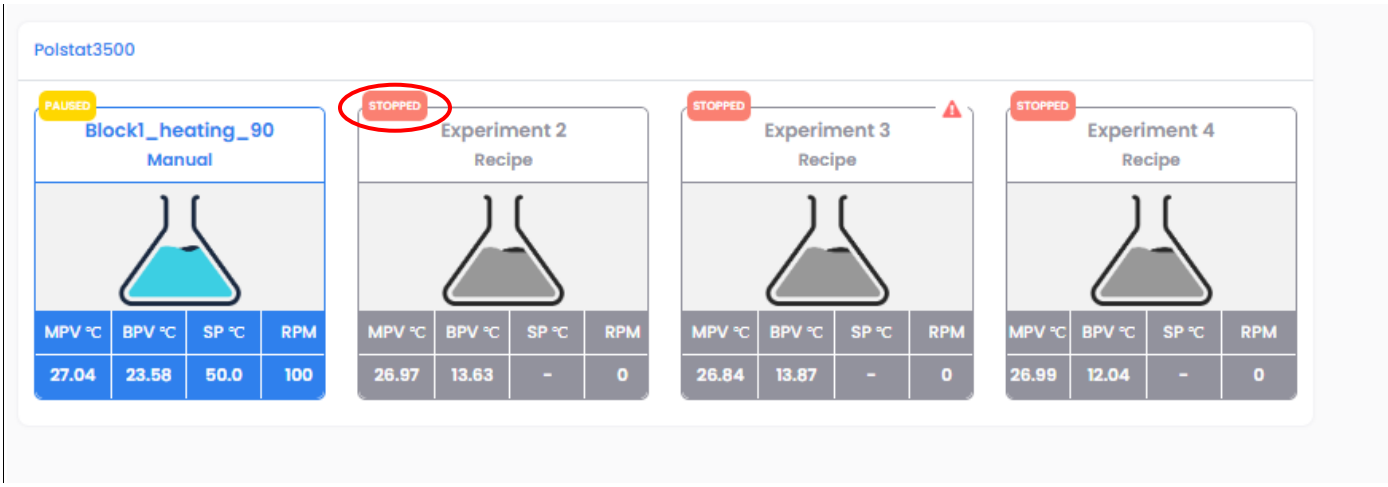
3.2.2 Paused

- Status paused means experiment is paused in particular block.
- Paused status will display with yellow color on top of device block as shown here.



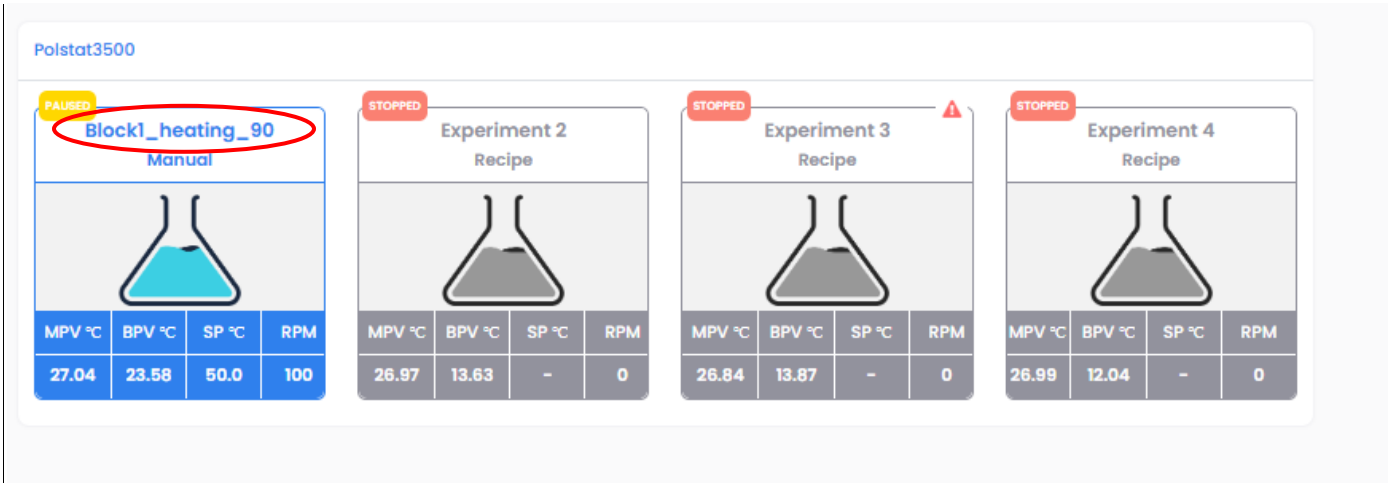
3.2.3 Stopped

- Status stopped means experiment is not started or stopped in particular block .
- Stopped status will display with red color on top of the device block as shown here.



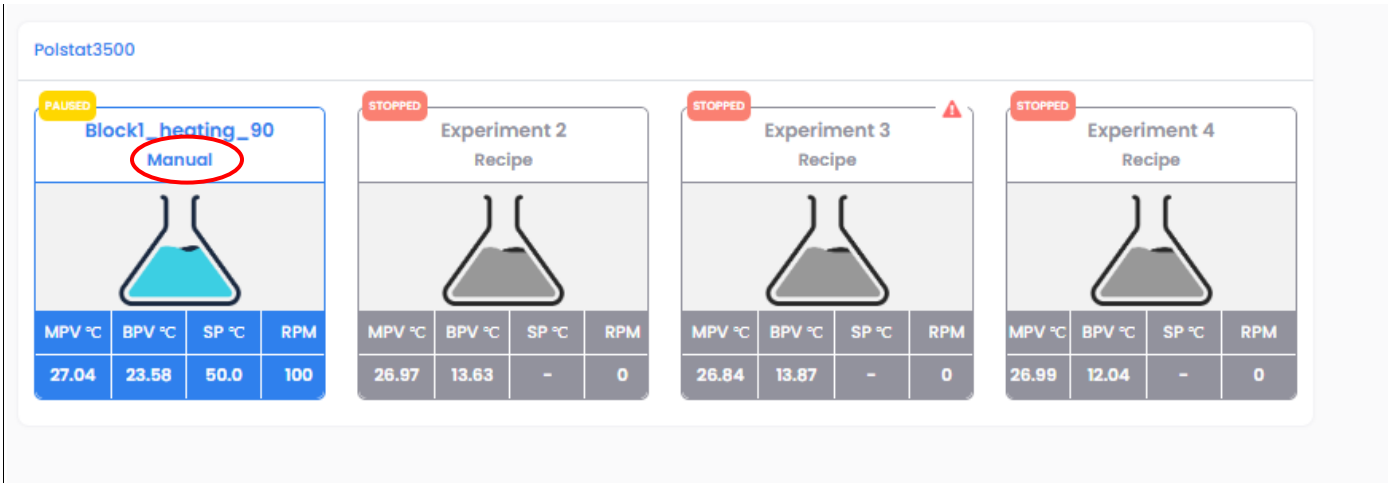
3.3 Experiment name

- Experiment name will display on top of device block as shown below.
- Experiment name will be given when we starting experiment.



3.4 Mode of Experiment

- We can run experiment in two modes 1. Recipe mode 2. Manual mode.
- We are able to see mode of Experiment on top of the device block as shown below.

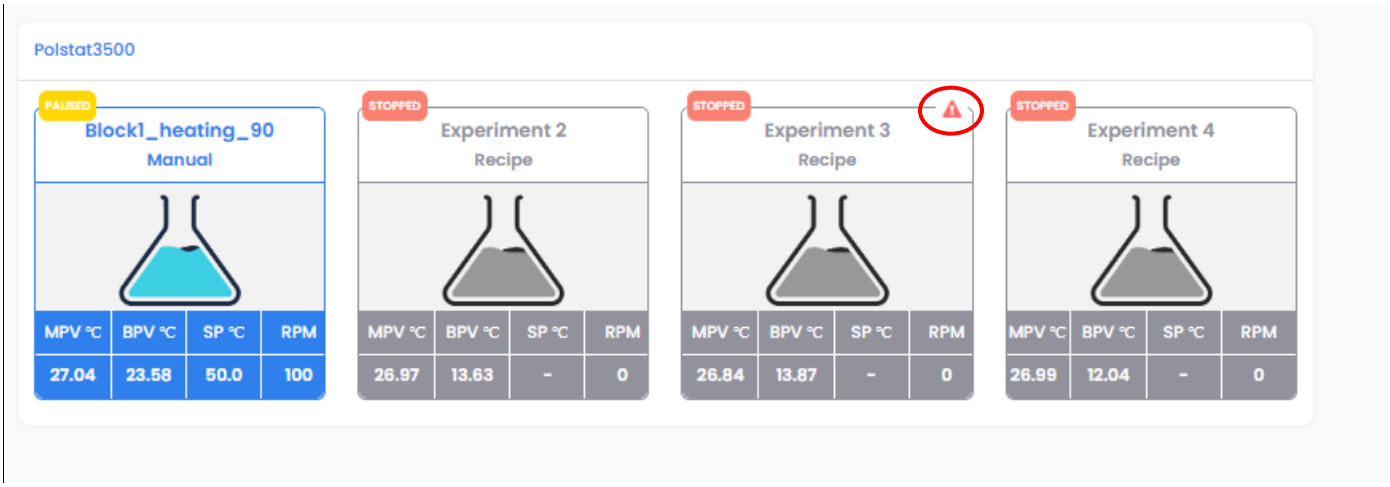


NOTE:

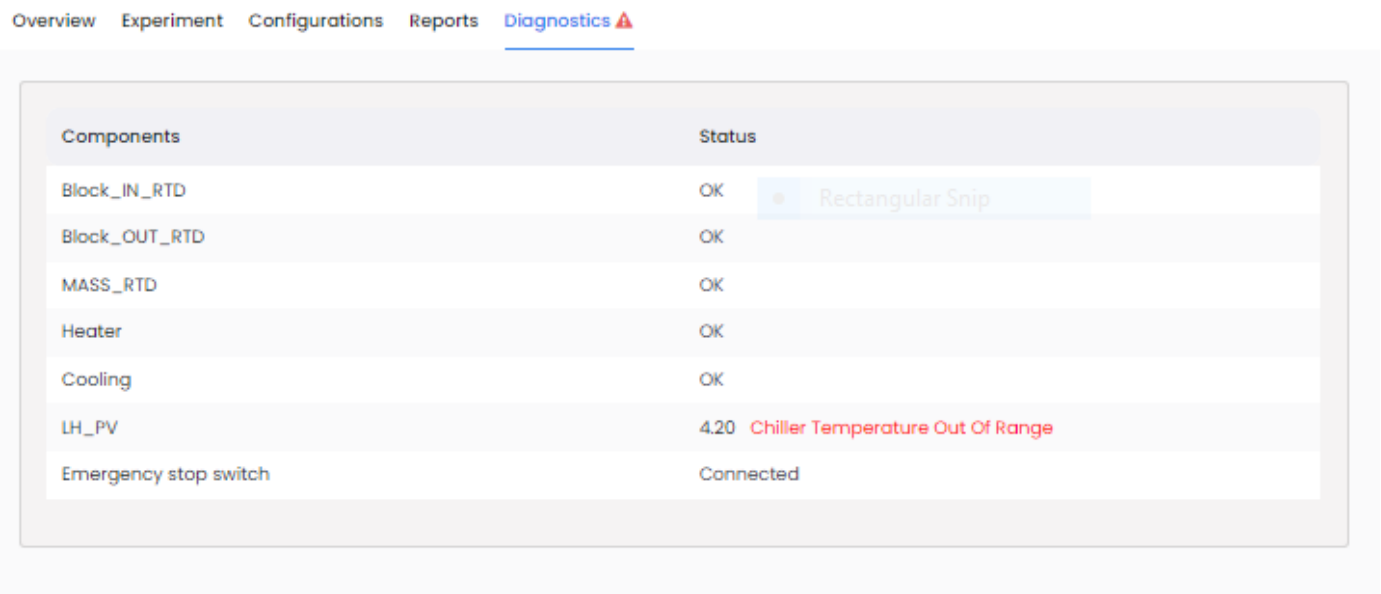
- If Image is in blue color with rotation then experiment is running in block.
- If Image is in blue color without rotation then experiment is paused in block.
- If Image is in grey color with rotation then stirrer is started in block.
- If Image is in grey color without rotation then experiment is not started in block.

3.5 Diagnostics

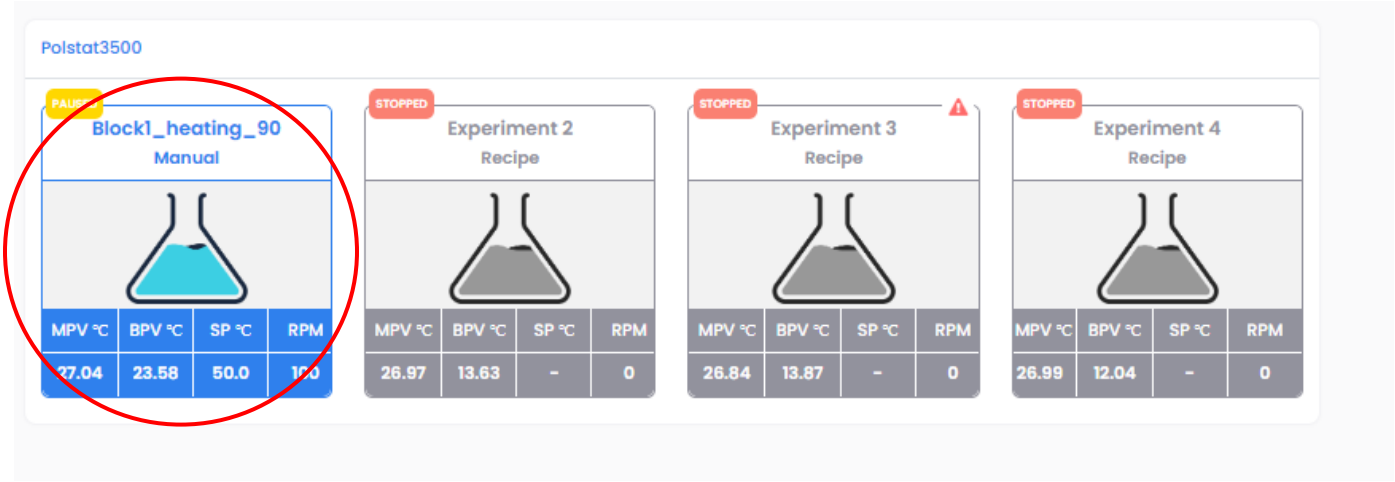
- If any device parameter of block is not working then it will show warning symbol on blocks as shown in below screen.



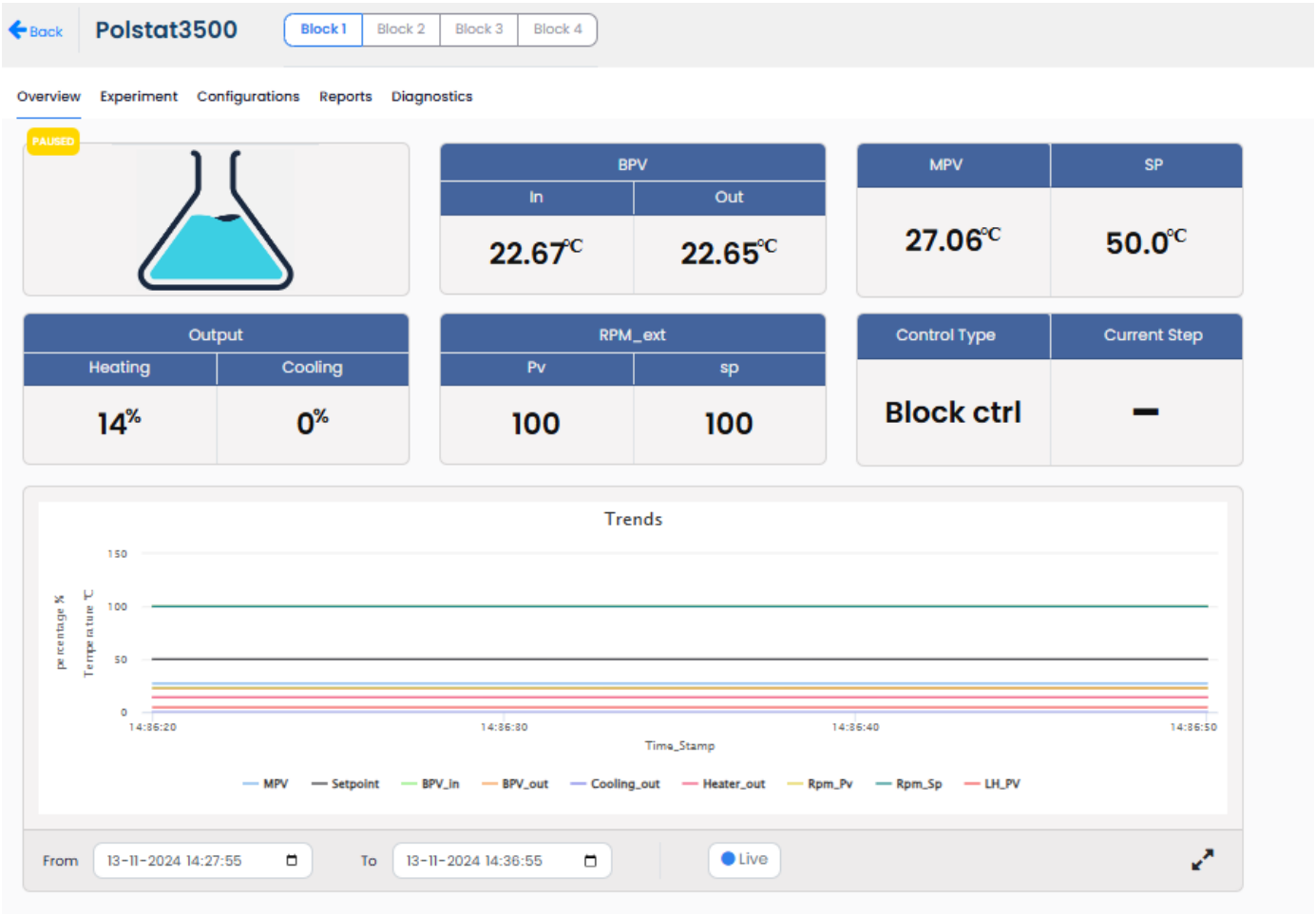
- If we click on that warning symbol below screen will display.



4. **Interact with Specific Block**
   - Click on particular block as shown here.



- After clicking on particular block below screen will display.



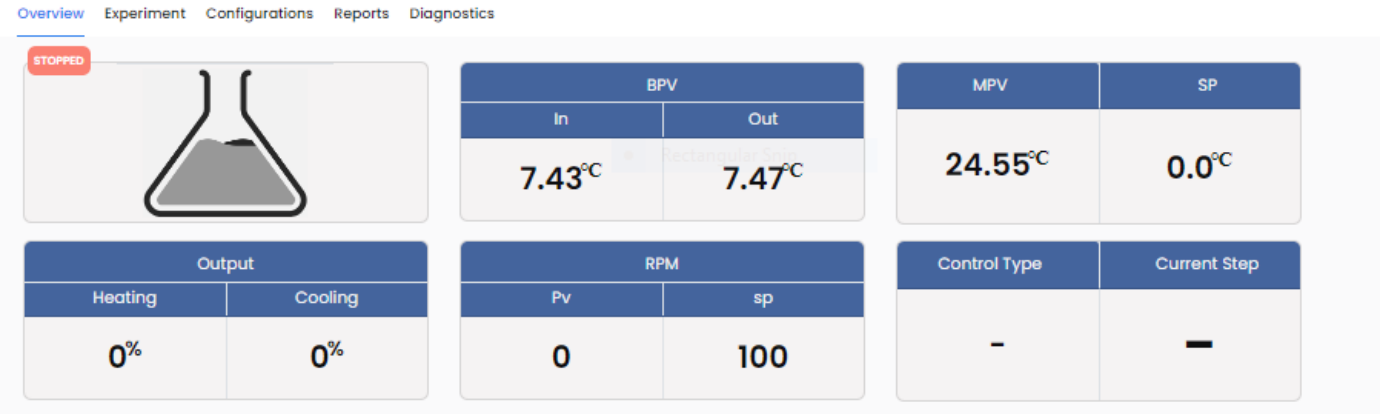
- This page consists of device name along with back button.
- Live data and graph also available in this page.

4.1 Overview

Features available in Overview page are listed below

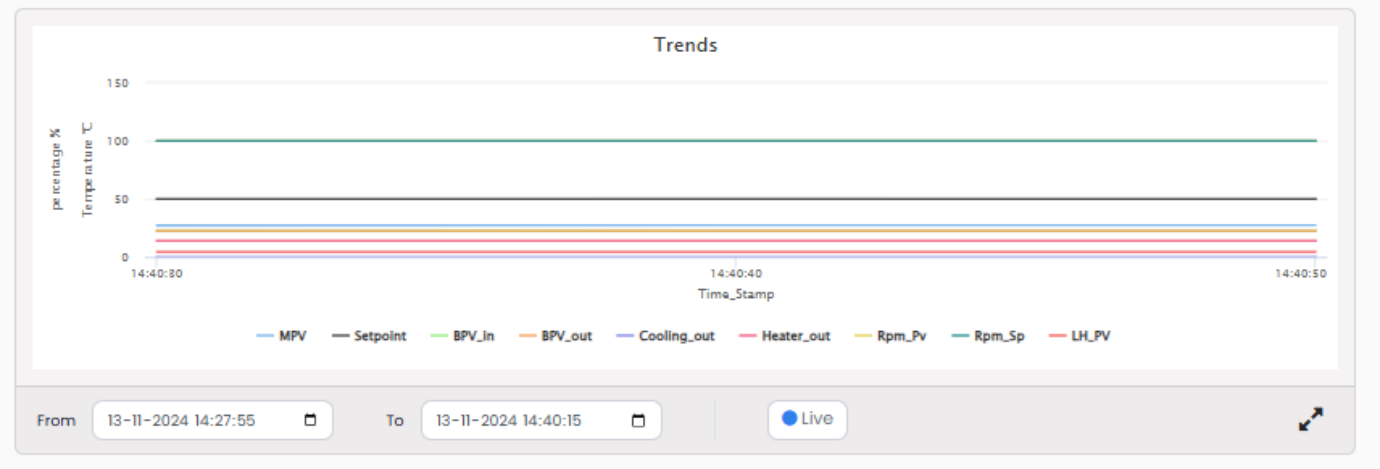
4.1.1 Live data

- We can see Live PV data in overview page which is coming from down level device.
- Live data will update for every 10 seconds.

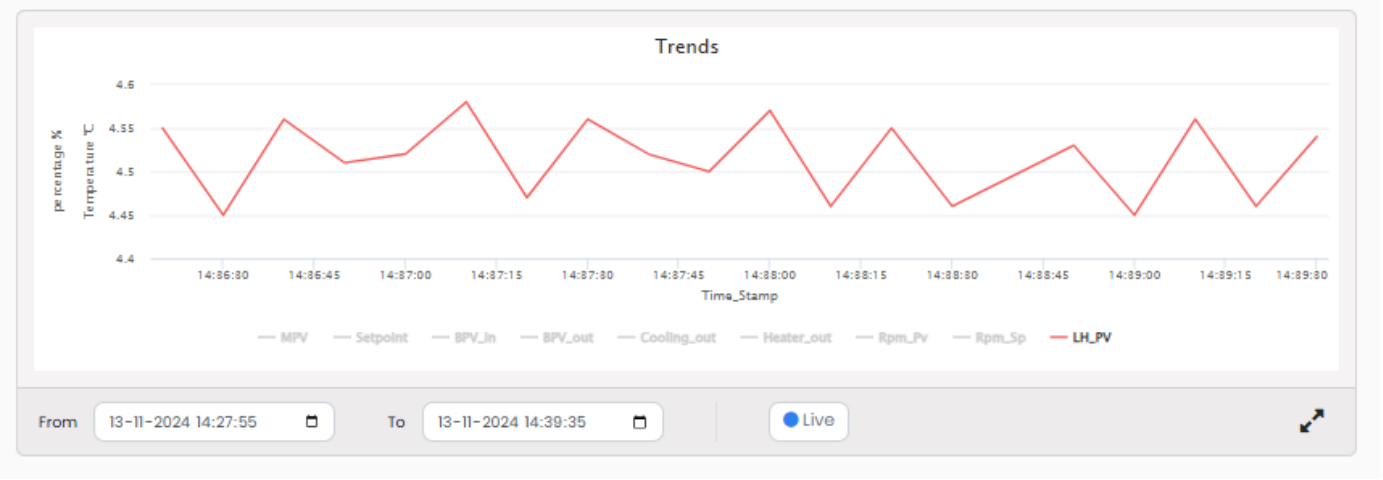


4.1.2 Live graph

- We can see live data in graph, graph will update for every 10 seconds.
- We can see different parameters data in single graph.

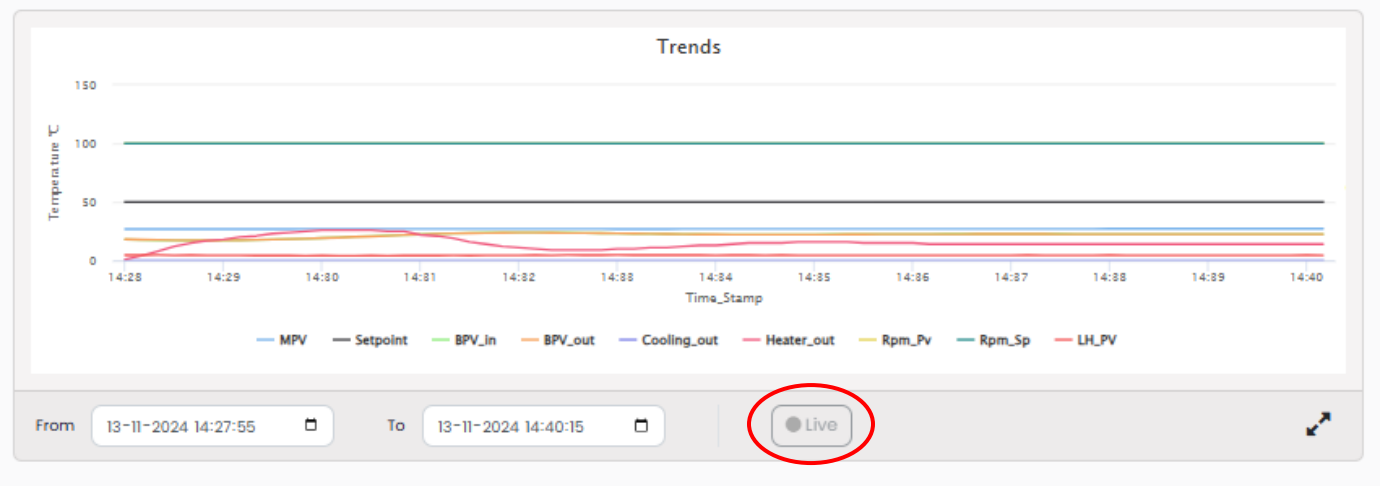


- We can select particular x axis parameter as shown in below screen



4.1.3 Historical graph

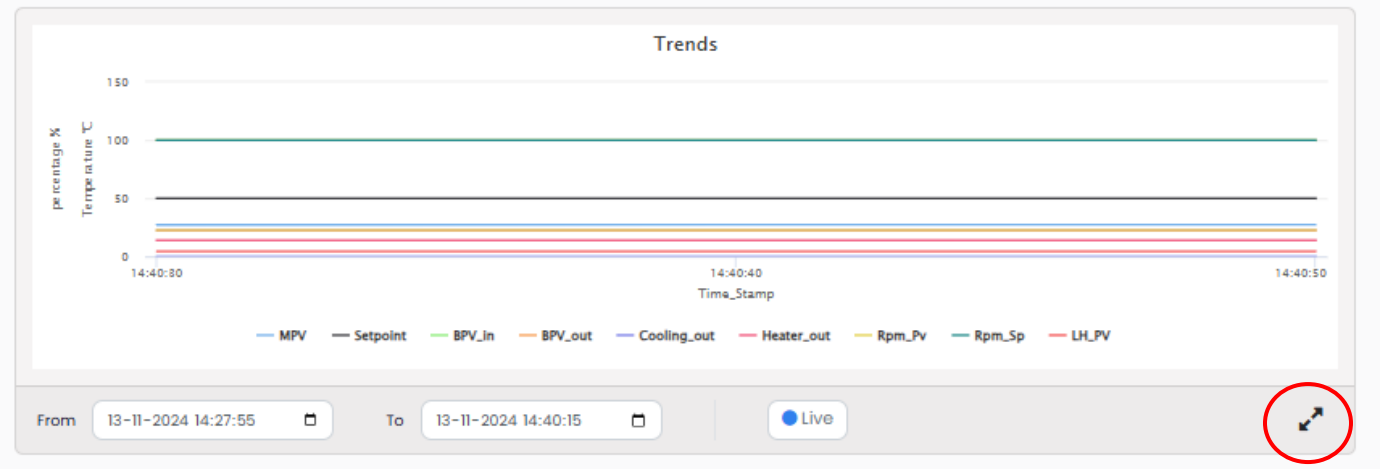
- We can also see historical data in graph.
- By selecting from and to date in Filters, we can see the historical data between the selected time period.
- Change from and to date then graph will display as shown here.



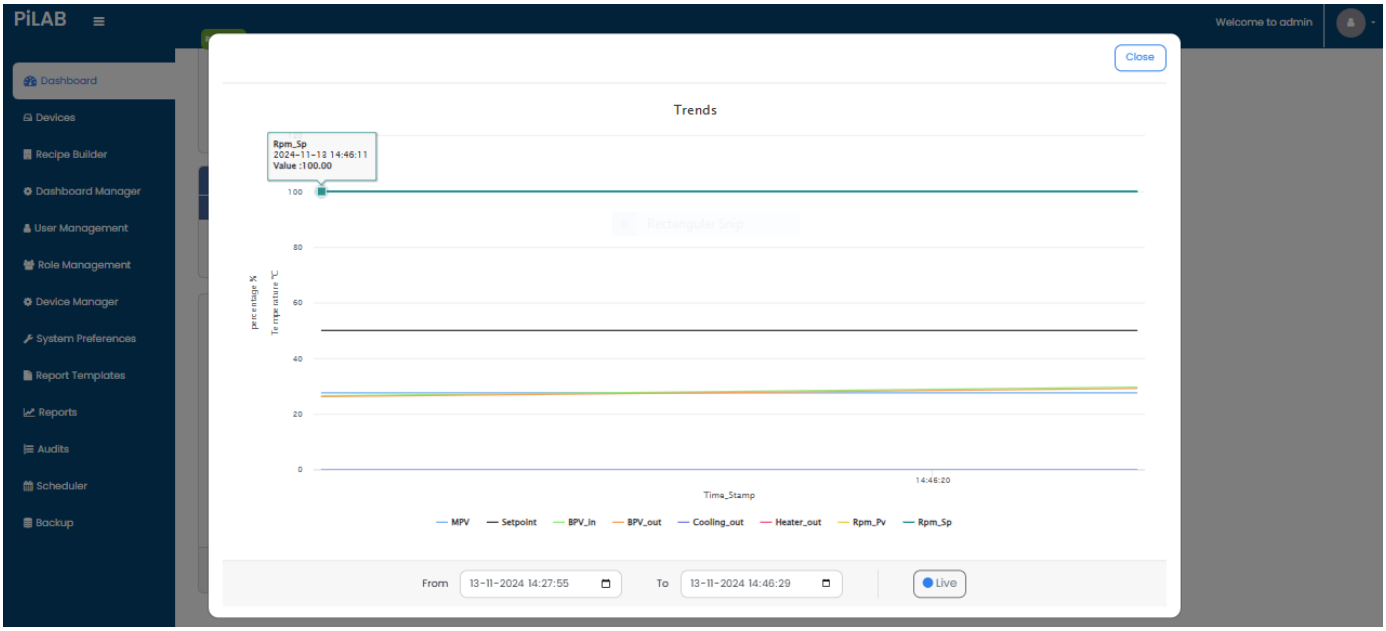
- If you click on Live button again Live data will display

4.1.4 Zoom out for graph

- We increase the size of the graph using Zoom out feature.
- Click on zoom icon button as shown here.

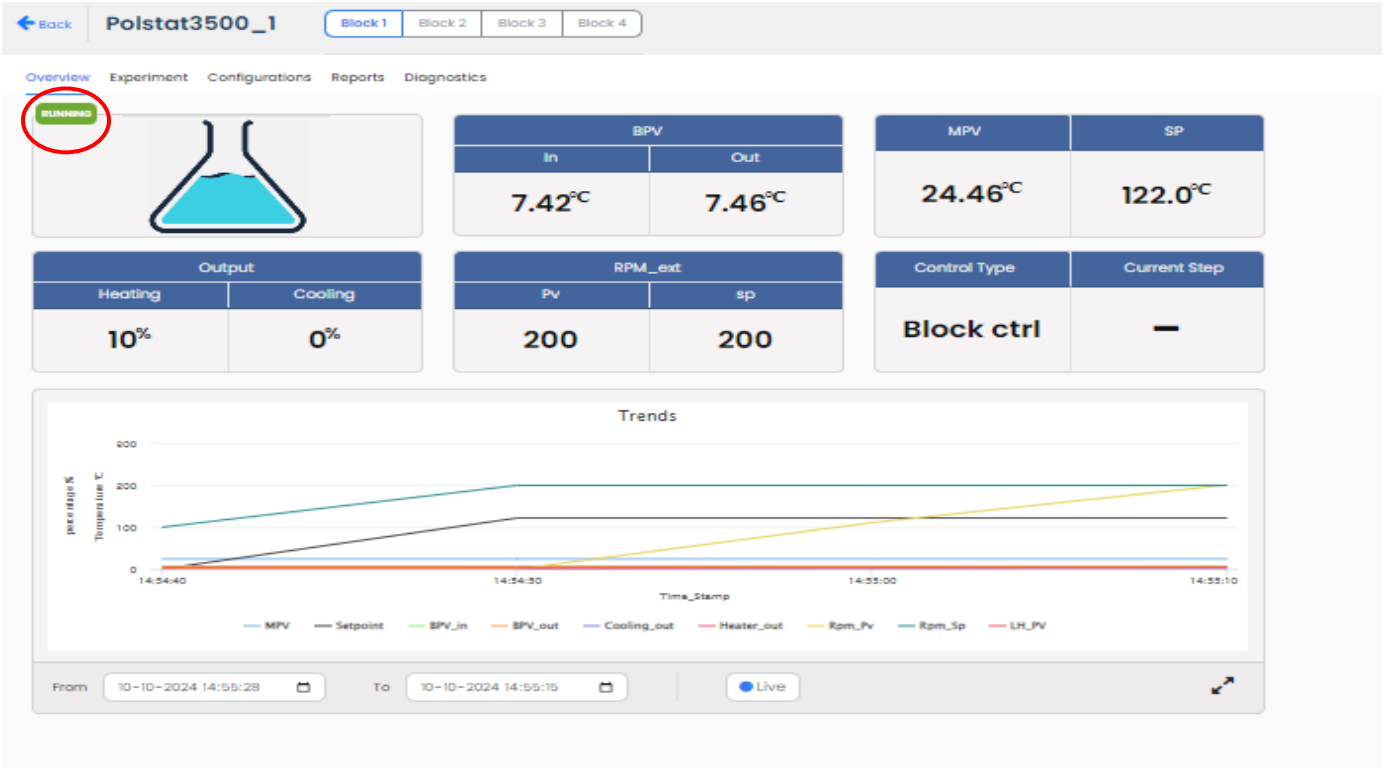


- After clicking on zoom button screen will display as shown here.



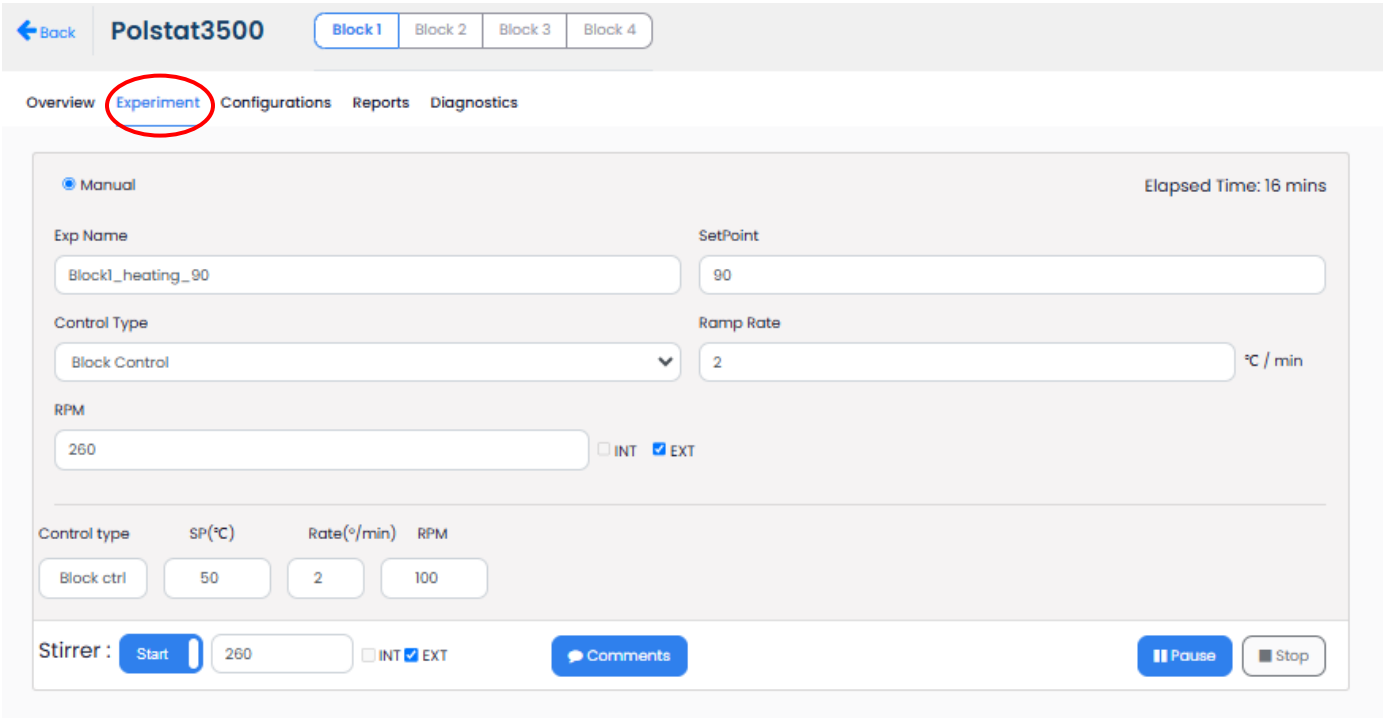
4.1.5 Current running status

- We can see current status of Experiment in overview page as shown here.



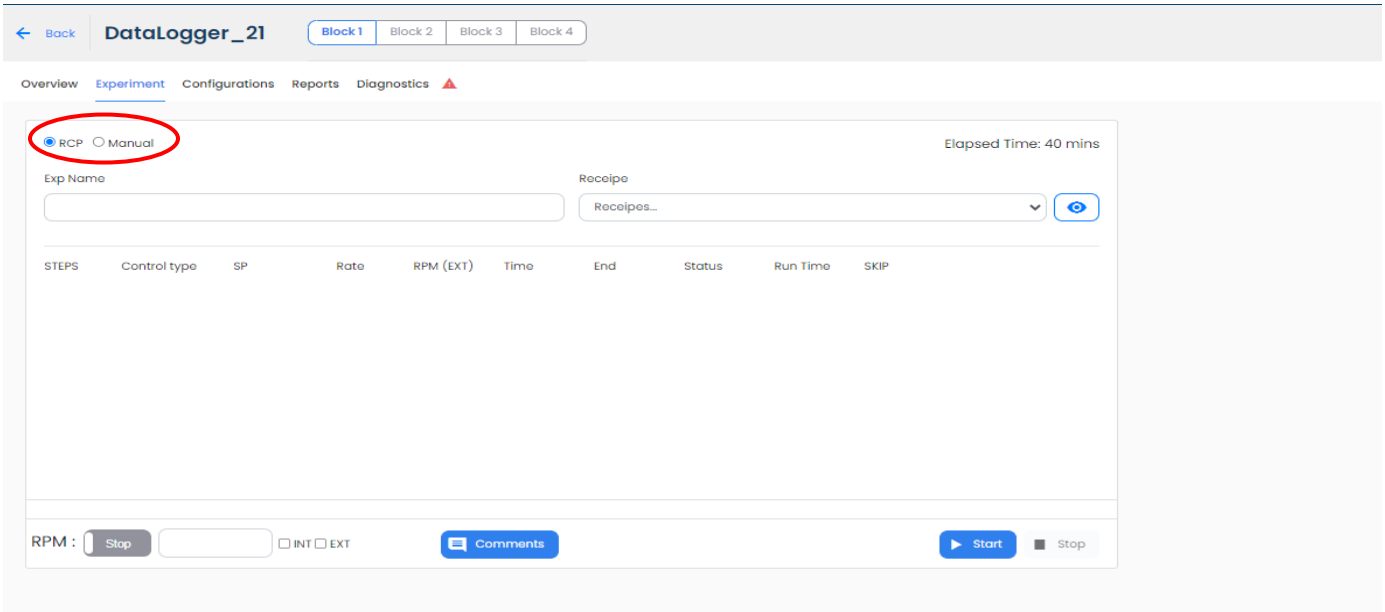
4.2 Experiment

- Click on Experiment tab then page will display as shown here.

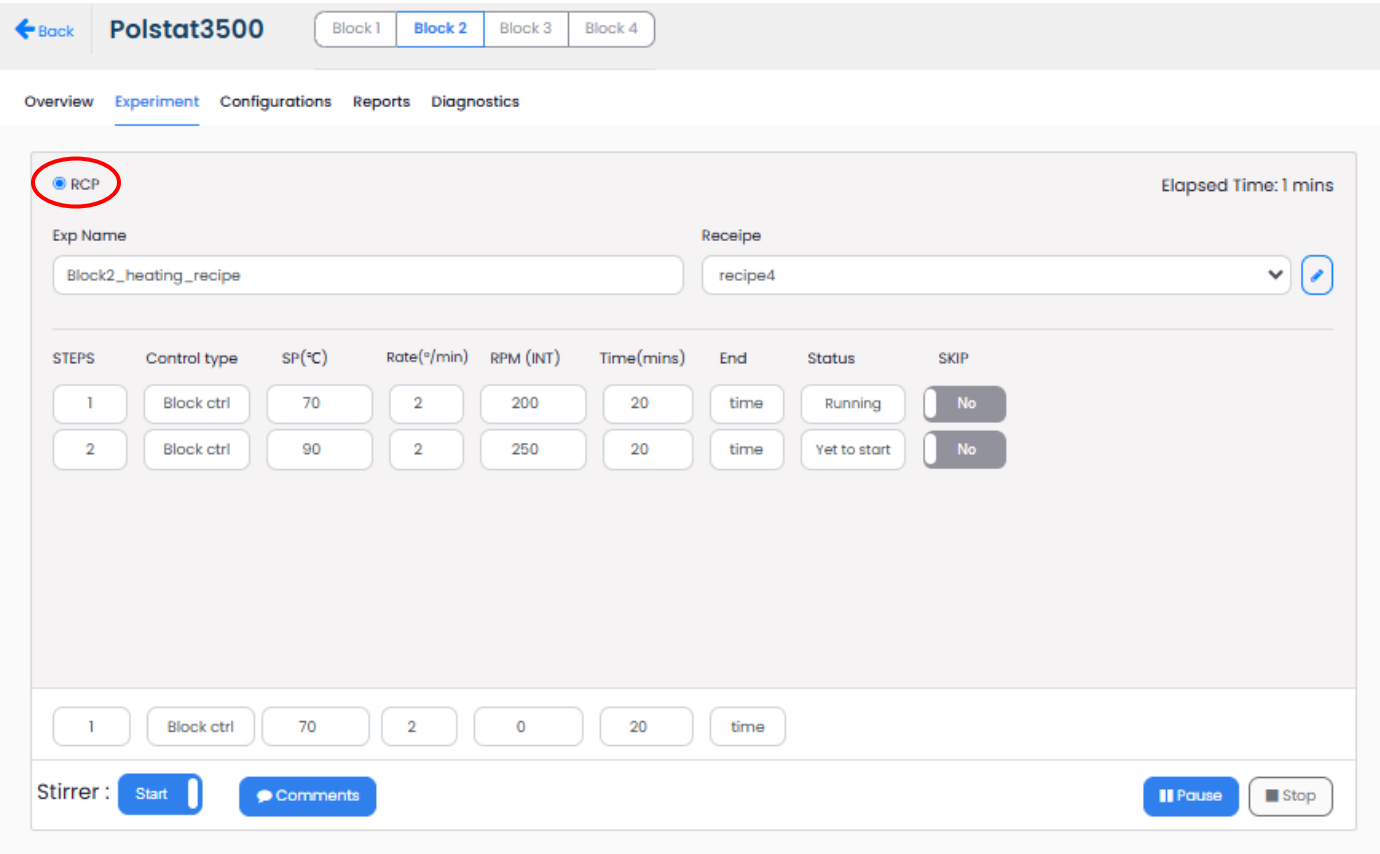


4.2.1 Mode of Experiment

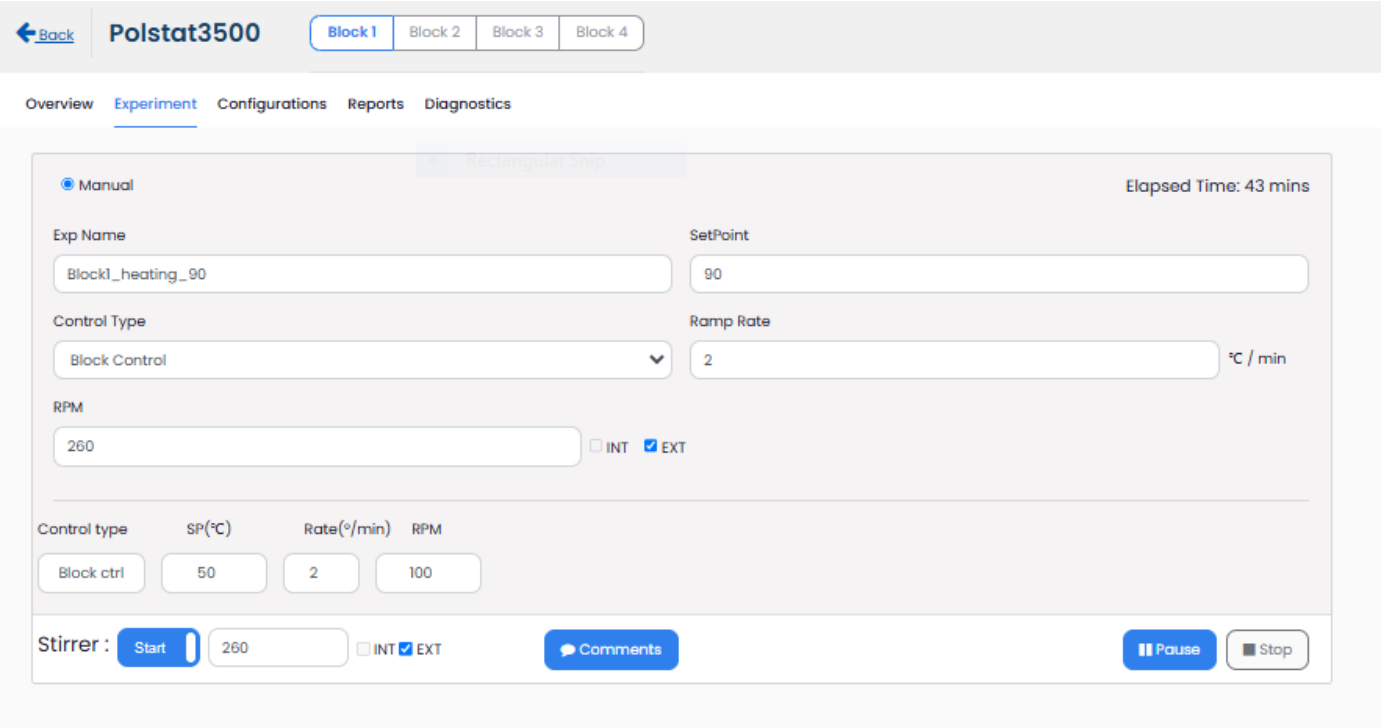
- We are having two modes of Experiment one is Recipe mode and the other is Manual mode.
- If experiment is not started in device then page will display as shown here.



- If we start experiment using recipe mode then experiment page display as shown here.

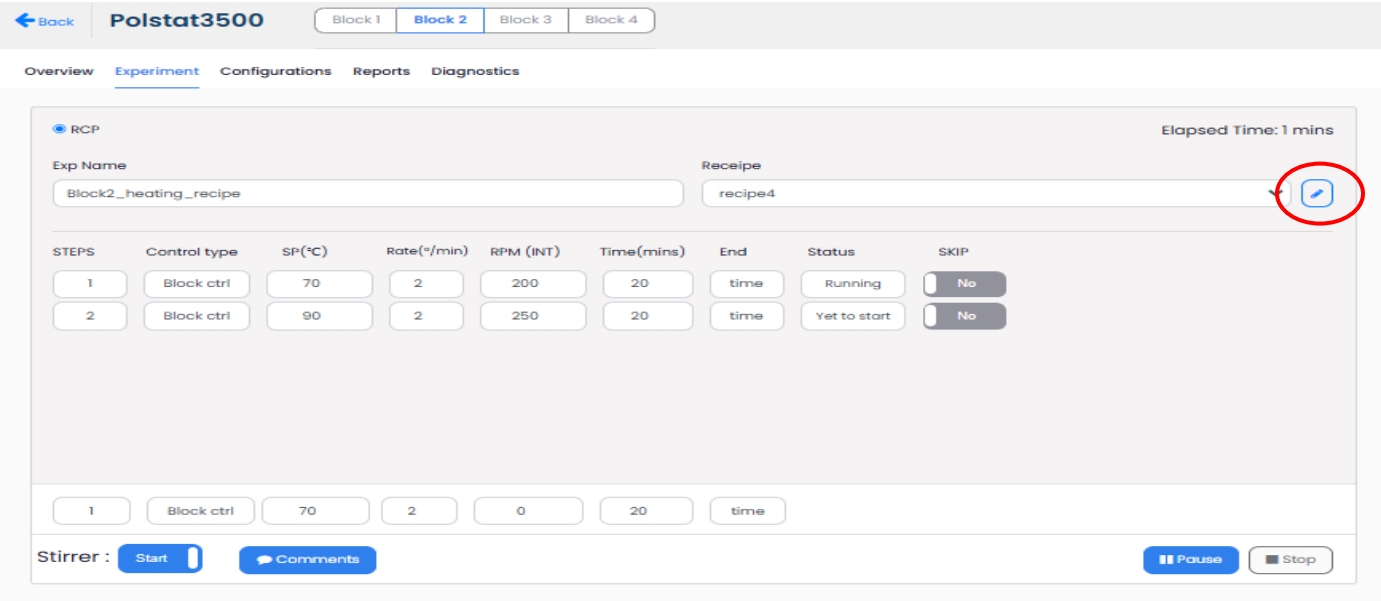


- If we start experiment using manual mode then experiment page display as shown here.

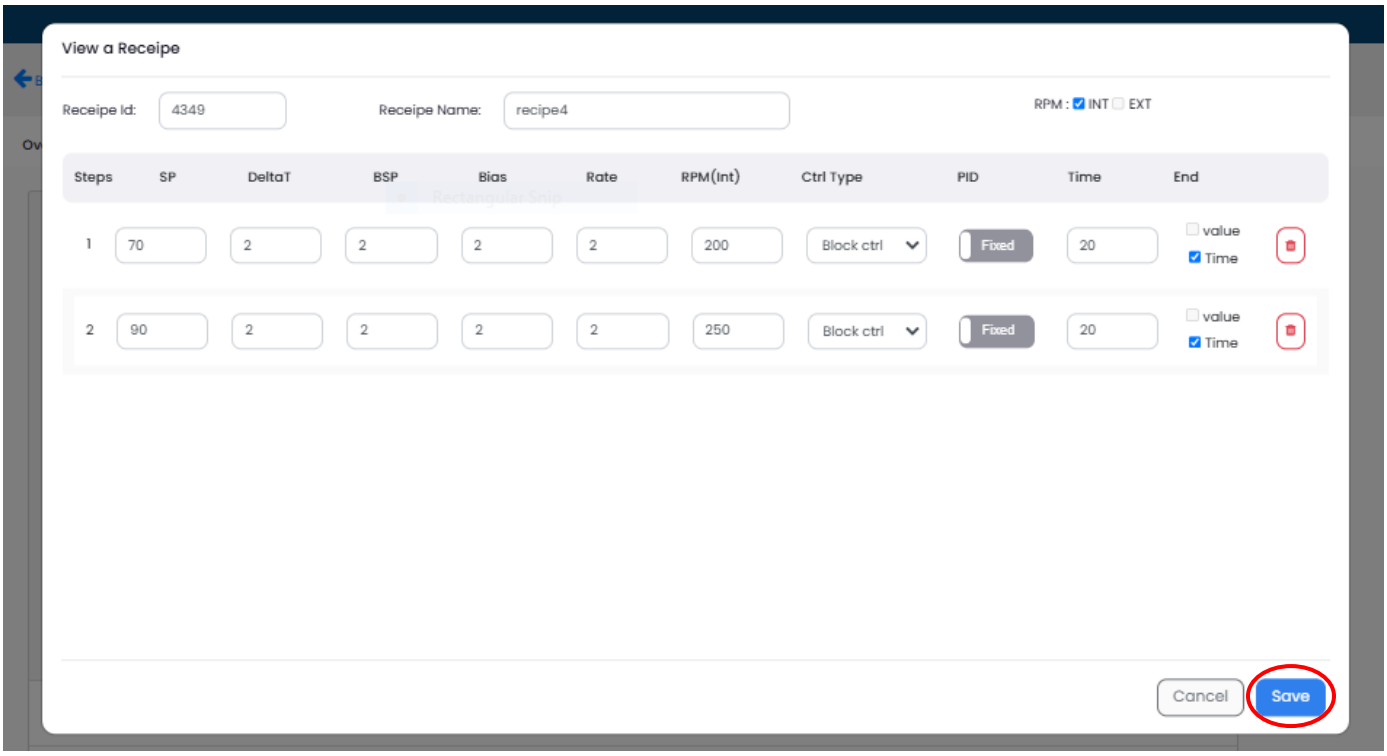


4.2.2 Recipe view/Edit button

- Recipe view button is used to view recipe steps.
- By saving the recipe we can send recipe details to down level device.
- Click on view button of the recipe as shown here.

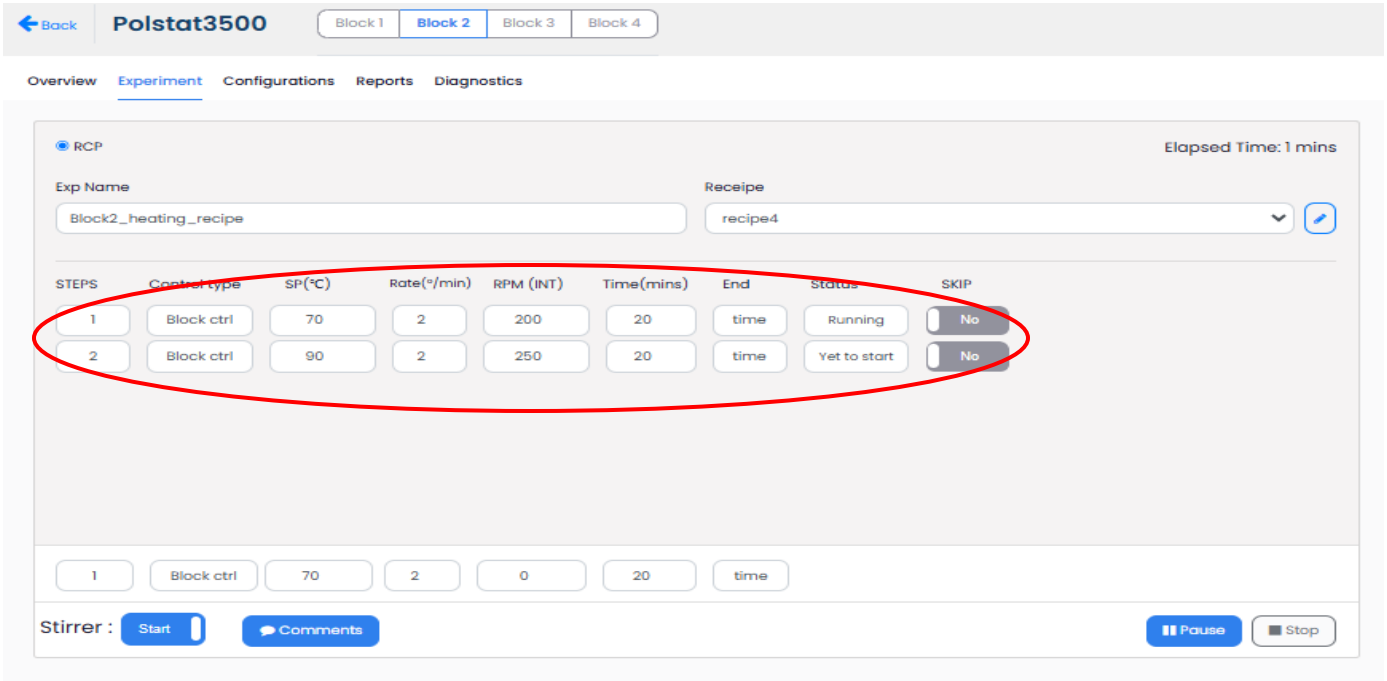


- After clicking on view button dialog will open as shown here.
- Click on save button to send configuration to down level device.



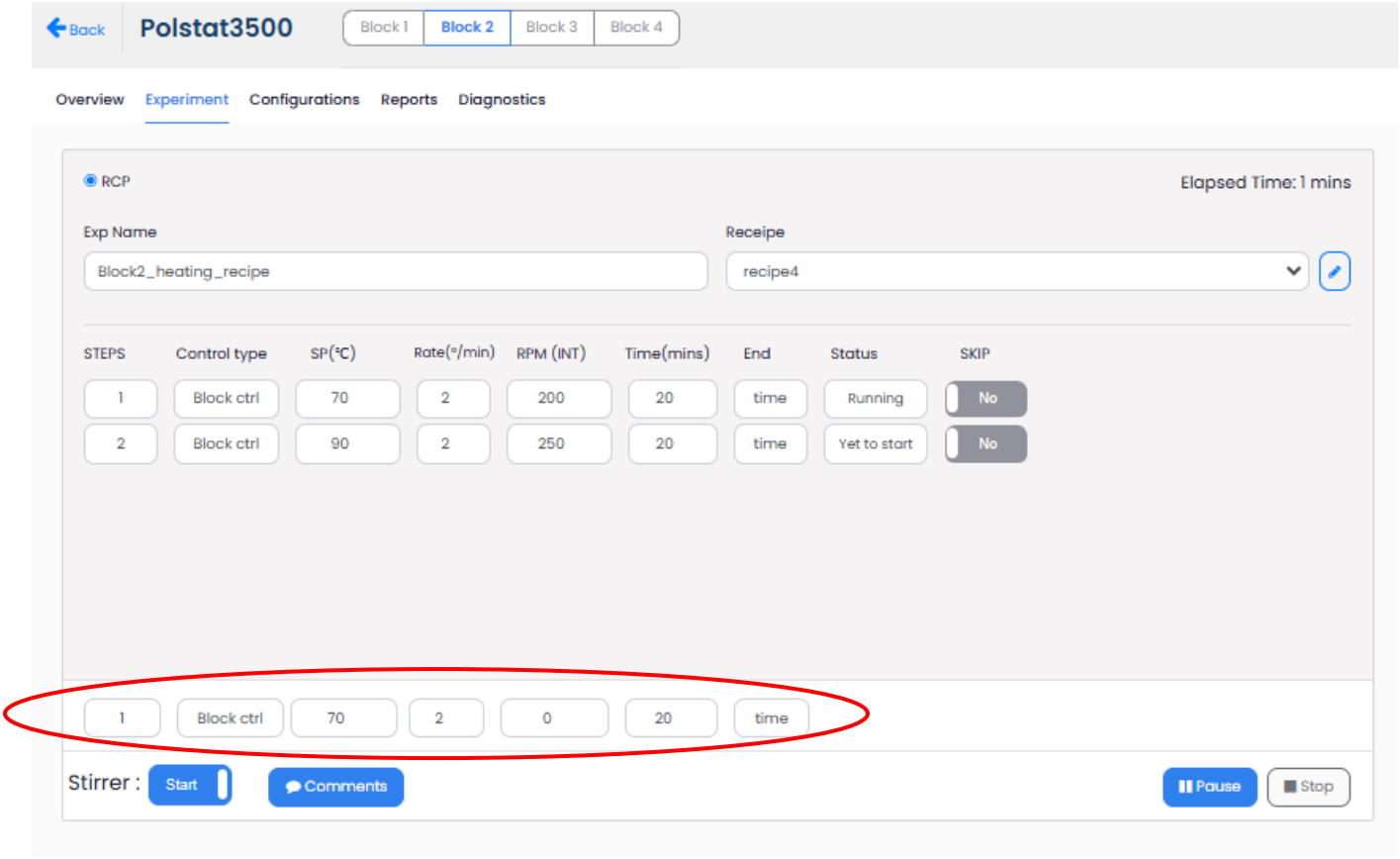
4.2.3 Recipe steps display

- If Experiment is running in recipe mode all recipe steps will display in Experiment page as shown here.



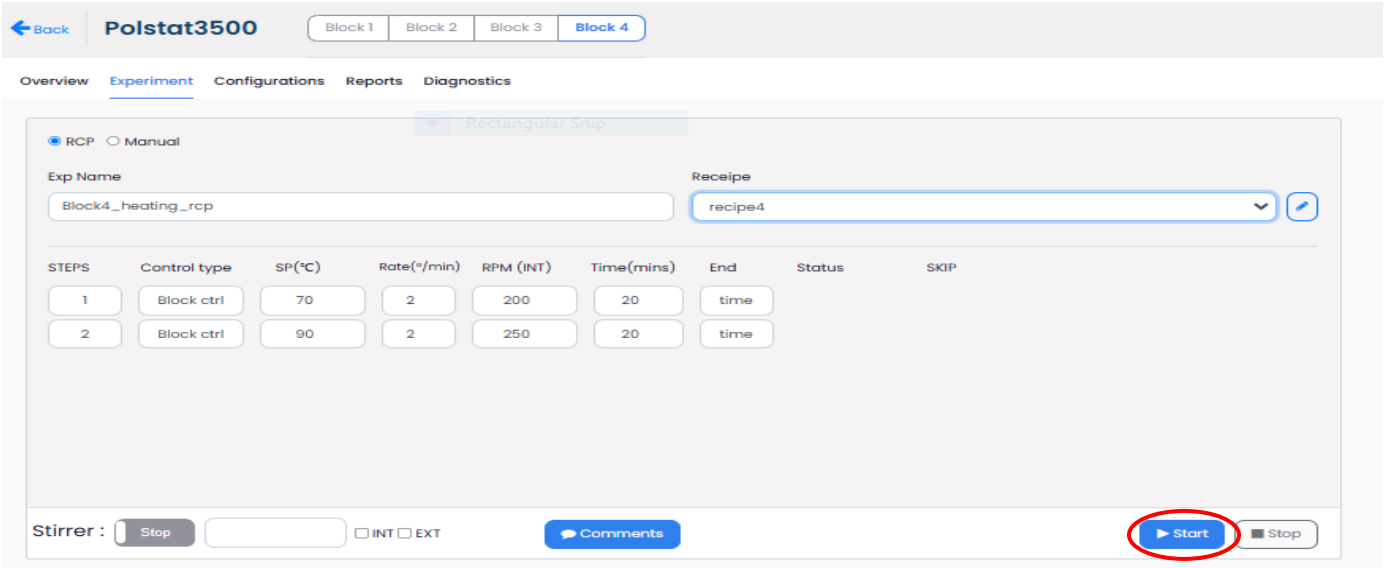
4.2.4 Current running step data

- If Experiment is running in recipe mode then current running step data will display in experiment page.



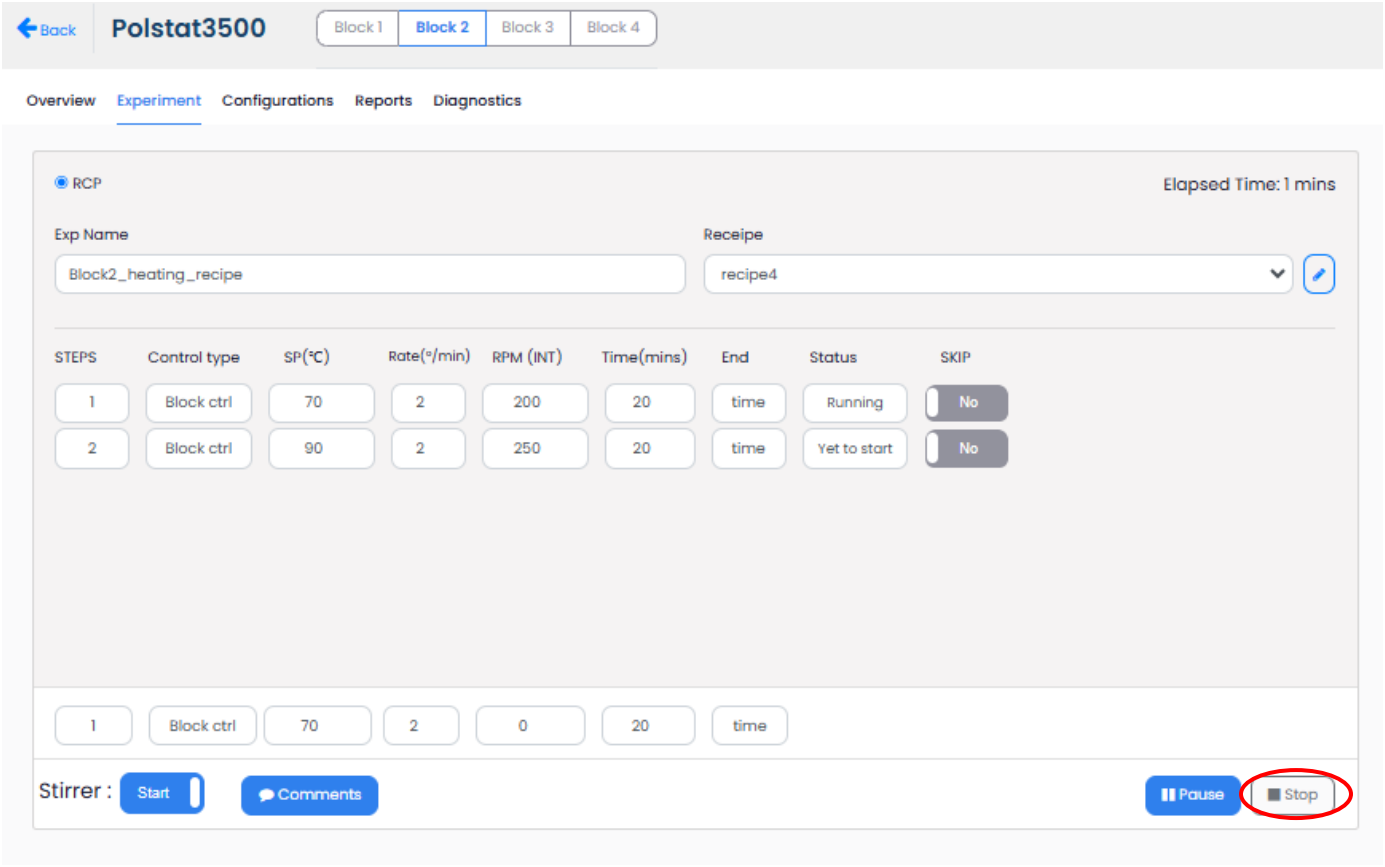
4.2.5 Start

- Start button is used start new experiment in device block.
- If we click on Start button experiment will start.
- Enter the required data click on start button as shown below.



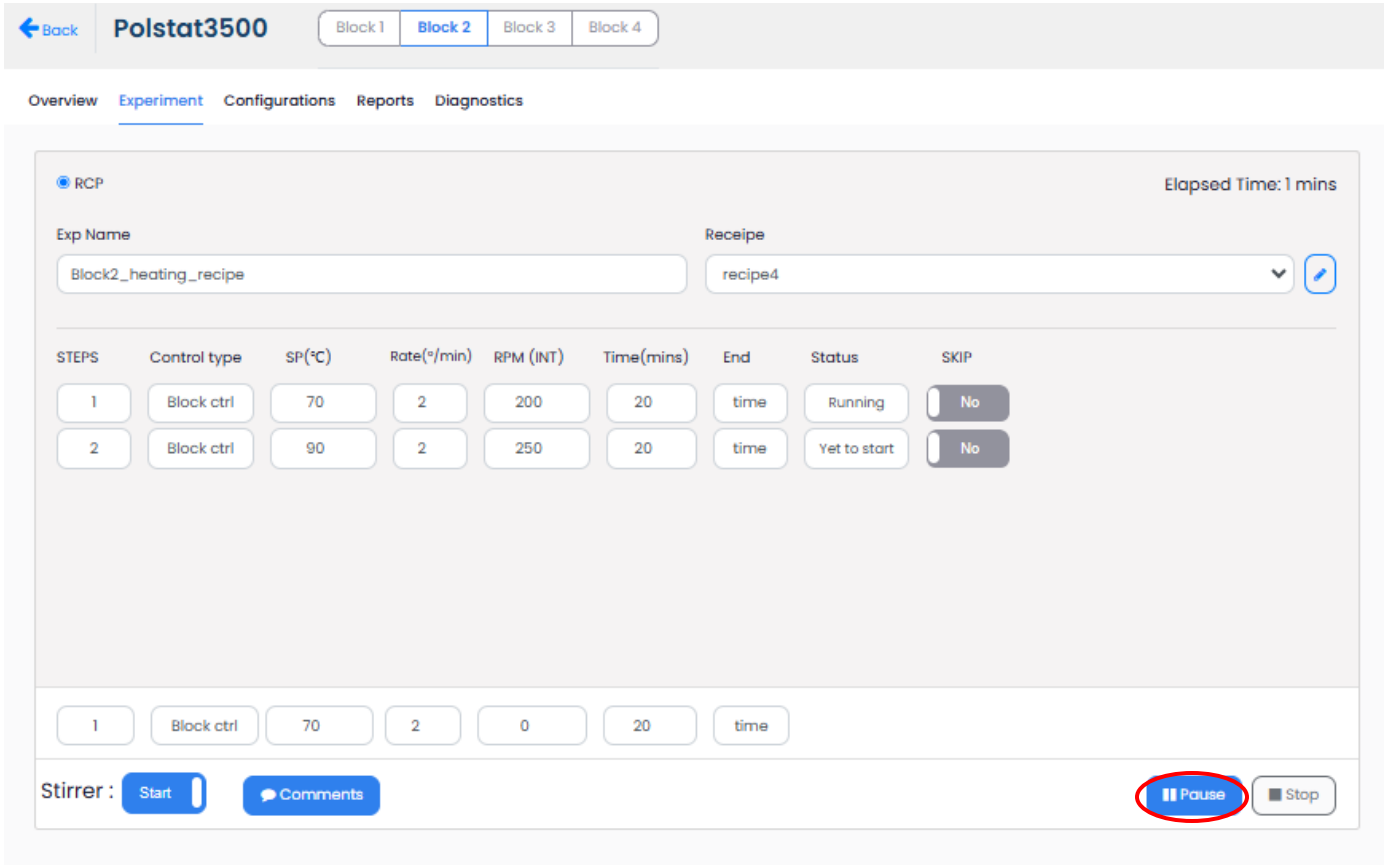
4.2.6 Stop

- Stop button is used to stop the experiment.
- If we click on stop button experiment will stop in device block.
- Click on stop button as shown here.



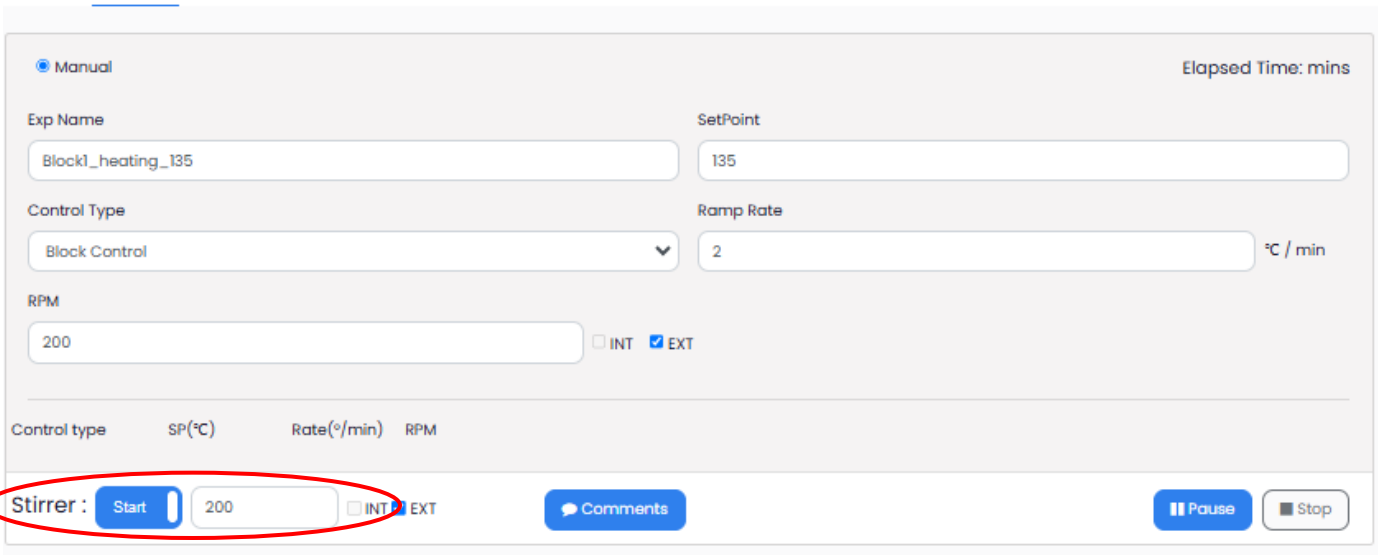
4.2.7 Pause

- Pause button is used to pause the experiment
- Click on pause button as shown here.

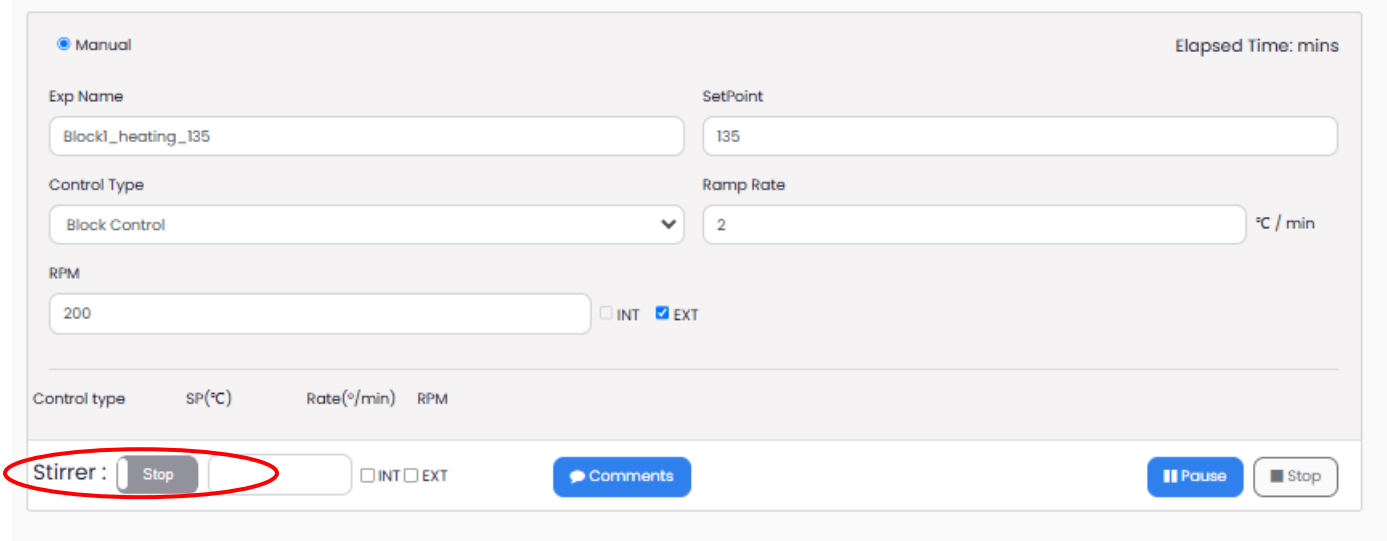


4.2.8 Stirrer

- Manual Stirrer starts only before the experiment or after the experiment
  Start
- When stirrer start below screen will display and it rotates with given number(as per below screen)per minute



- **Stop**
- When stirrer is stop below screen will display



4.2.9 Elapsed Time

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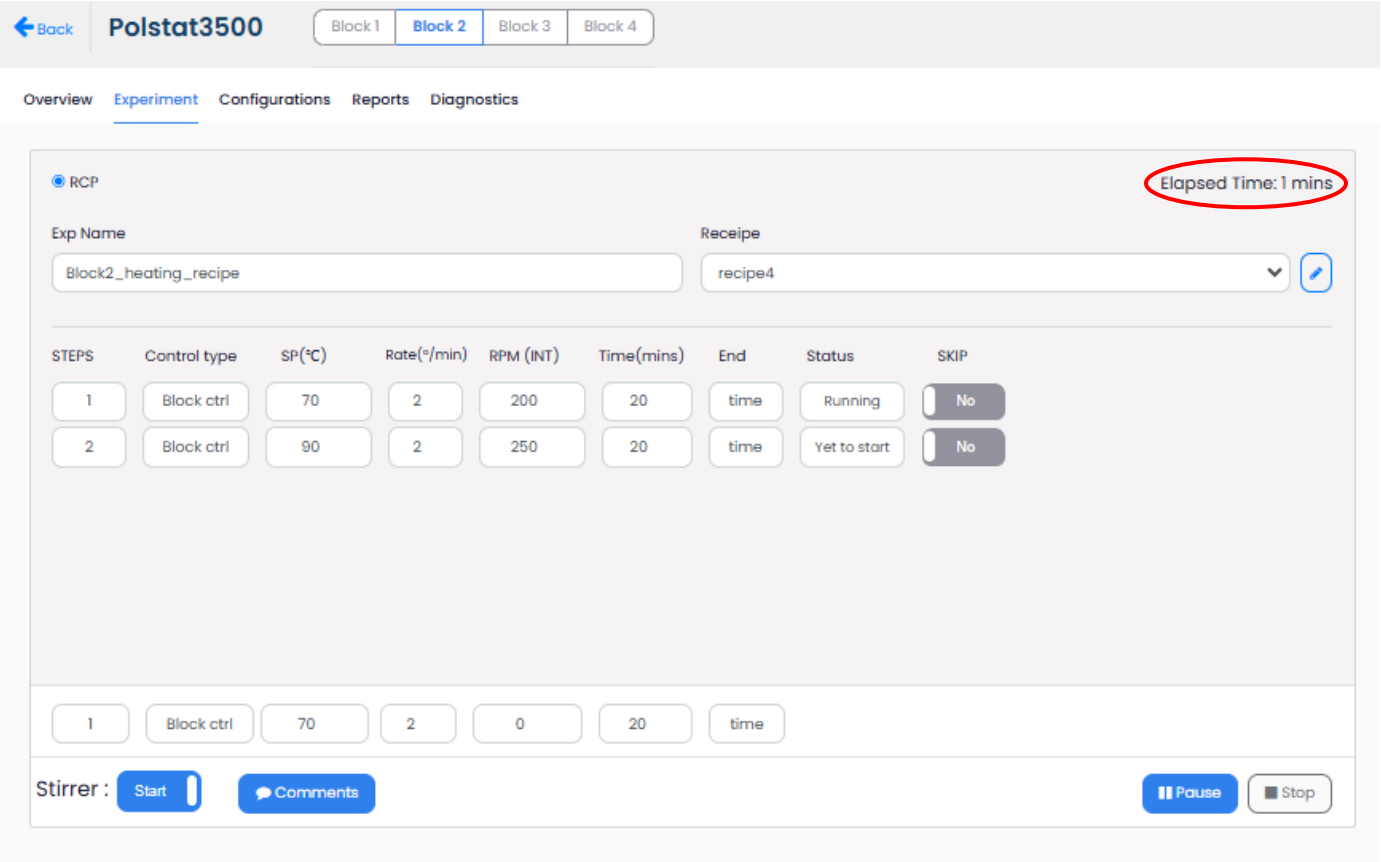
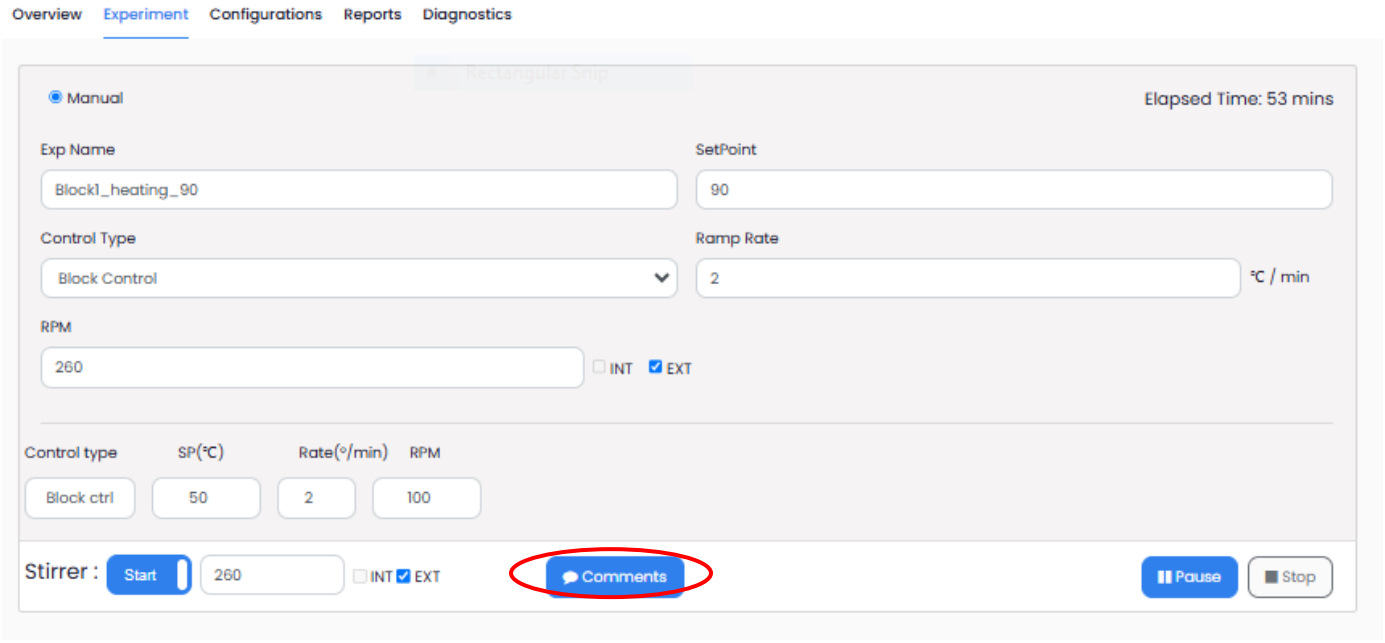
- Elapsed time is defined as the difference between starting time of experiment and current time.
- It will come from down level device.
- Elapsed time is shown here.

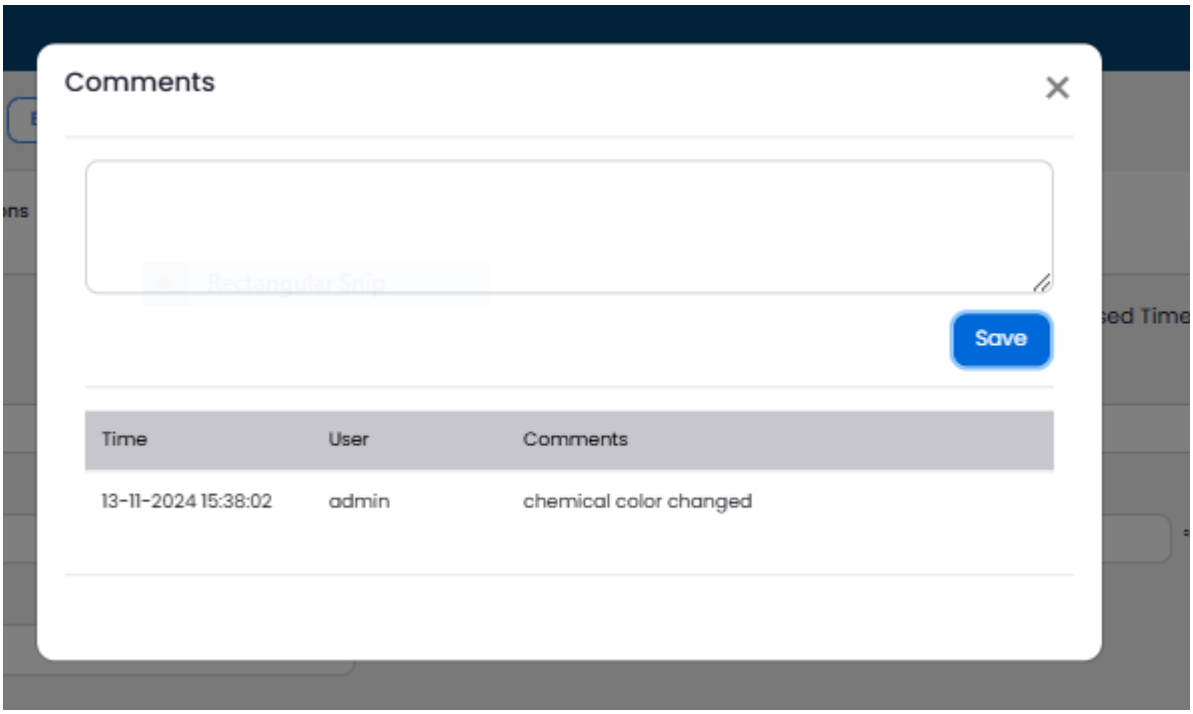


4.2.10 Comments

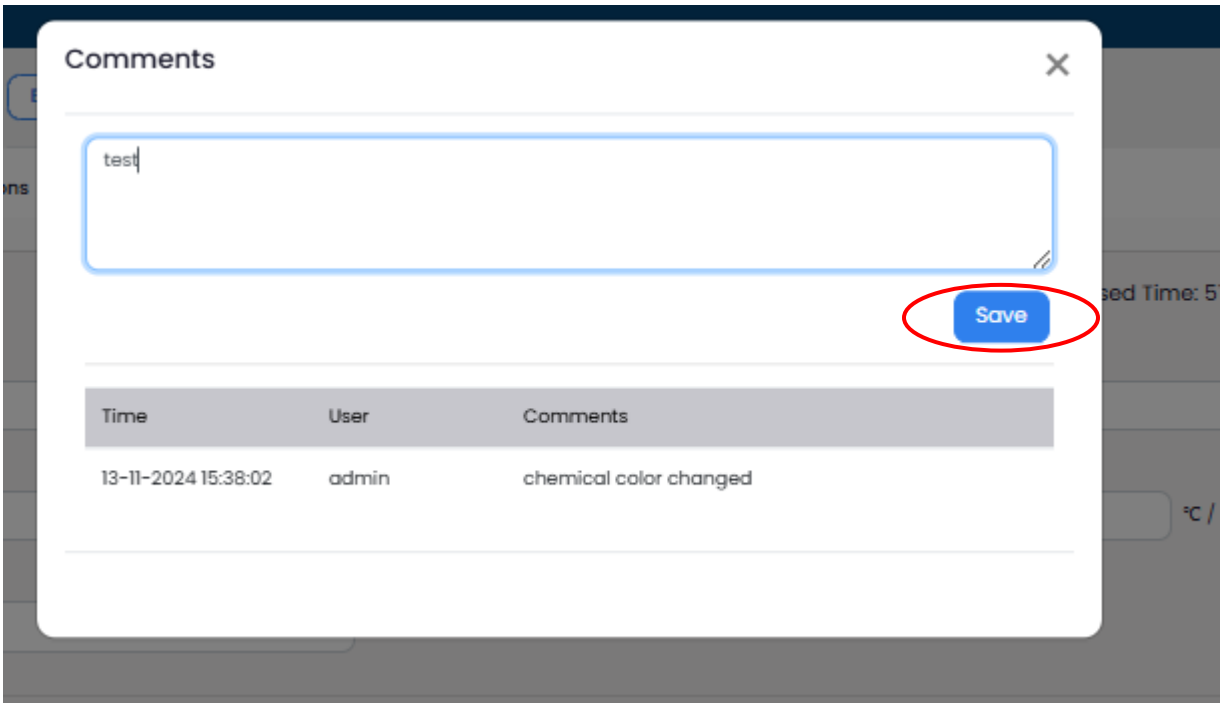
- Comments feature is used to write comments for experiment.
- Click on comments button as shown here.



- After clicking on comments button dialog will open as shown here.



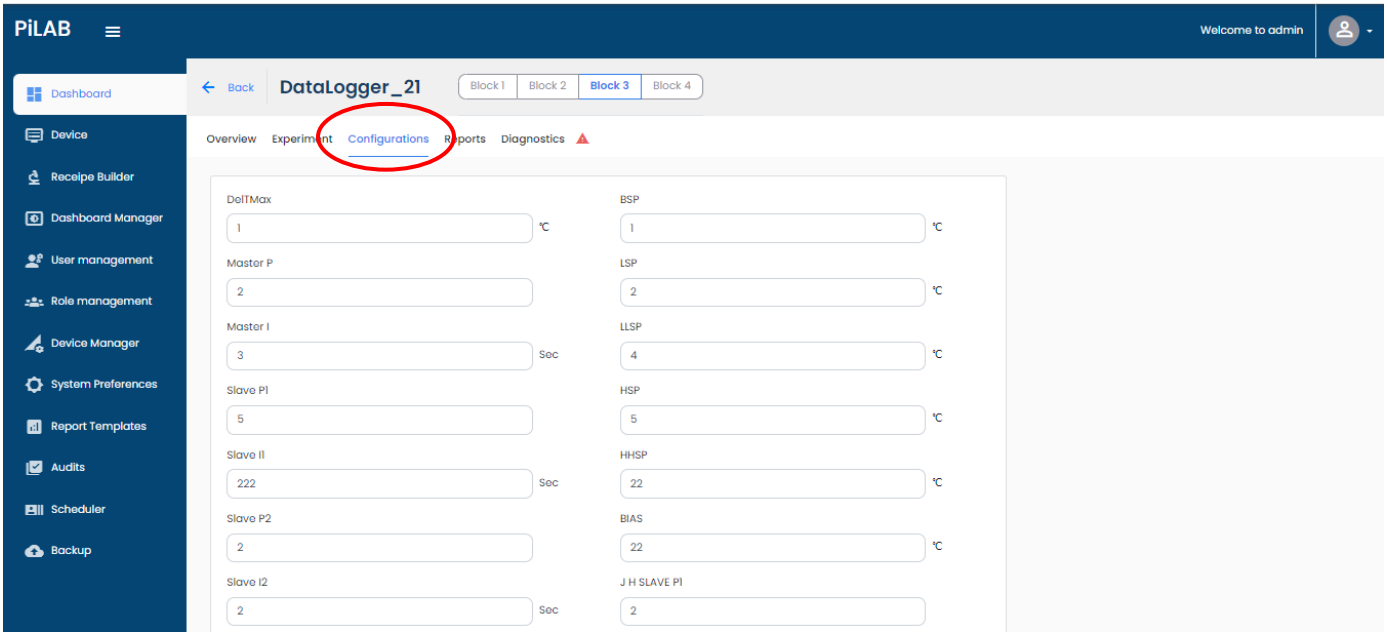
- Now enter comment click on save comment button as shown here.
- Then comment will save.



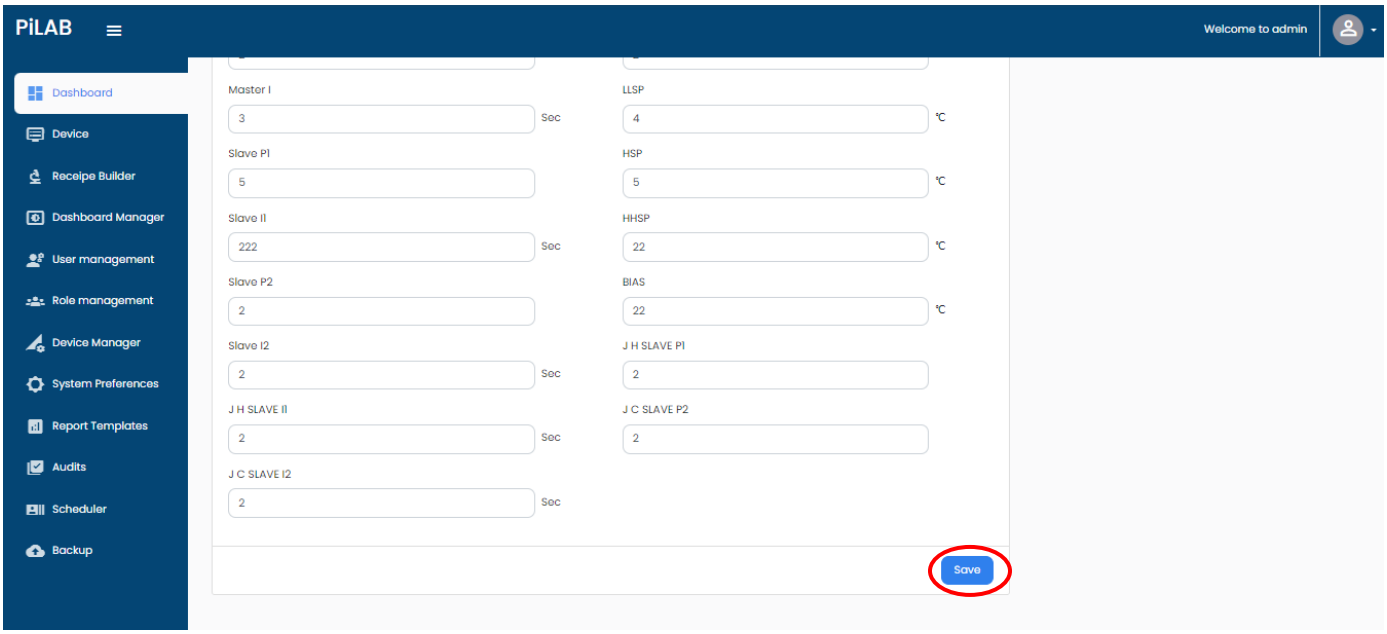
4.3 Configurations

4.3.1 Save Configurations

- Configurations page contain all configuration parameters needed for device as shown here.

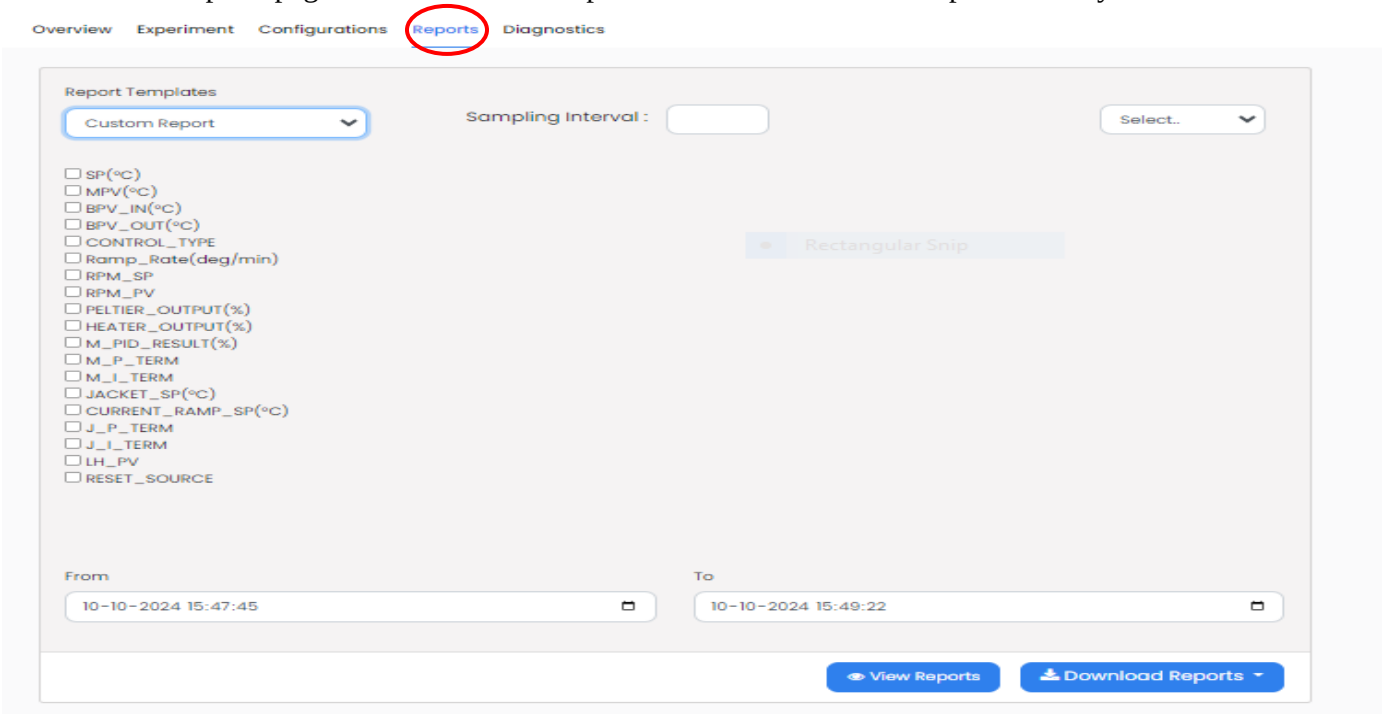


- Click on save button to save all configurations.



4.4 Reports

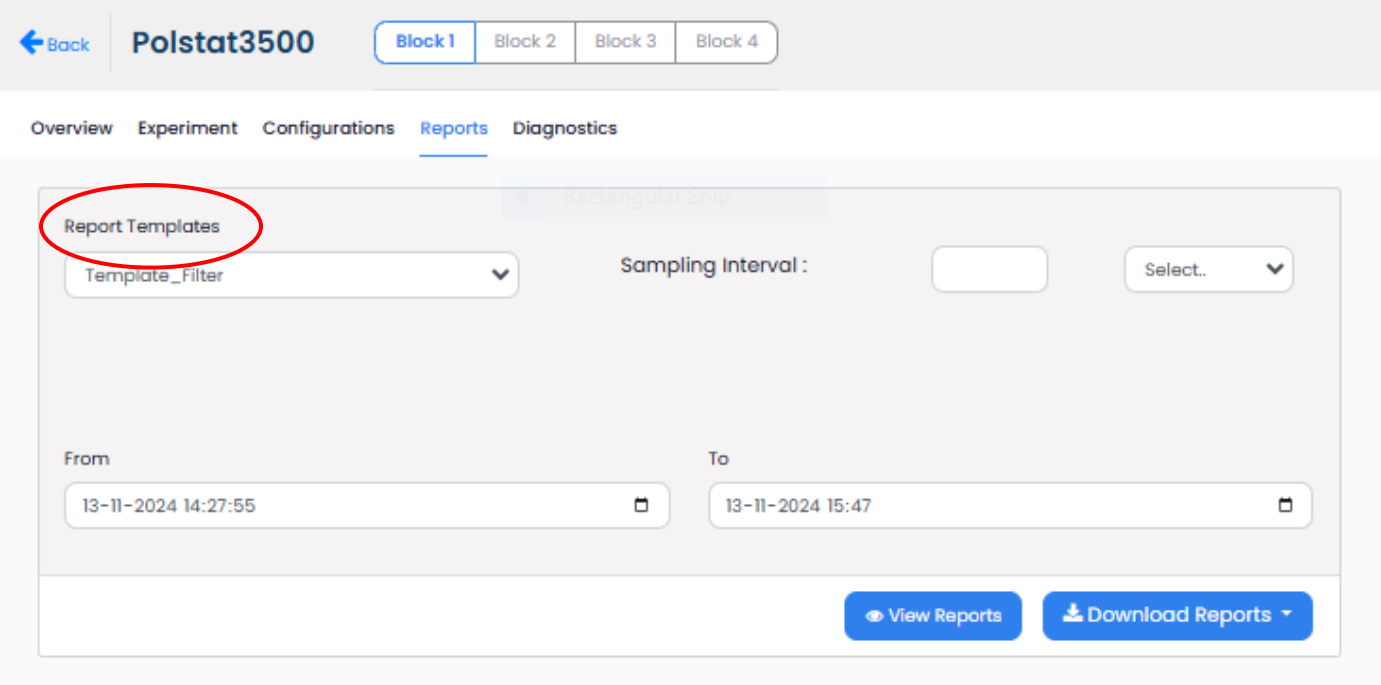
- In reports page we can download reports and we can also view reports directly.



- We can download reports when experiment is running or experiment is stopped.

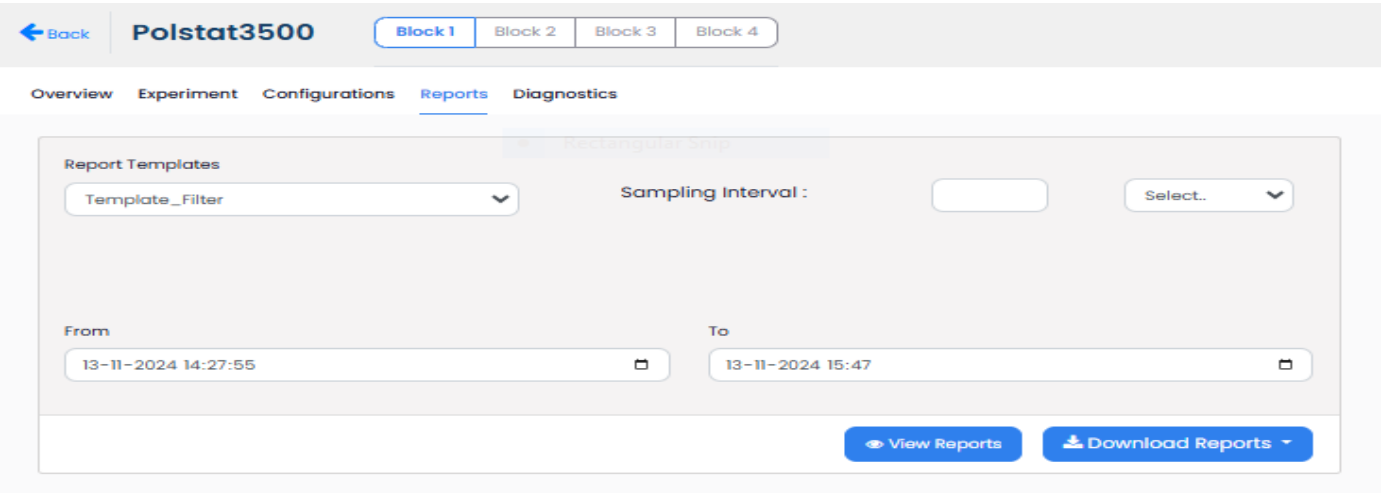
Report Templates Filter

- There are 2 types of report templates
    1. Custom reports.
    2. Manual reports.
- In custom reports we directly select required parameters and download the report.
- Manual reports are created in reports page those created reports will display under templates dropdown.
- If we click on report templates dropdown reports will display as shown here.



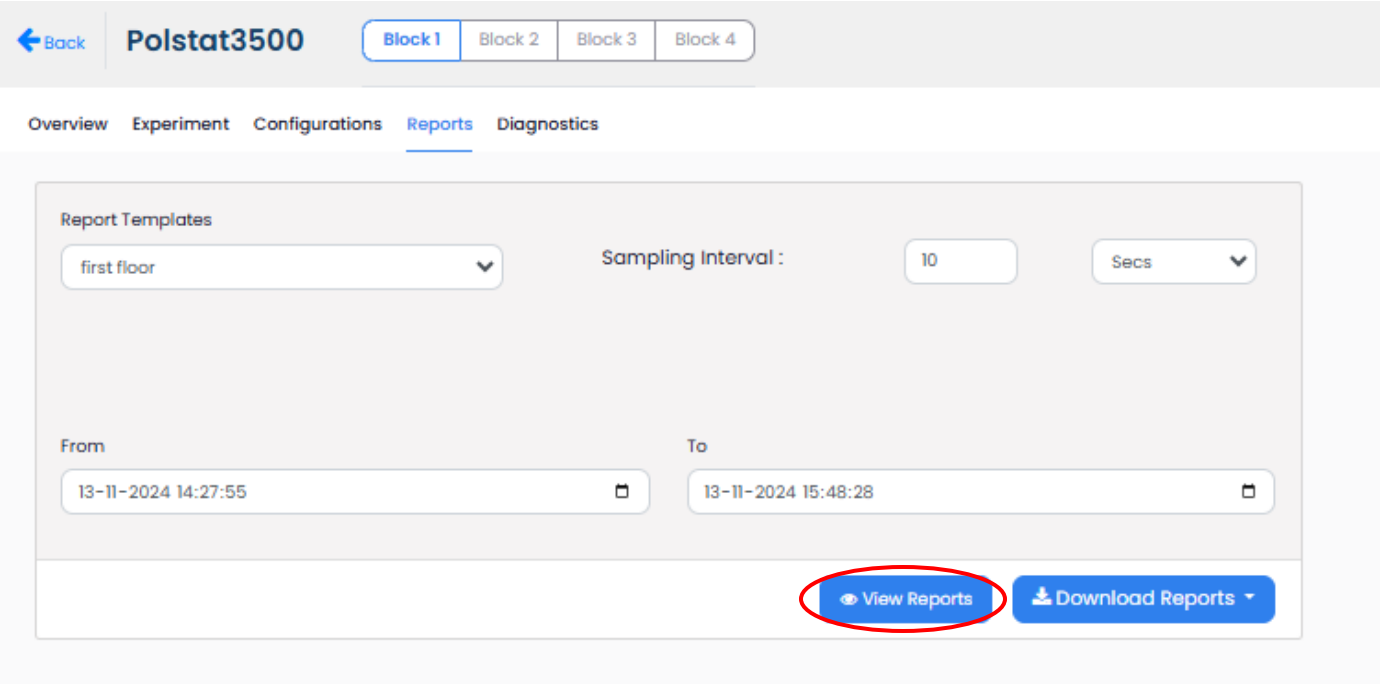
From and To date Filters

- From and to date Filters are used to download reports between the selected duration of time.
- From time is the experiment start time and to time is the current time as shown.

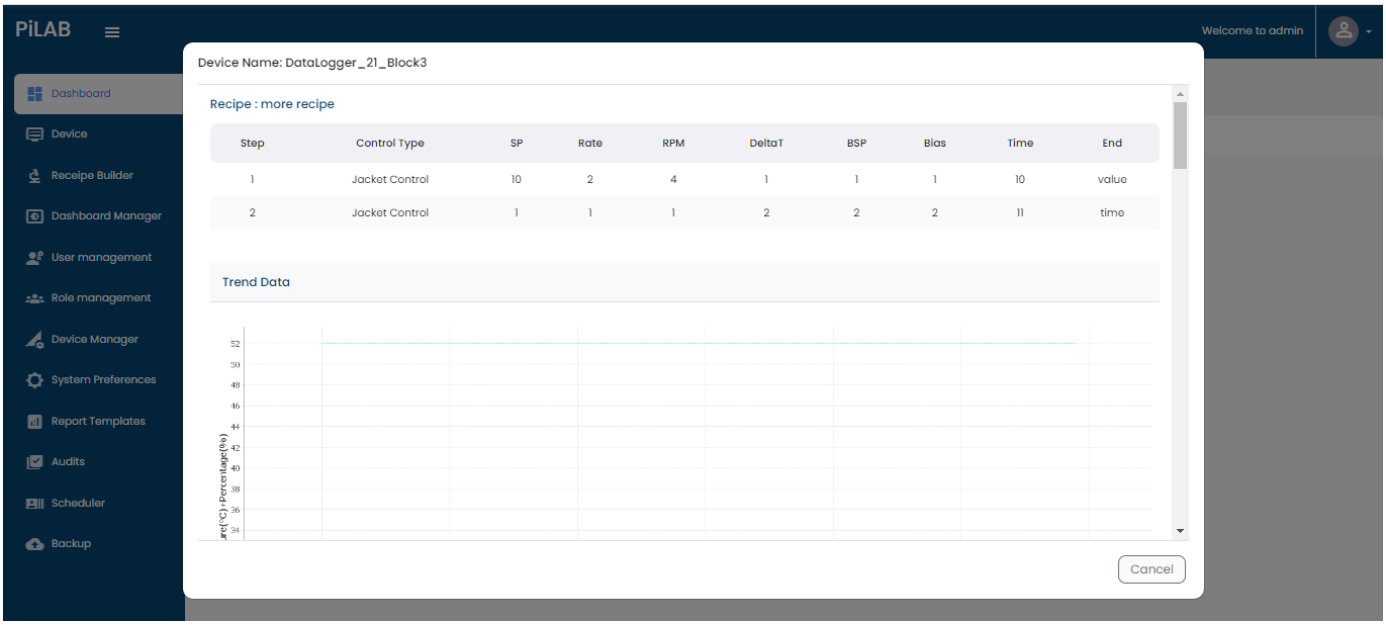


4.4.1 View Report

- We can view the reports between selected periods of time.
- Report view contains recipe data, graph and parameter data.
- Select report template change from and to date click on view reports as shown.

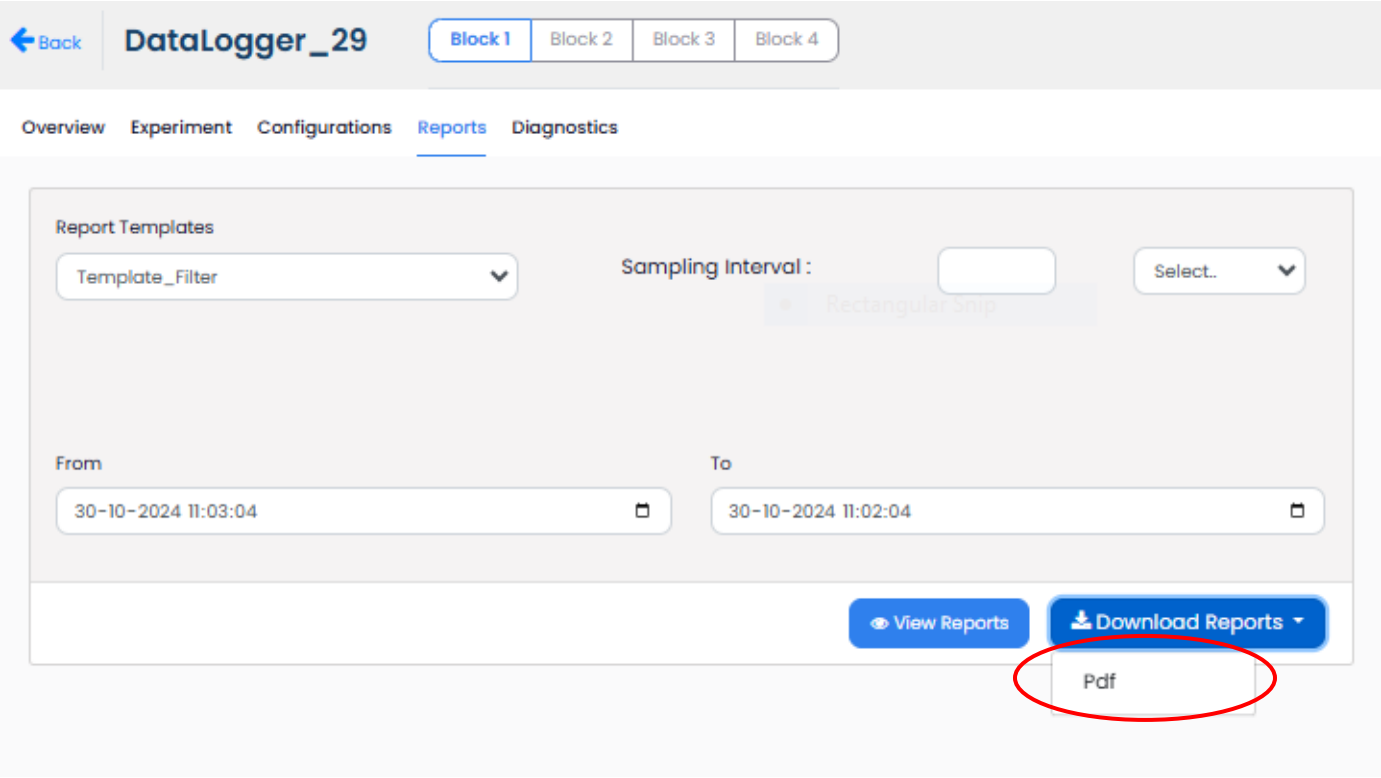


- After clicking on view reports button report will display as shown here.

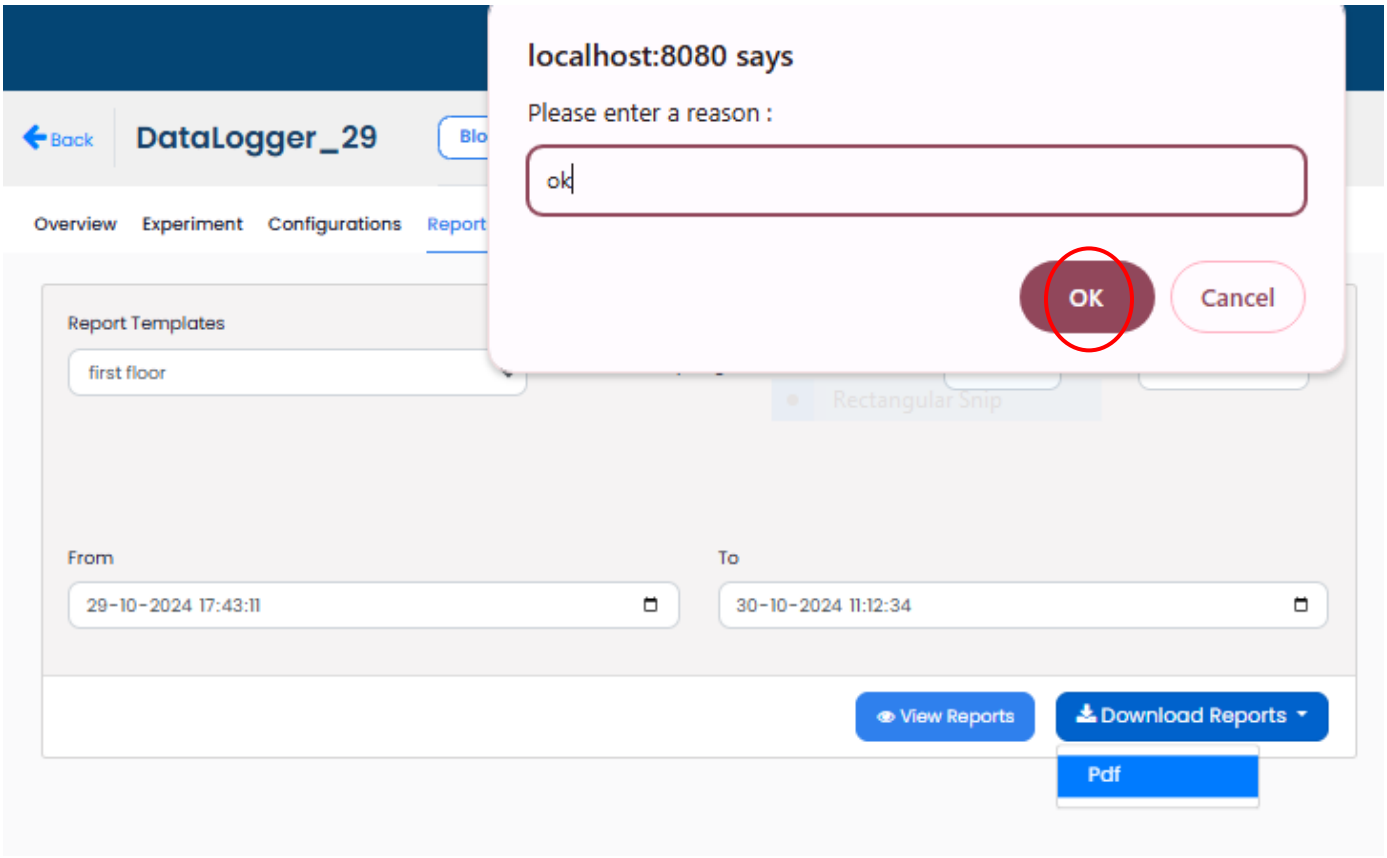


4.4.2 Download Reports

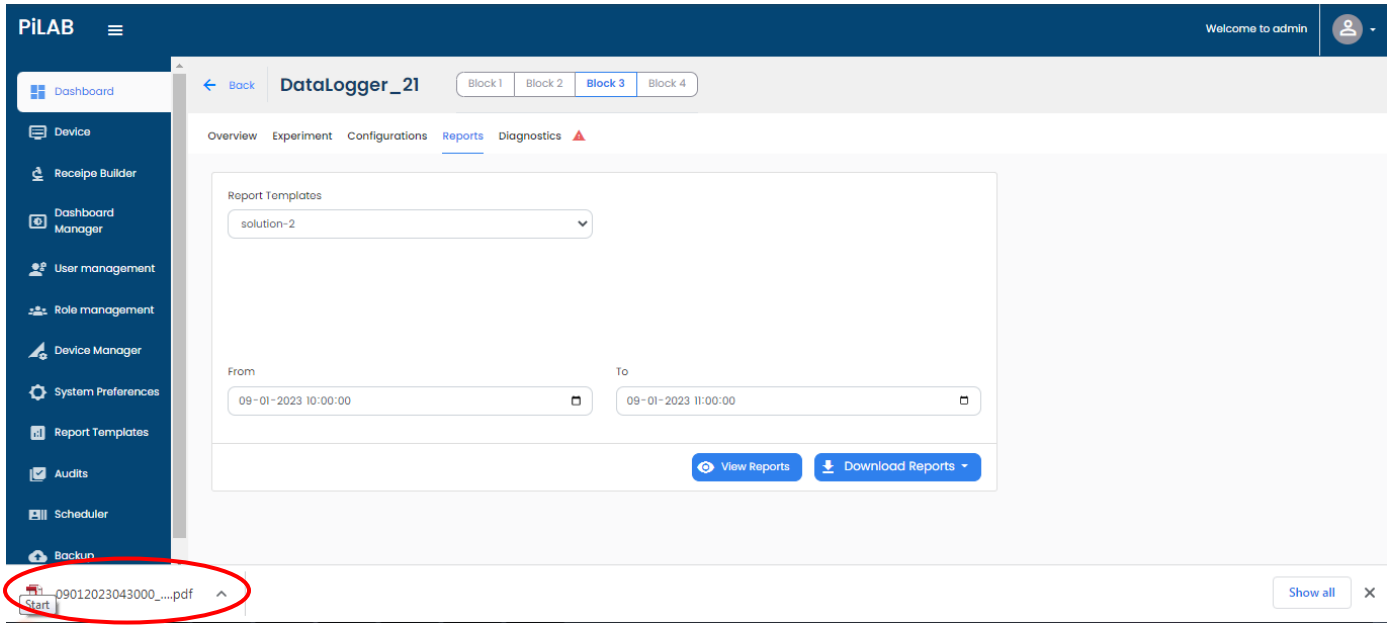
- We can download reports between selected time periods.
- Downloaded report will contain recipe data, graph, parameter data and comments.
- Select report template change from and to date then click on download button as shown.



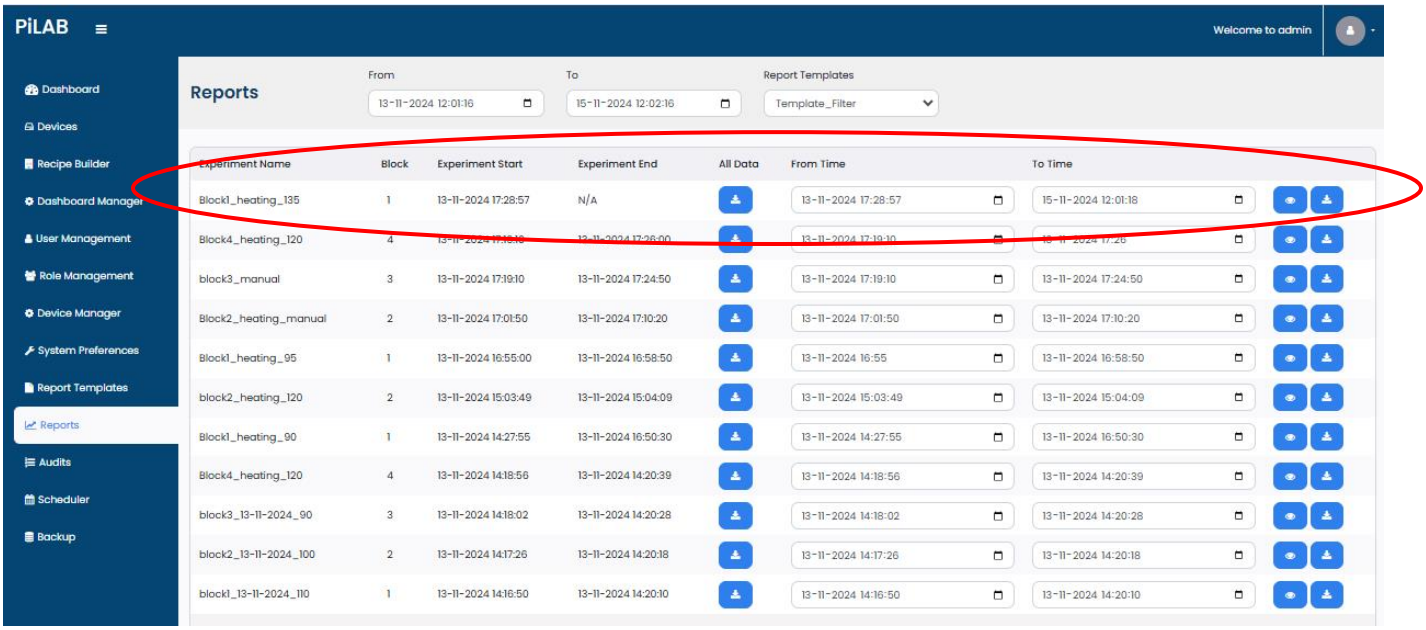
- Then click on PDF shown and enter reason and click OK as shown.



- Then report will download as shown here.



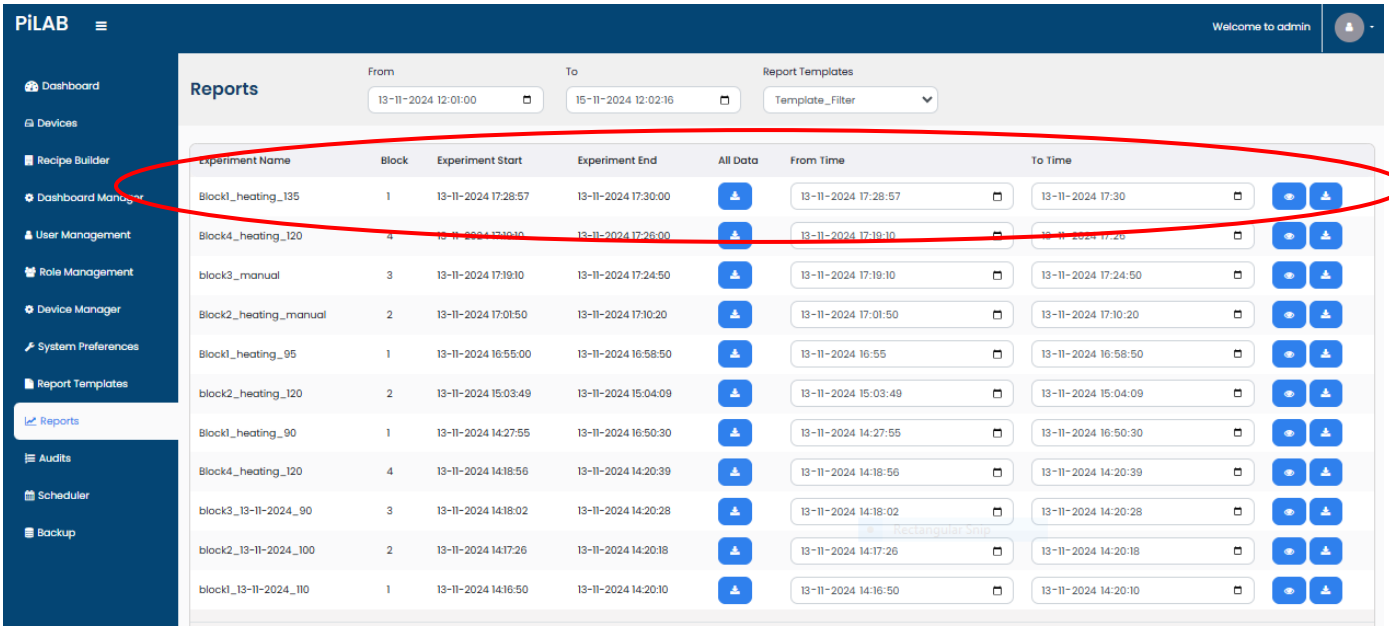
When the experiment begins, an experiment record will be created as shown on the screen below



NOTE:

- If the experiment has not yet ended, the "Experiment End" column will display "N/A" and the "To Time" column will show the current time.

When experiment completed, below screen will display.



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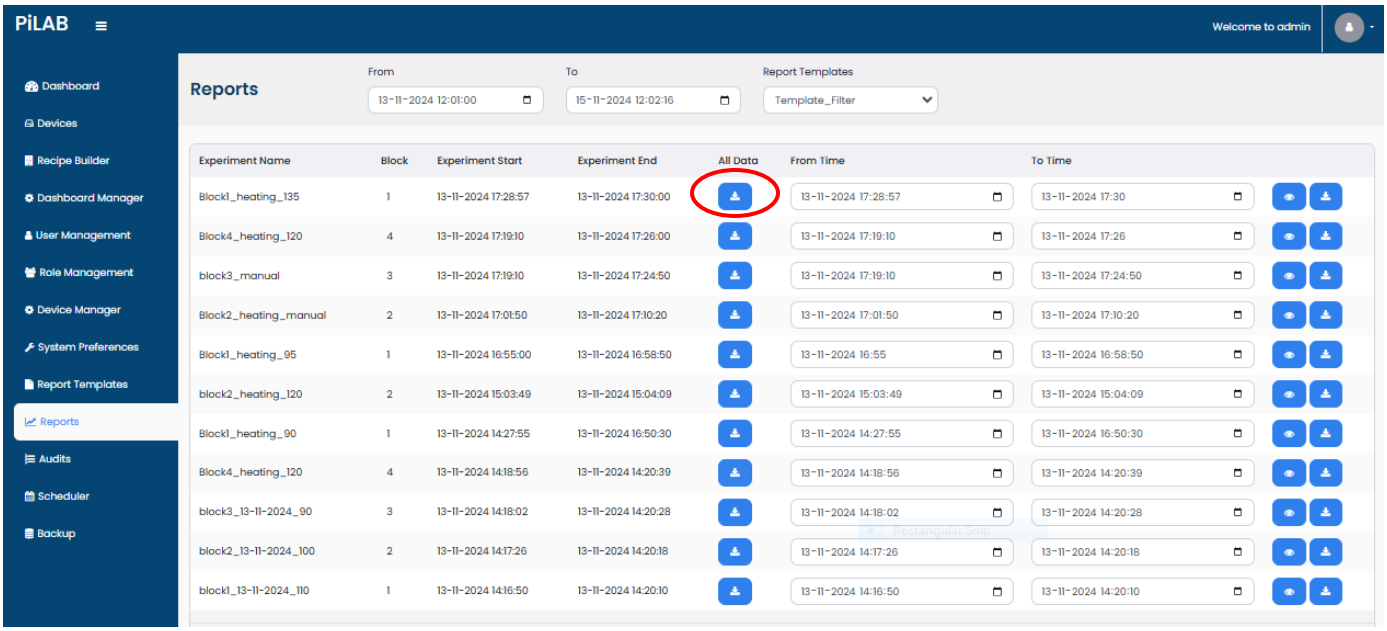
click on all data button as below screen.



When click on all data button below report will be download

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Device Name : **Polstat3500**
Report Generated By : **admin**
Date & Time From : **13-11-2024 17:28:57**
Date & Time To : **13-11-2024 17:30:00**
Report Generated Date & Time : **15-11-2024 12:10:13**

DATE & TIME	Block1						Block2						Block3						Block4					
	Mpv	B_In	B_out	H_out	C_out	LH_Pv	Mpv	B_In	B_out	H_out	C_out	LH_Pv	Mpv	B_In	B_out	H_out	C_out	LH_Pv	Mpv	B_In	B_out	H_out	C_out	LH_Pv
13-11-2024 17:29:00	28.70	7.42	7.54	0	0	4.31	28.67!	8.27	8.33	0	0	4.54	28.52!	19.44	Open	0	0	5.91	28.49!	25.24	25.07	0	0	5.69
13-11-2024 17:29:10	28.71	7.40	7.52	2	0	4.29	28.67!	8.24	8.30	0	0	4.47	28.52!	19.22	Open	0	0	5.86	28.50!	24.70	24.55	0	0	5.62
13-11-2024 17:29:20	28.69	7.39	7.51	4	0	4.39	28.66!	8.19	8.27	0	0	4.56	28.52!	18.89	Open	0	0	5.91	28.51!	24.35	24.21	0	0	5.66
13-11-2024 17:29:30	28.68	7.38	7.50	6	0	4.20	28.66!	8.16	8.23	0	0	4.42	28.52!	18.68	Open	0	0	5.88	28.52!	23.87	23.73	0	0	5.64
13-11-2024 17:29:40	28.67	7.38	7.50	9	0	4.30	28.65!	8.12	8.20	0	0	4.48	28.52!	18.39	Open	0	0	5.82	28.51!	23.56	23.42	0	0	5.58
13-11-2024 17:29:50	28.66	7.47	7.57	11	0	4.32	28.64!	8.09	8.16	0	0	4.51	28.52!	18.19	Open	0	0	5.89	28.53!	23.10	23.12	0	0	5.63
13-11-2024 17:30:00	28.68	7.60	7.69	14	0	4.08	28.67!	8.07	8.13	0	0	4.40	28.54!	17.90	Open	0	0	5.82	28.54!	22.80	22.67	0	0	5.53

Remarks :

Reviewed By : **Date :**

Note: ! -Experiment Stop,# -Chiller Temp out of range and * -Experiment Pause

Page 1 of 1

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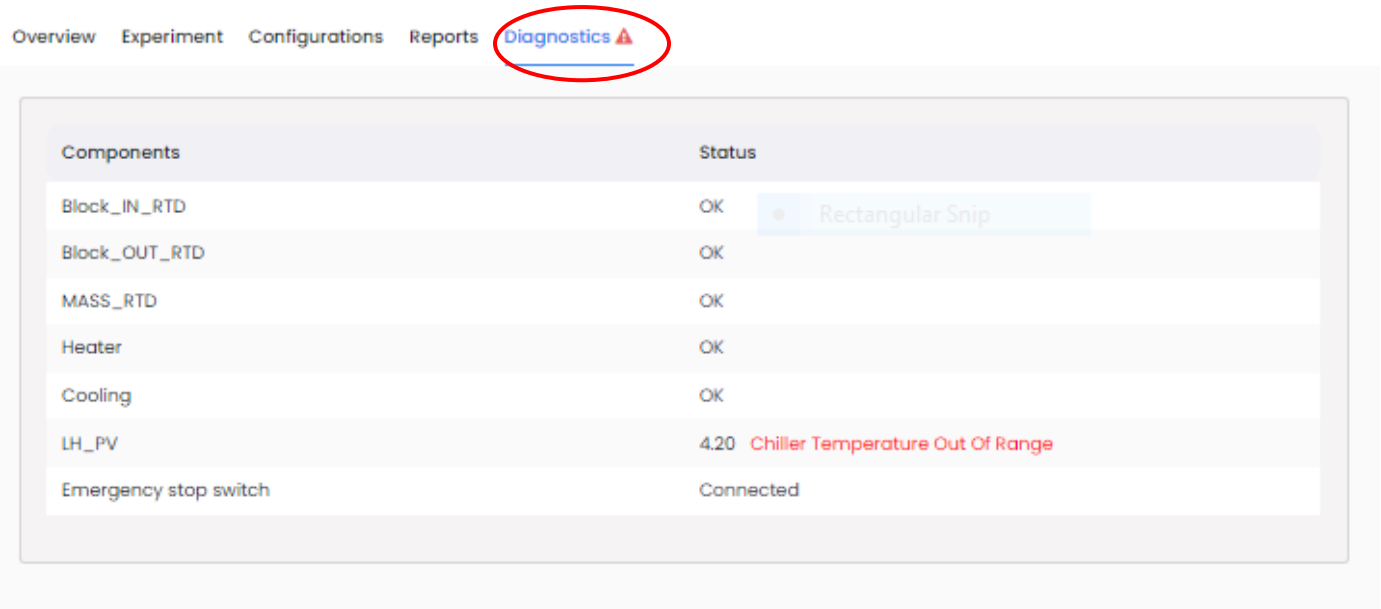
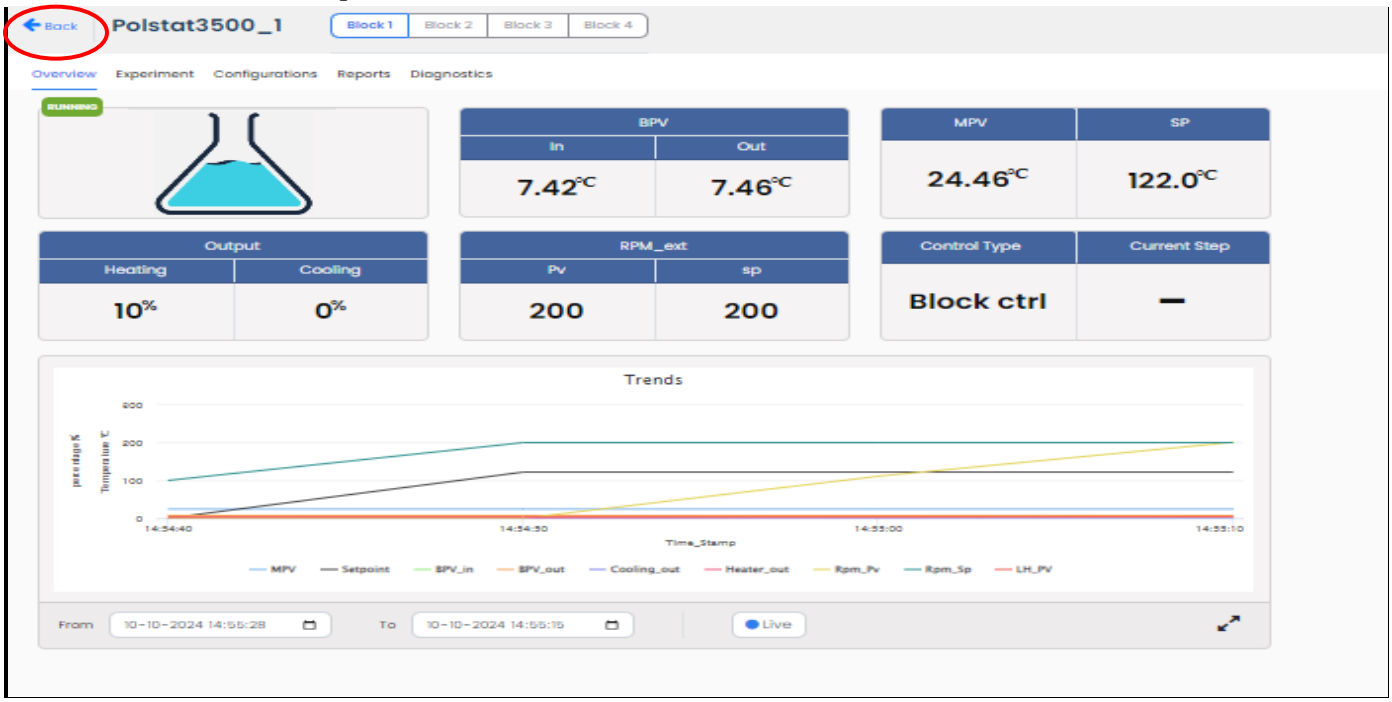
4.5 Diagnostics

- In Diagnostics page device parameters status will display.
- If we go to diagnostics tab below page will display.

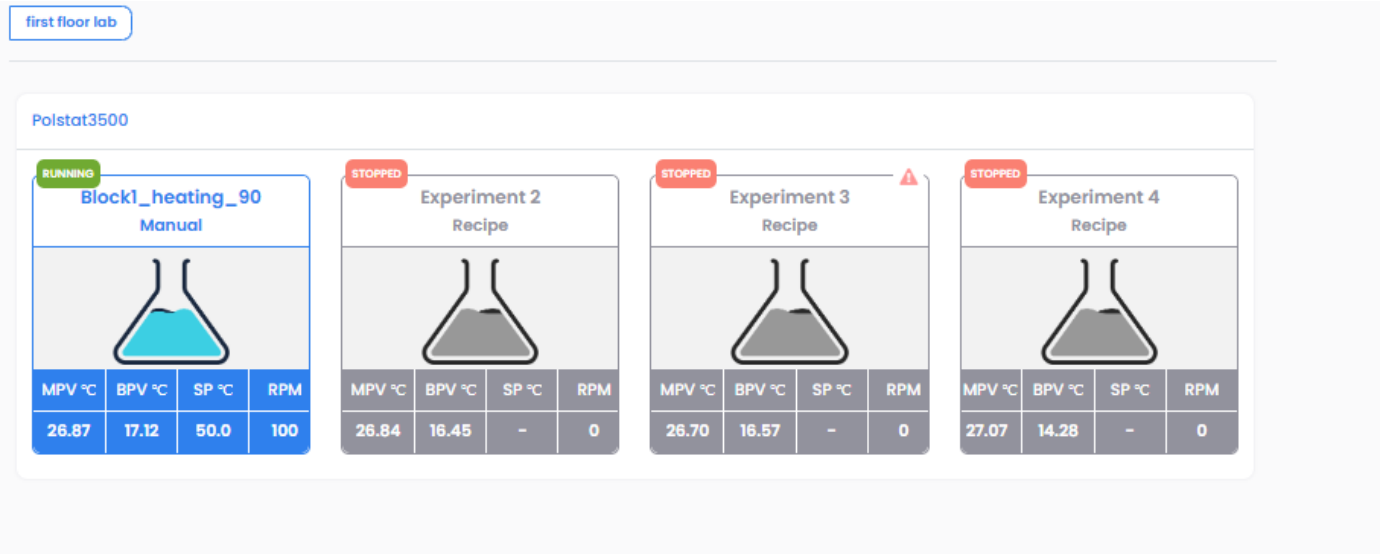


4.6 Back button

- Back button is present in blocks screen as shown here.



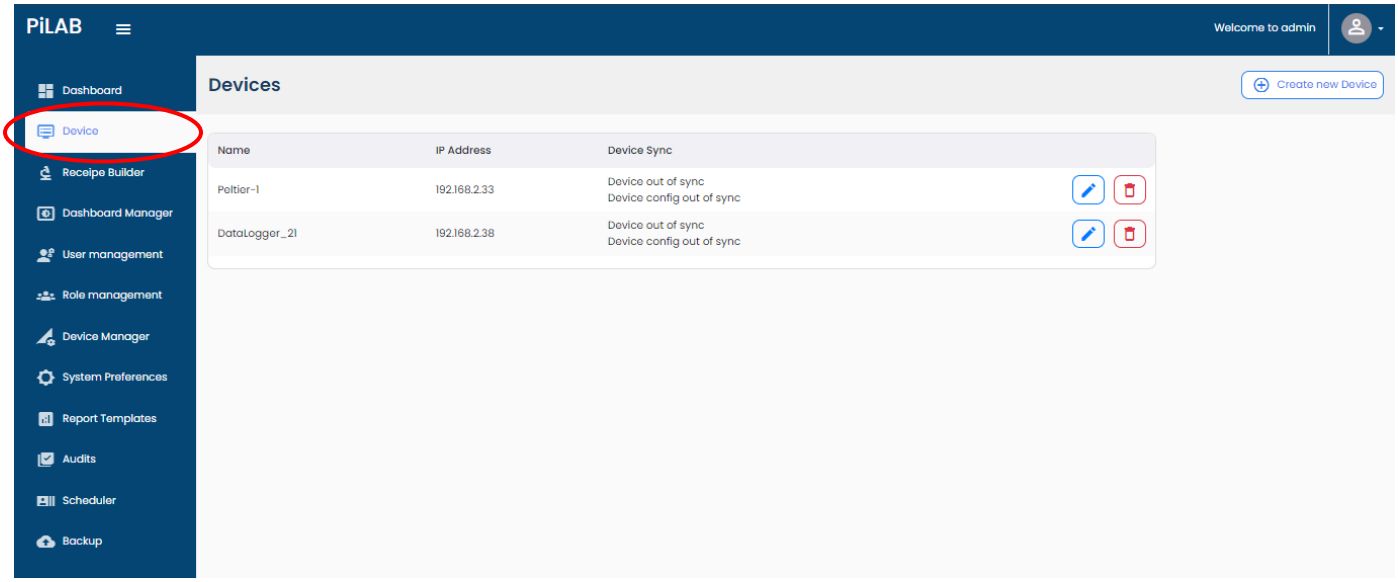
- If we click on back button it will redirects to the home screen as shown here.



5. Device

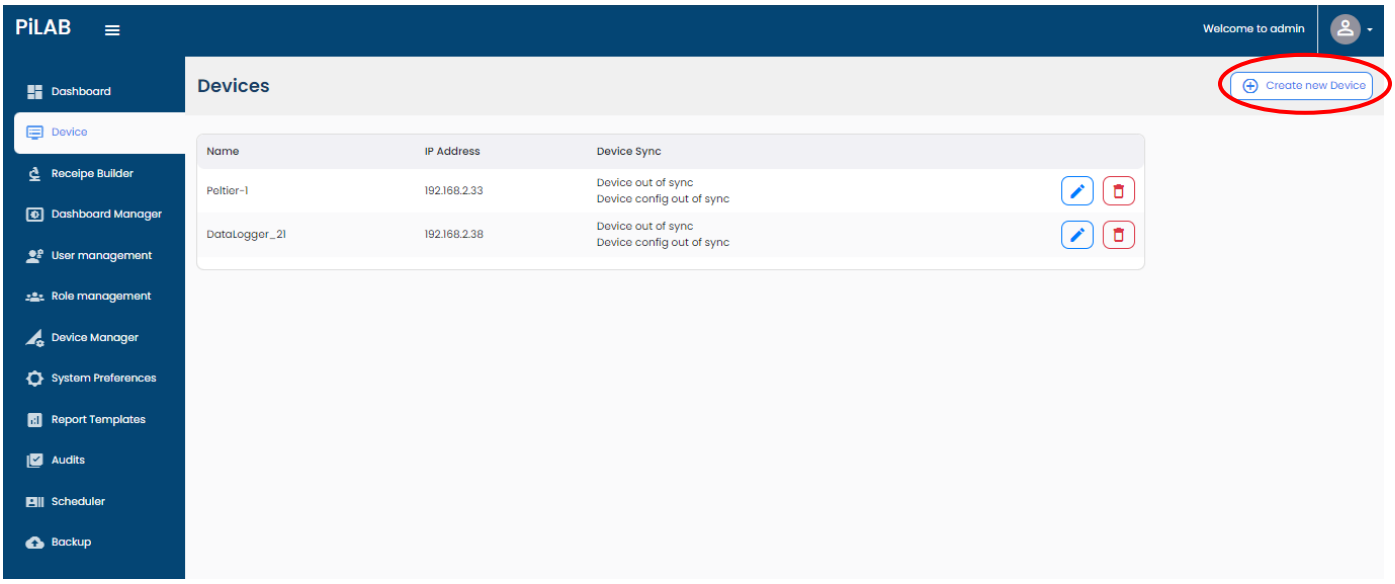
1. Device Page

- When we go to Device in side bar all devices will display which are created as shown here.

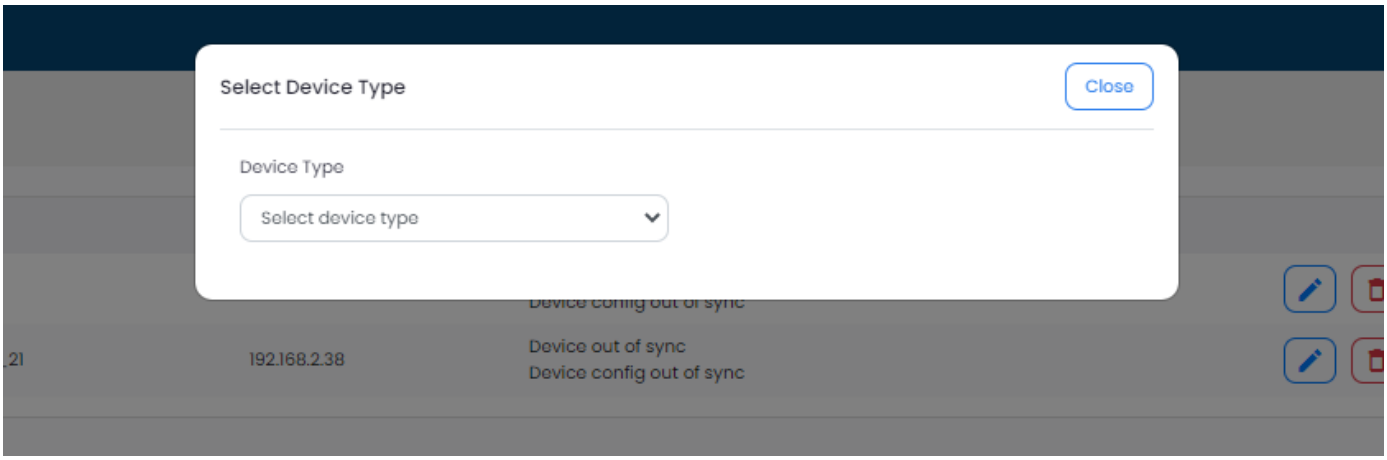


2. Device Creation

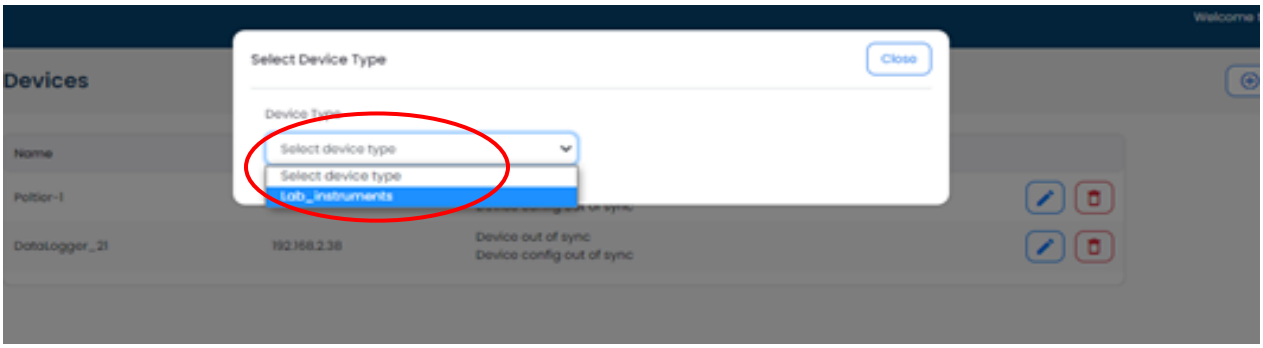
- Click on Create new Device button to create device as shown.



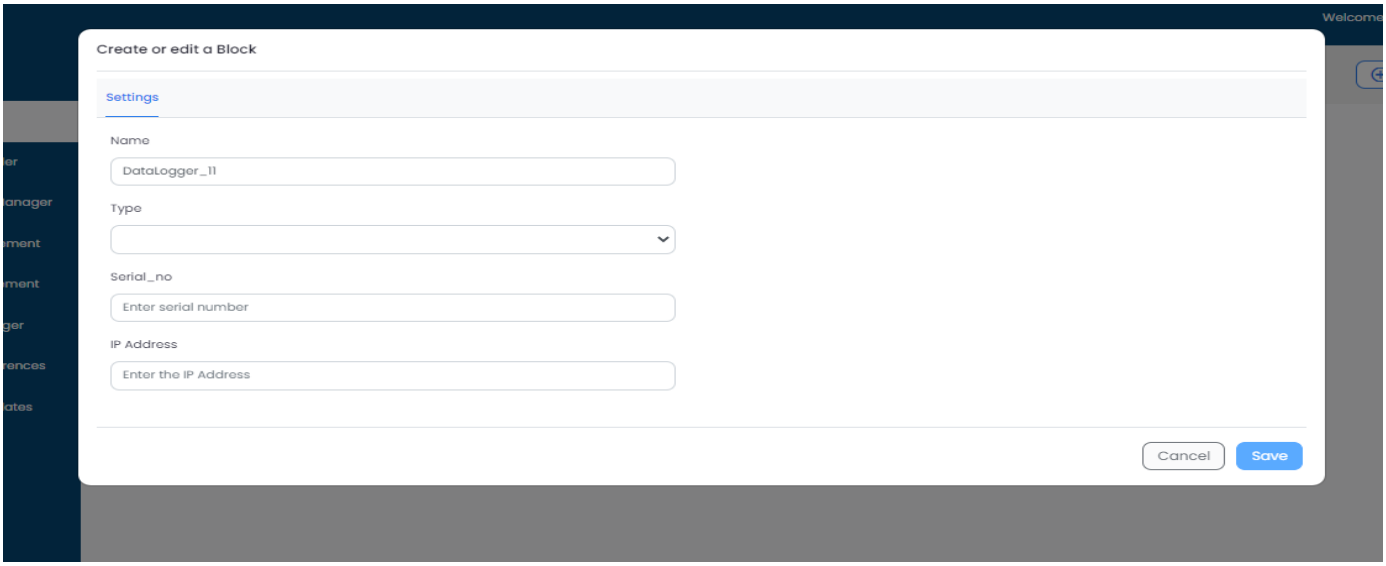
- After clicking on Create new Device button Dialog will open as shown here.



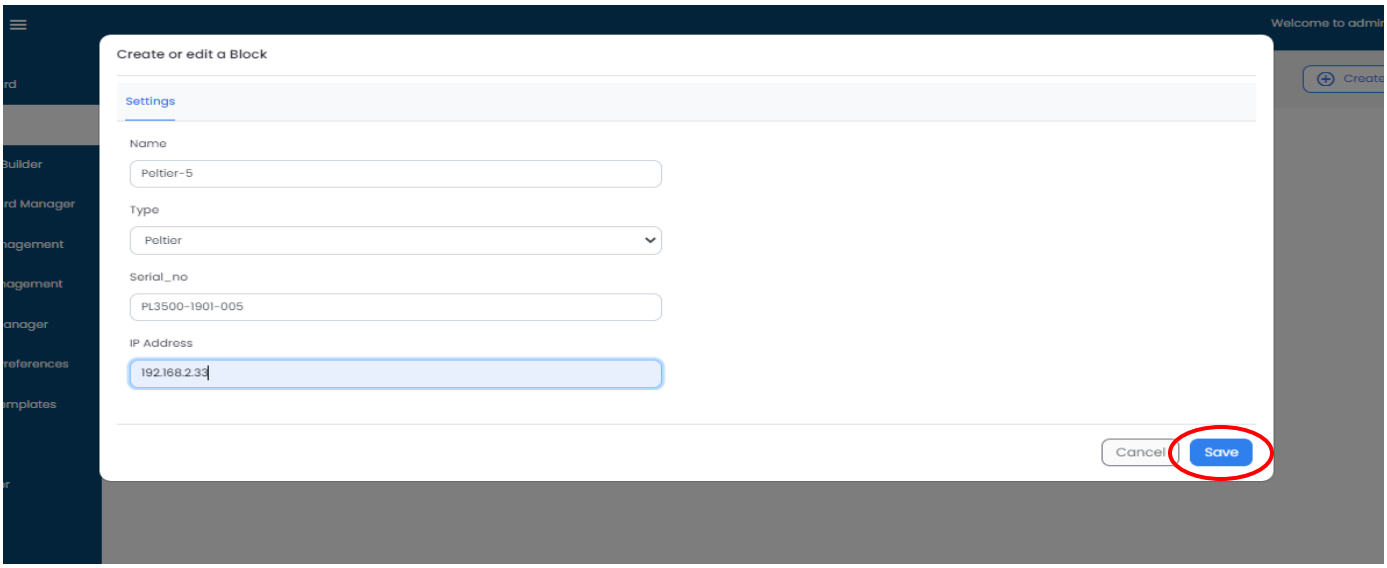
- Now select device type as Lab Instruments as shown.



- After selecting Lab Instruments below dialog will open as shown here.

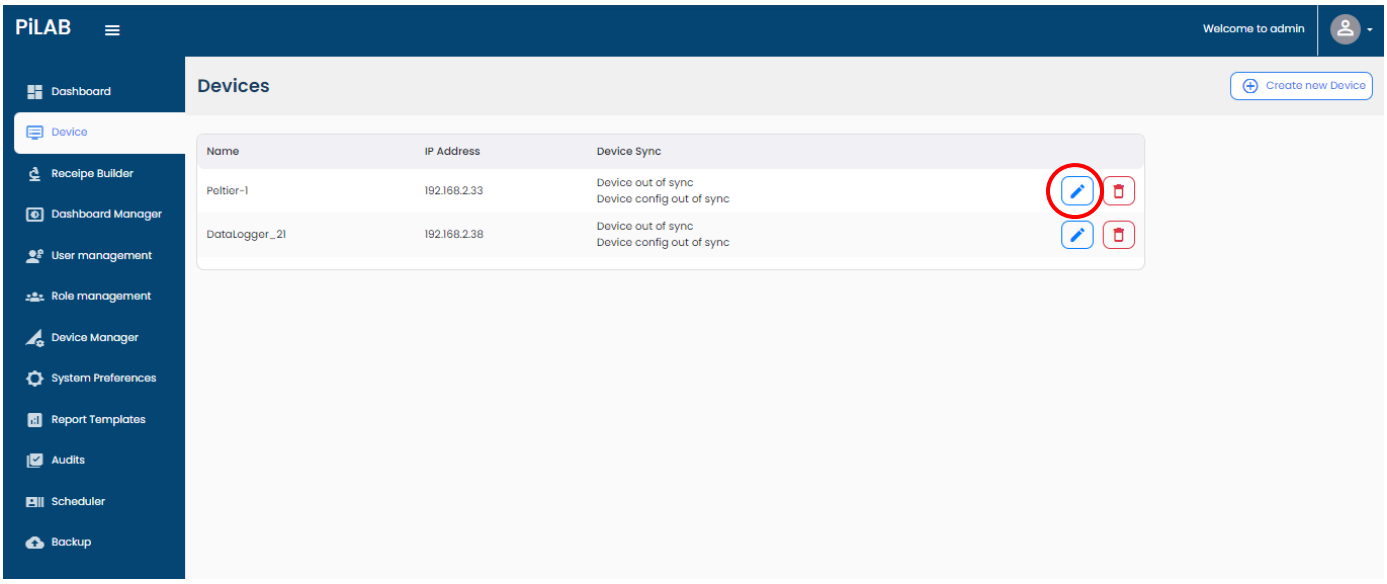


- Now enter required details click on save button as shown.
- Then device will save.

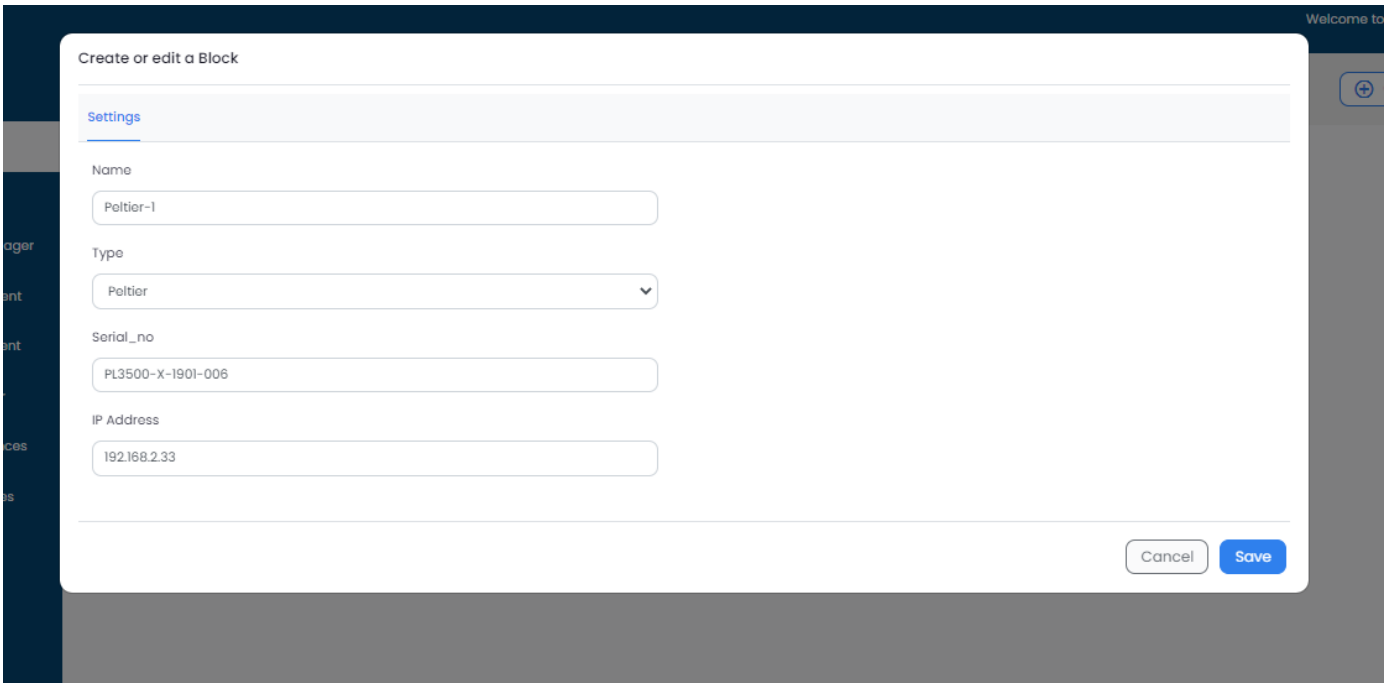


3. Device Edit

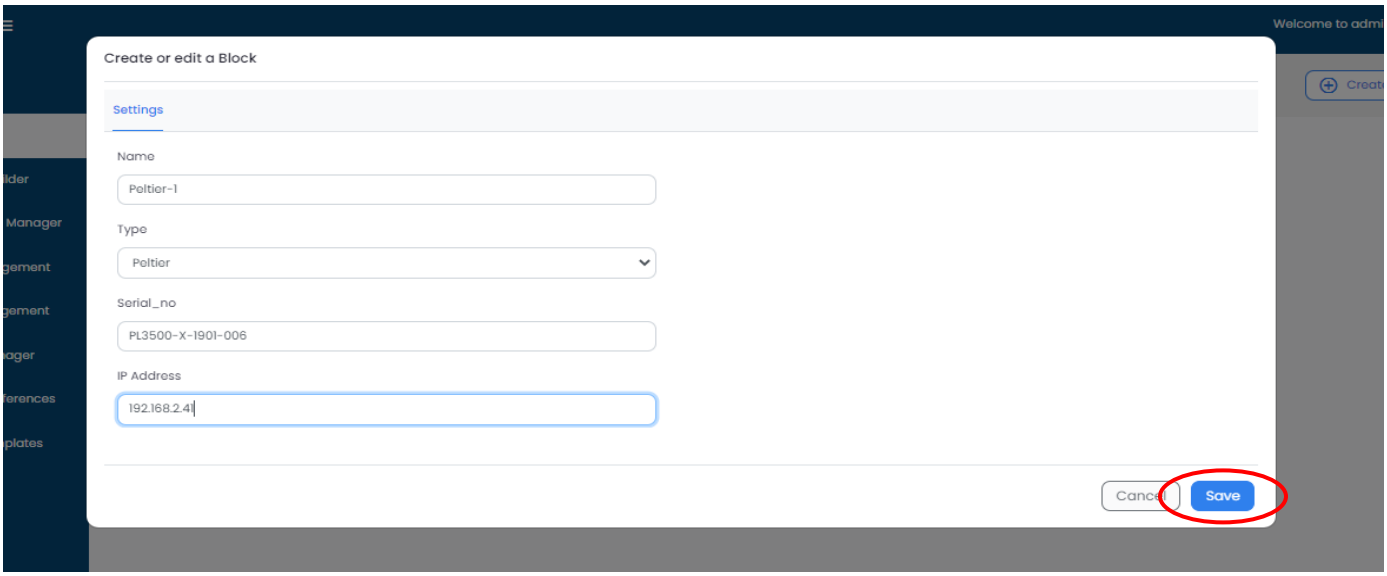
- We can edit device data by clicking on edit button.



- After clicking on edit button device dialog will open as shown here.



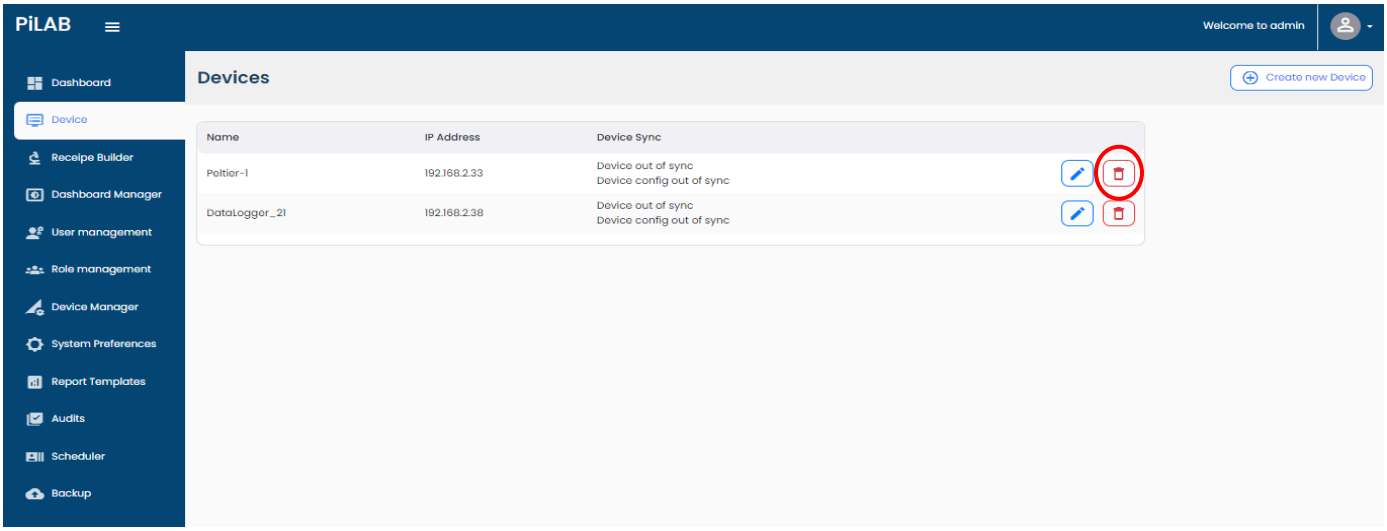
- Edit required data and click on save button as shown.



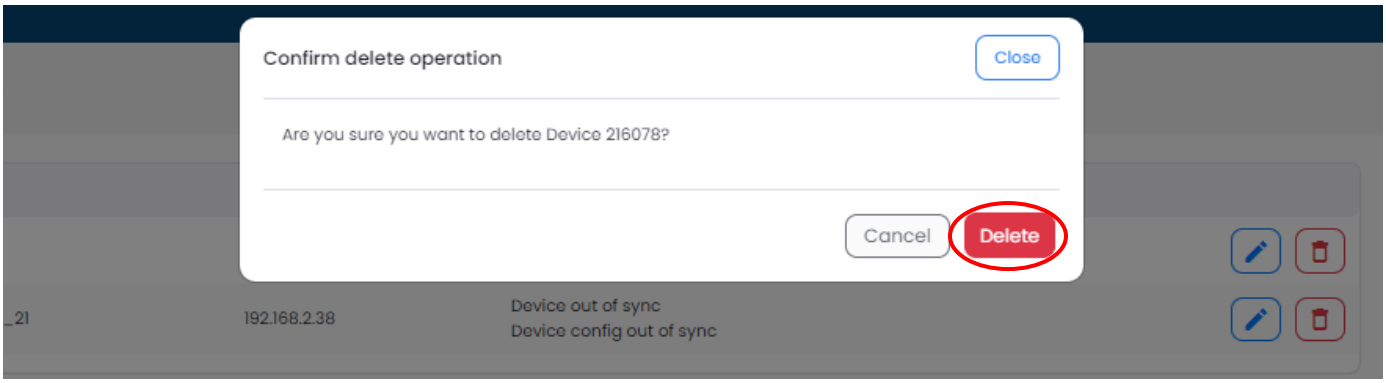
- Then device data will update.

4. Device Delete

- Click on delete button if you want delete device as shown.



- After clicking on delete button dialog will open as shown here.

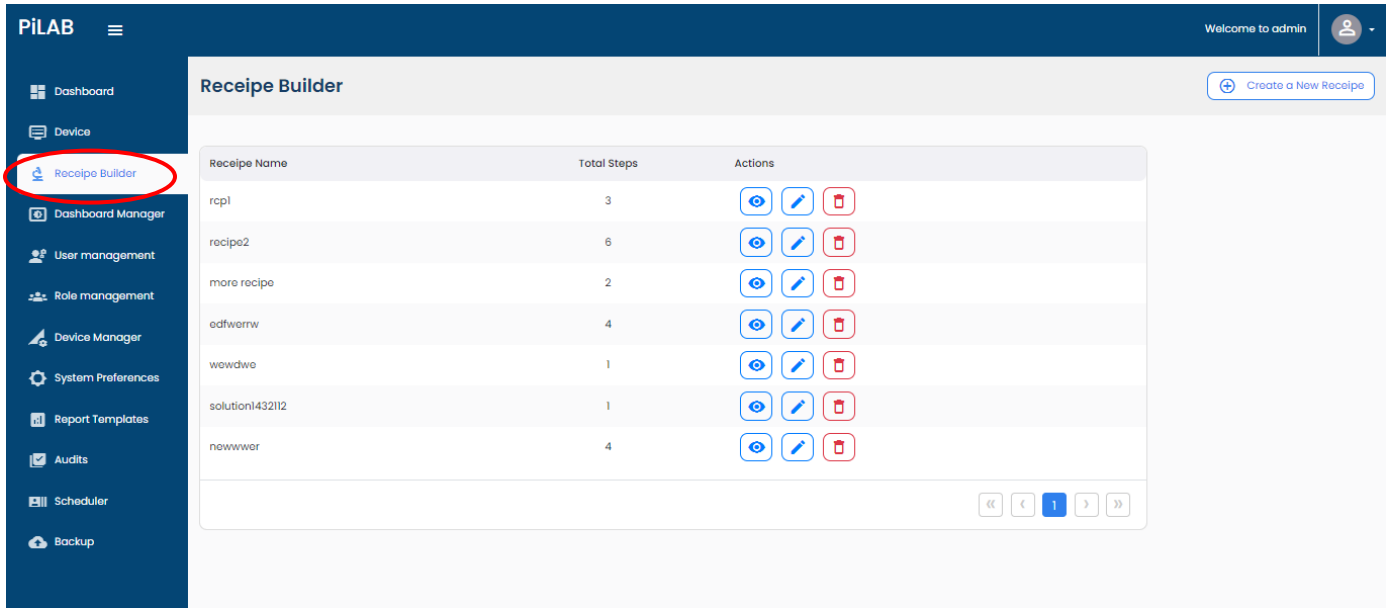


- After click on delete button it will ask for reason, after entering reason click on OK then device will delete.

6. Recipe Builder

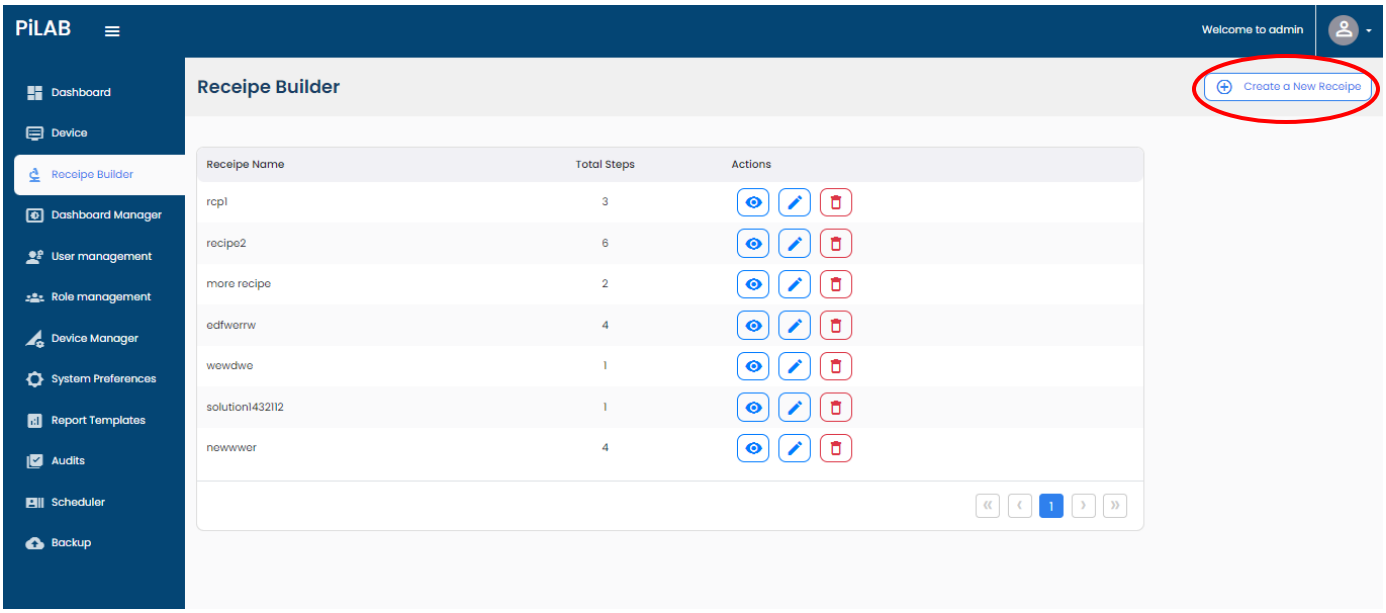
1. Recipe Page

- Recipe builder contain all the created recipes as shown here.

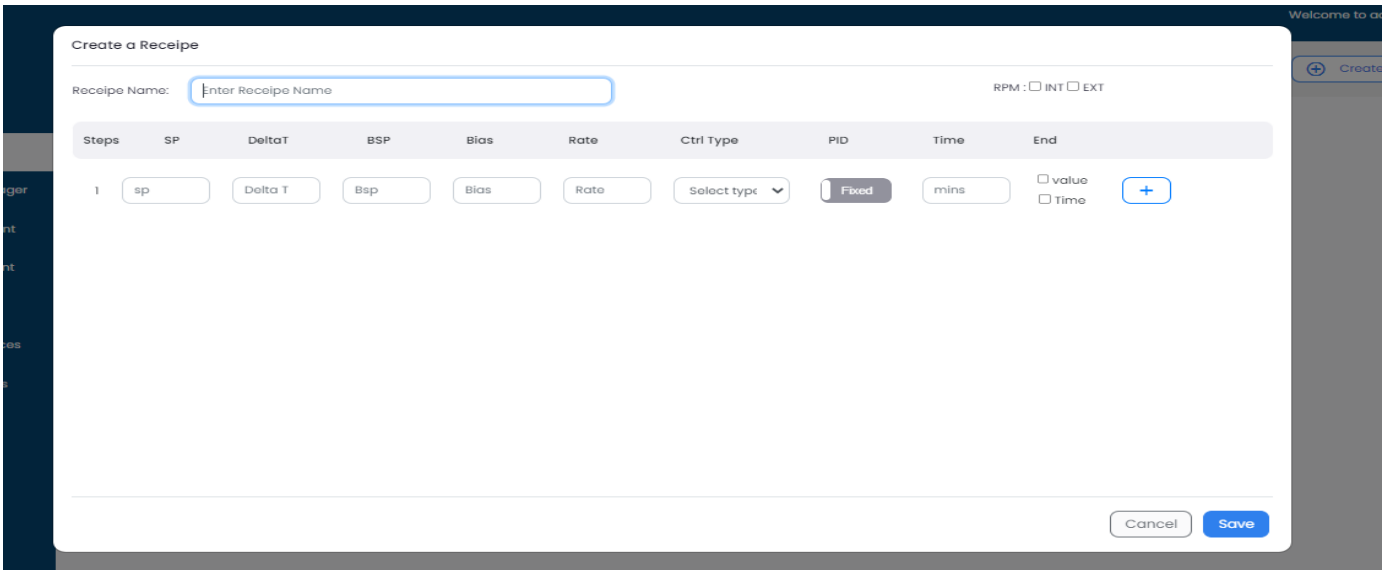


2. Recipe Creation

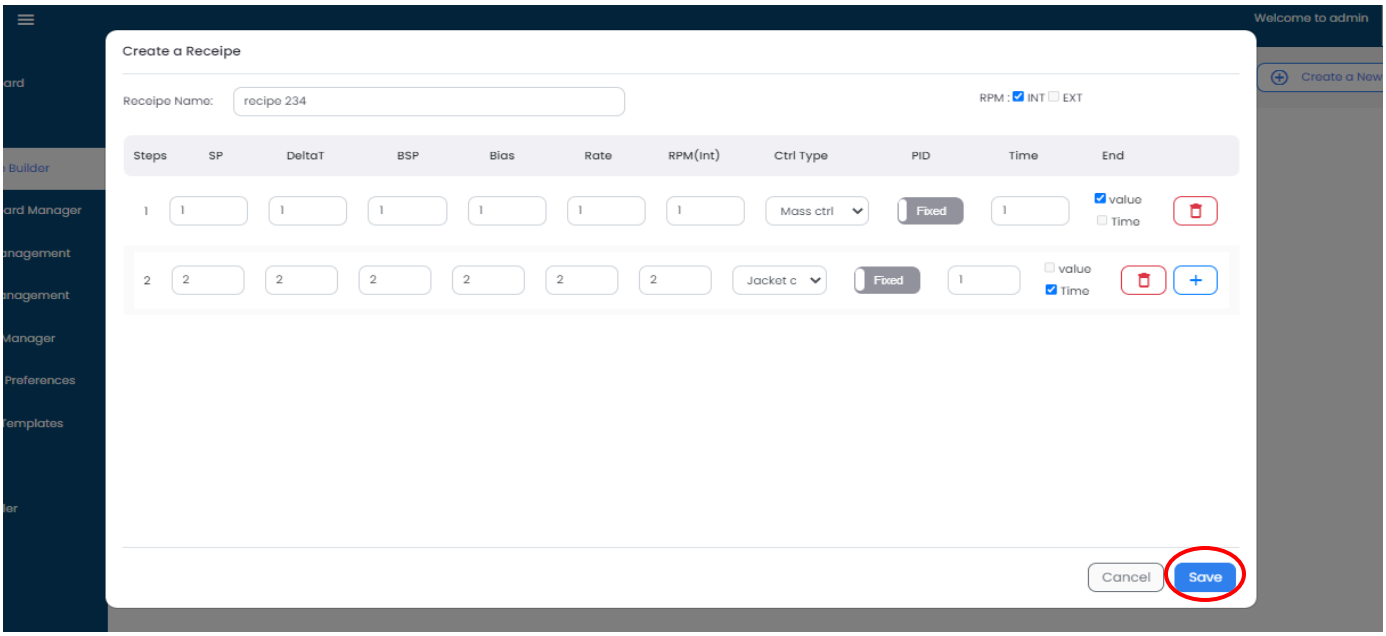
- Click on Create new Recipe as shown here.



- After clicking on Create new Recipe button dialog will open as shown here.



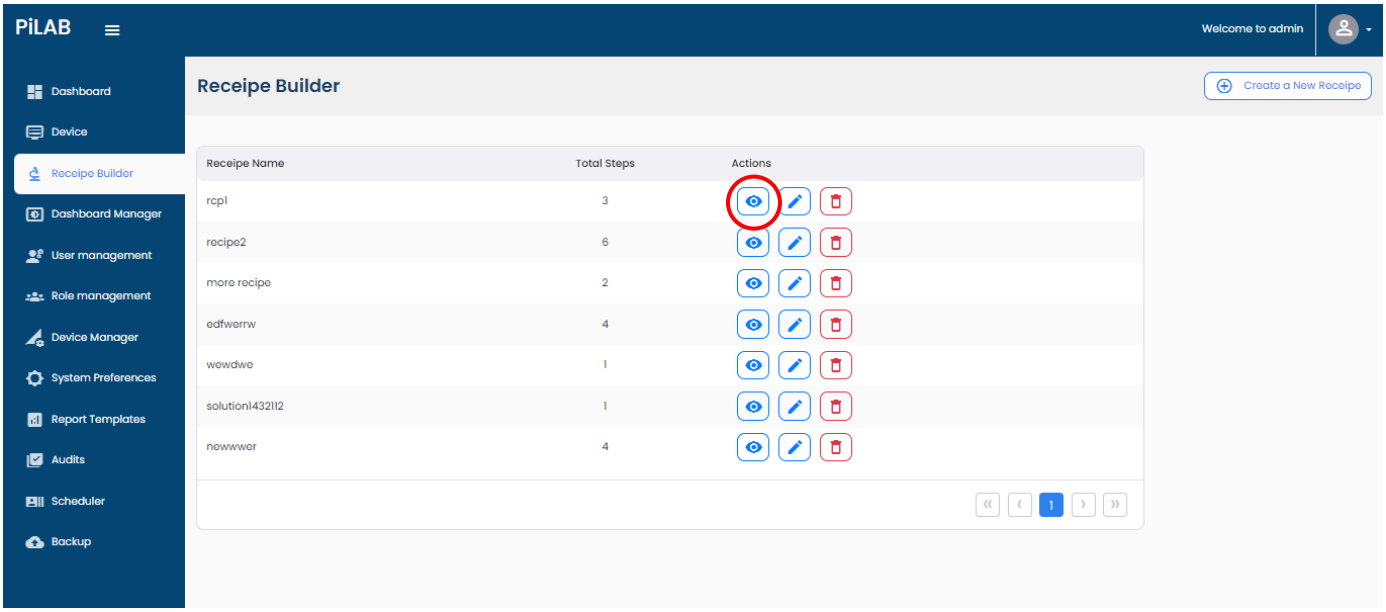
- **RPM selection:**
- We need to select any rpm type for experiments 1. Rpm internal 2.Rpm external
- We can select only one type of rpm for experiment.
- Enter recipe data click on save button as shown below.



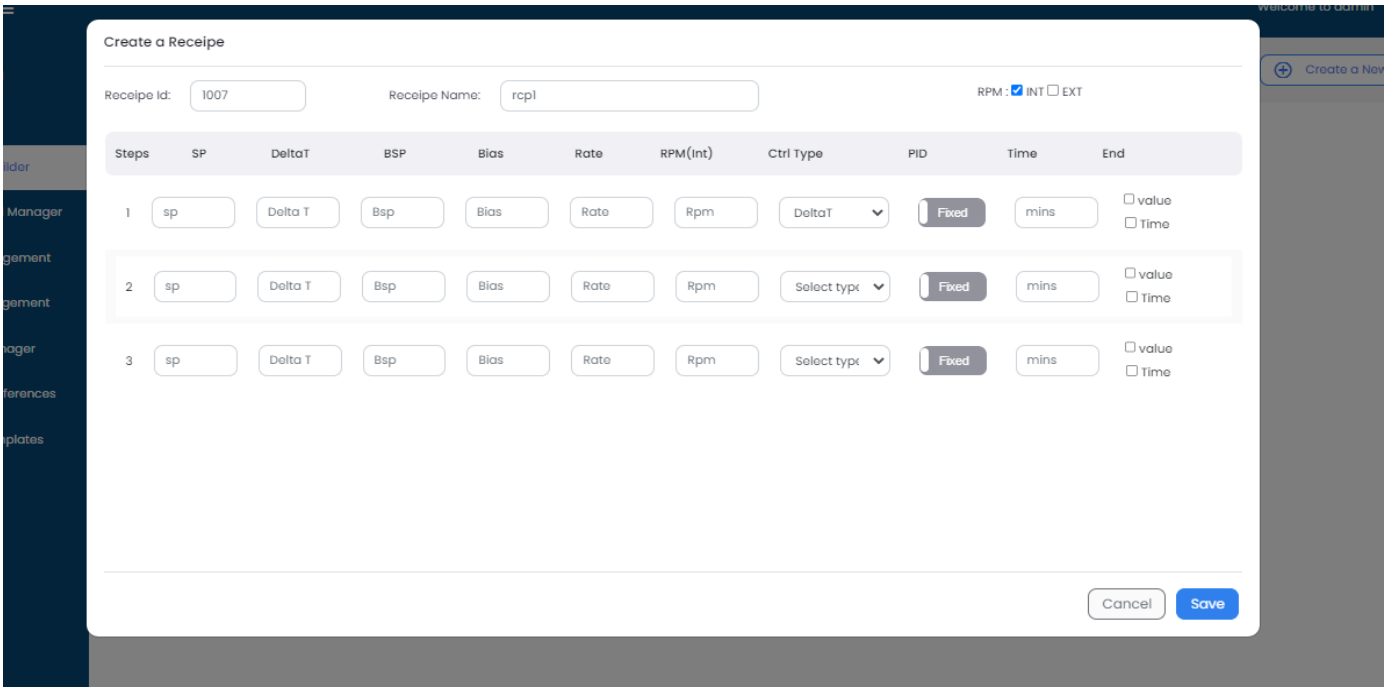
- Then new recipe will create.

3. Recipe View

- Recipe view is used to see recipe data.
- Click on recipe view button as shown here.

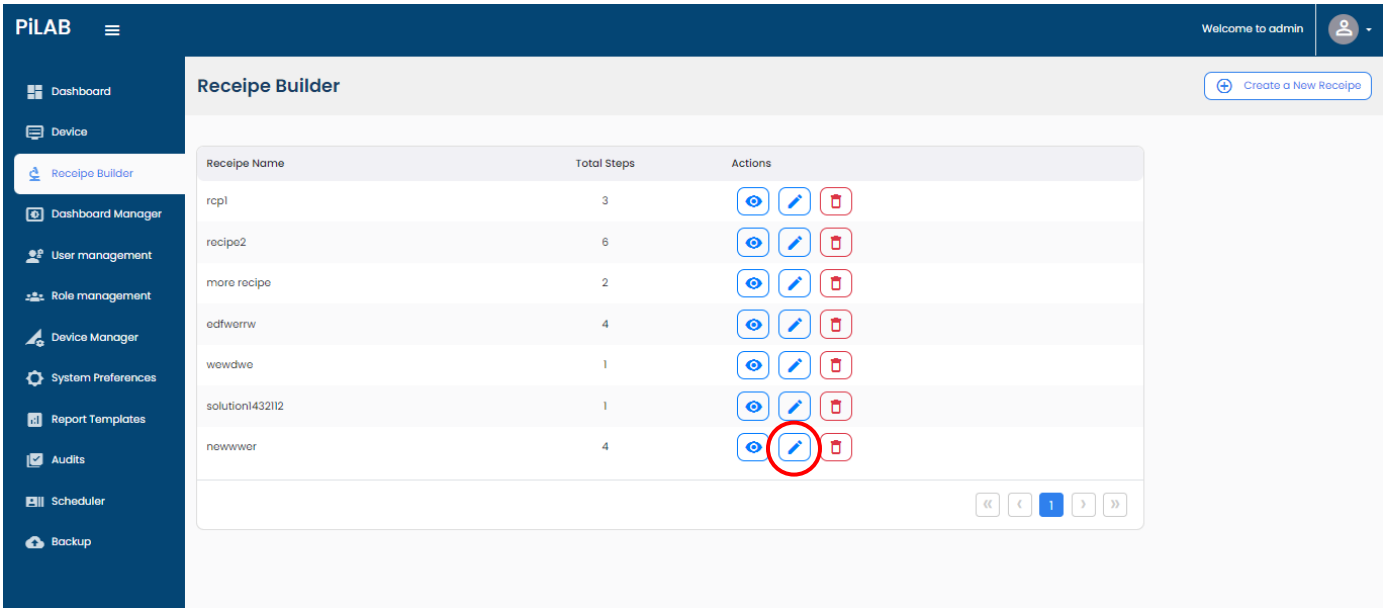


- After clicking on View button dialog will open as shown here.

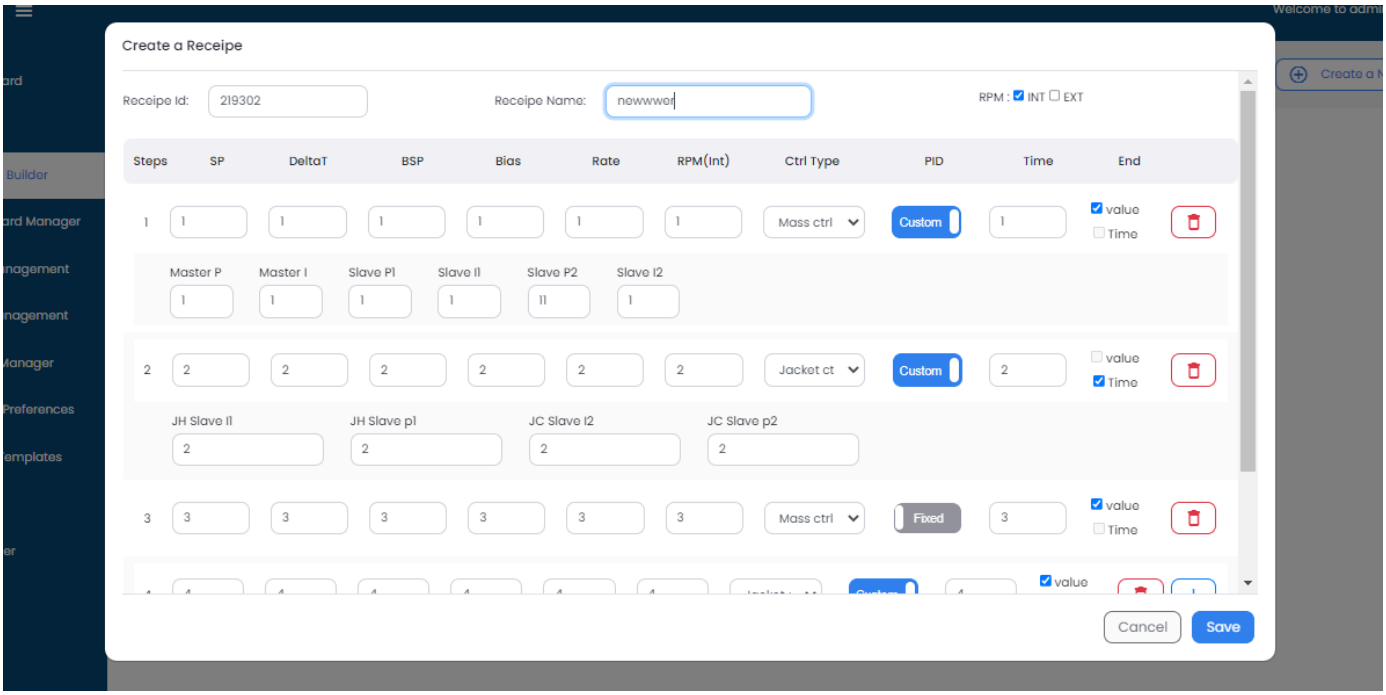


4. Recipe Edit

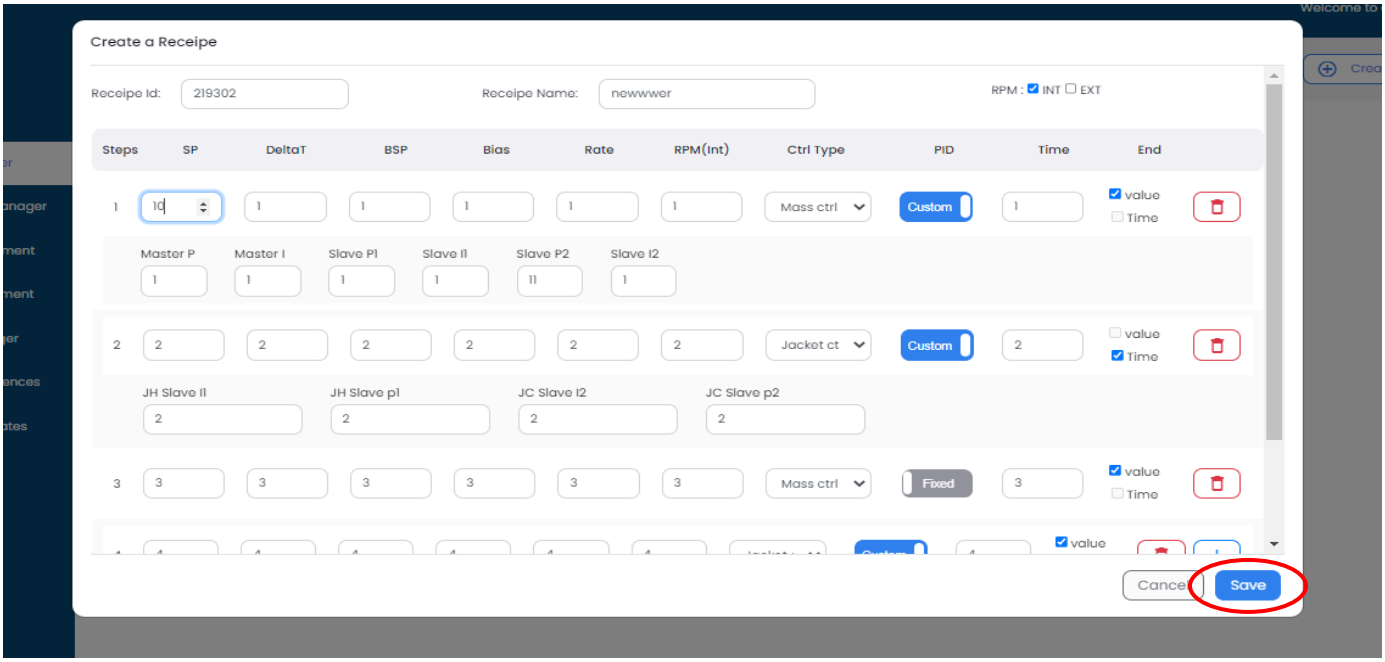
- Recipe Edit is used to edit recipe data
- Click on recipe view button as shown here.



- After clicking on edit button dialog will open as shown here.

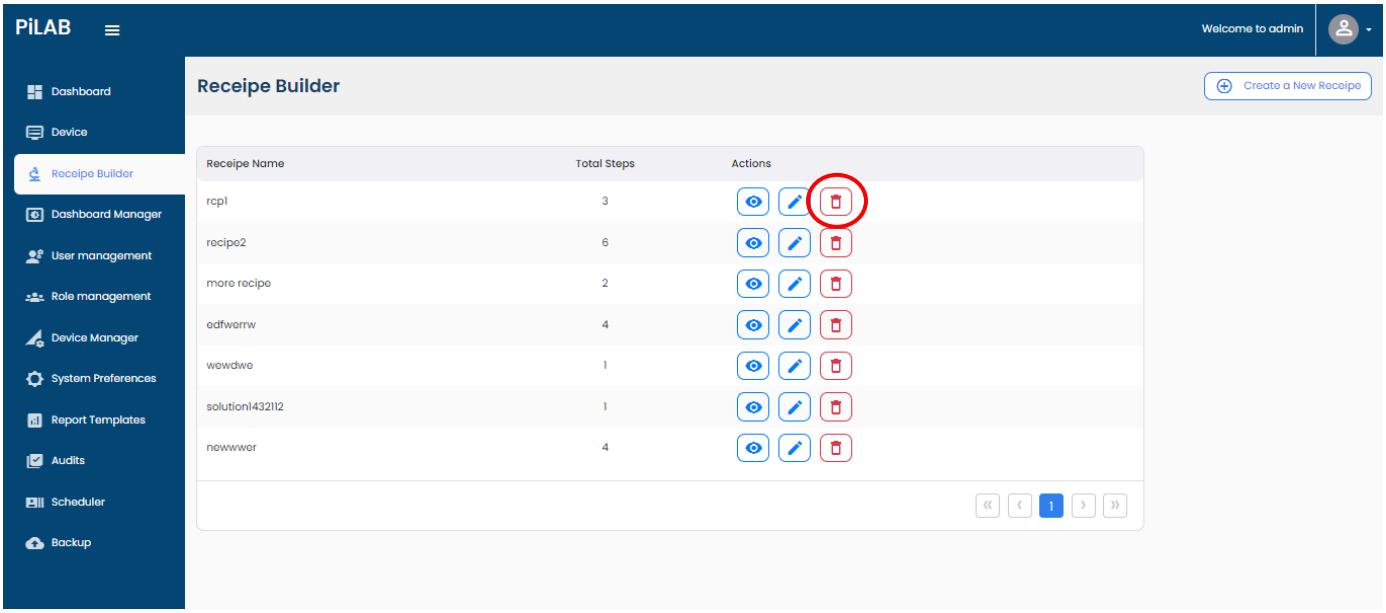


- Edit required data then click on save button as shown.
- Then recipe will update.

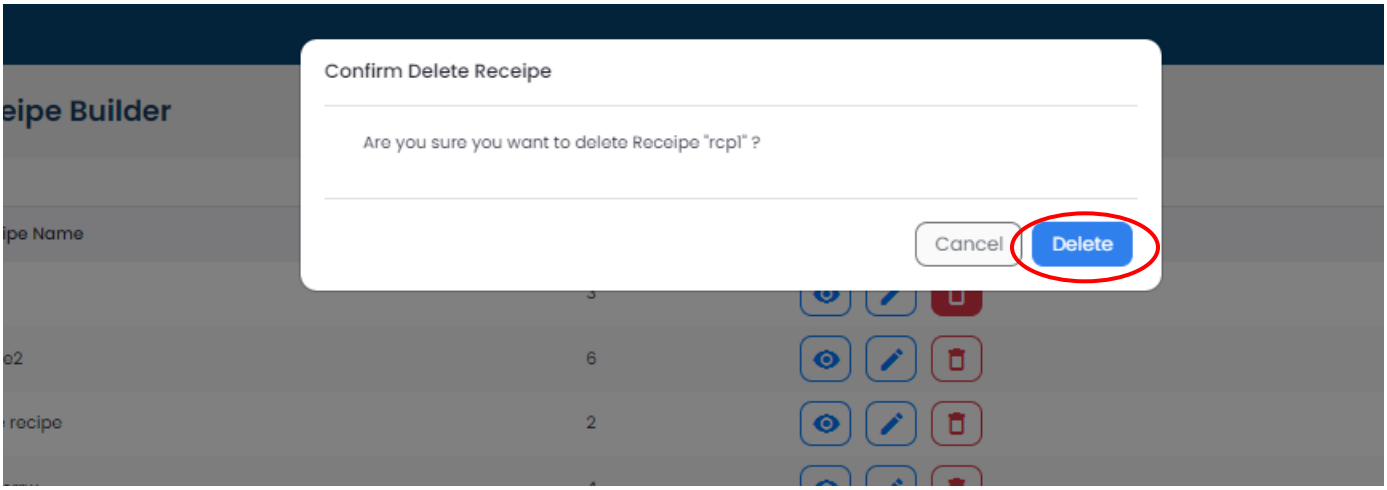


5. Recipe Delete

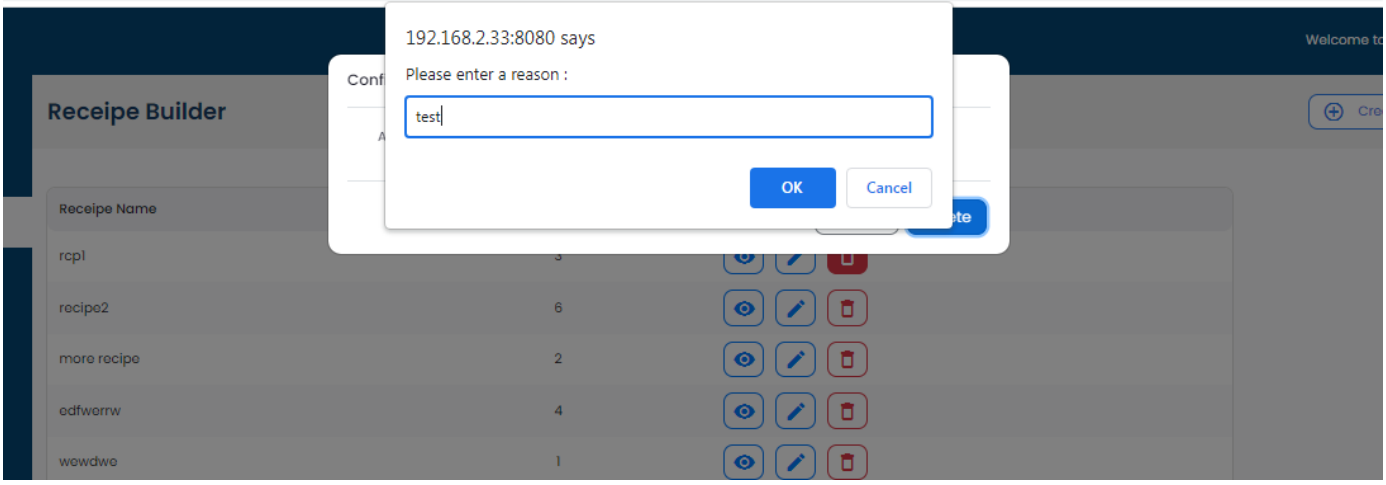
- Recipe delete is used to delete recipe.
- Click delete button as shown here.



- Then dialog will open as shown here.
- Click on delete button.



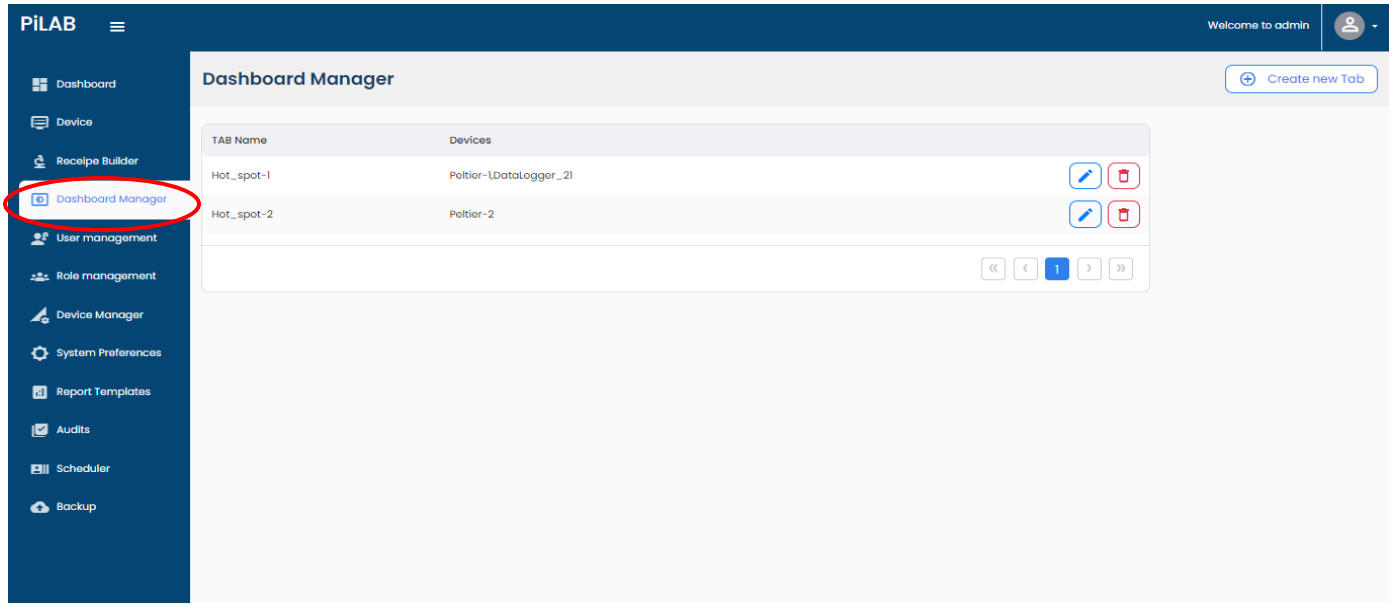
- After clicking on delete button, it will ask for reason then enter reason click on OK button as shown.
- Then recipe will delete.



7. Dashboard Manager

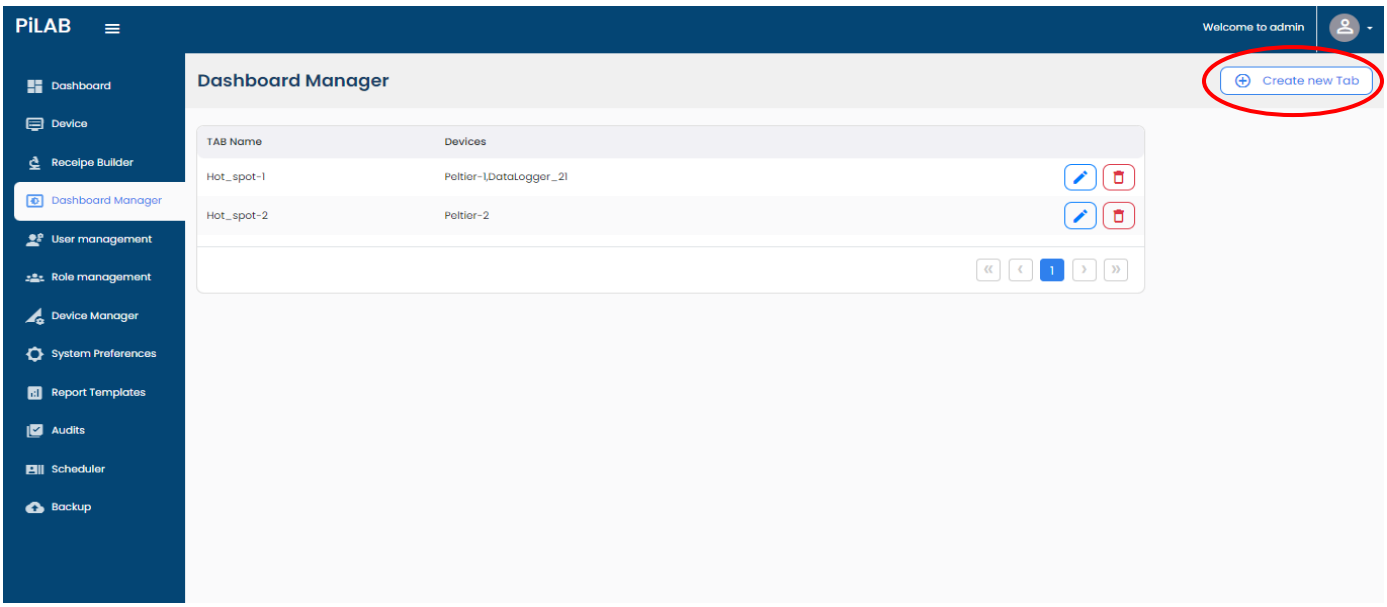
1. Dashboard Manager Page

- Dashboard Manager contains all the created Tabs/Areas as shown here.
- These created tabs will display in dashboard page.

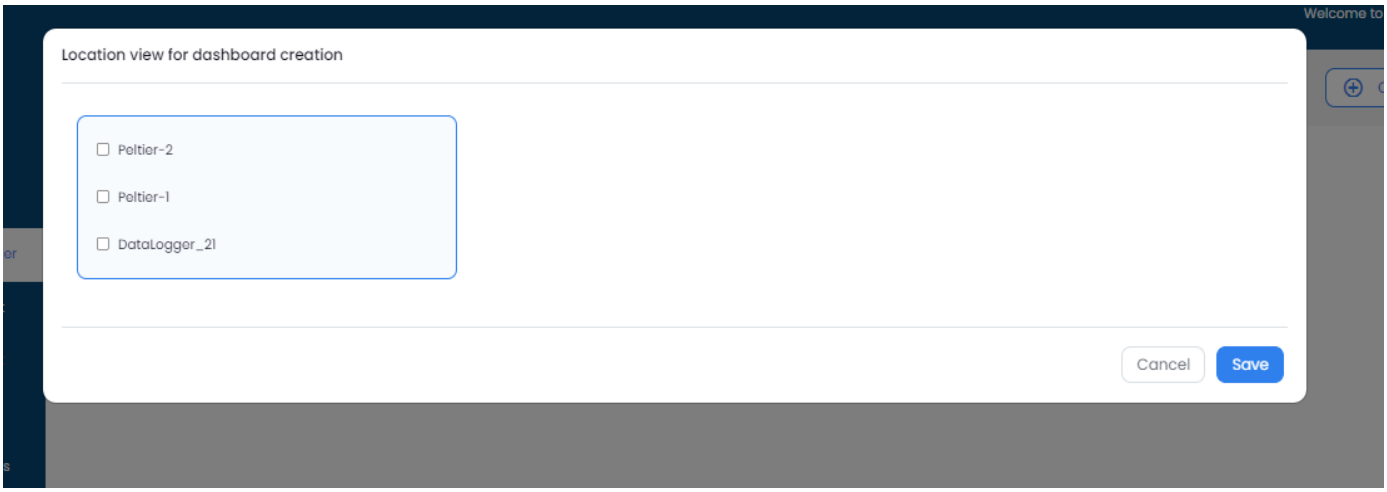


2. Dashboard Tab(Area) Creation

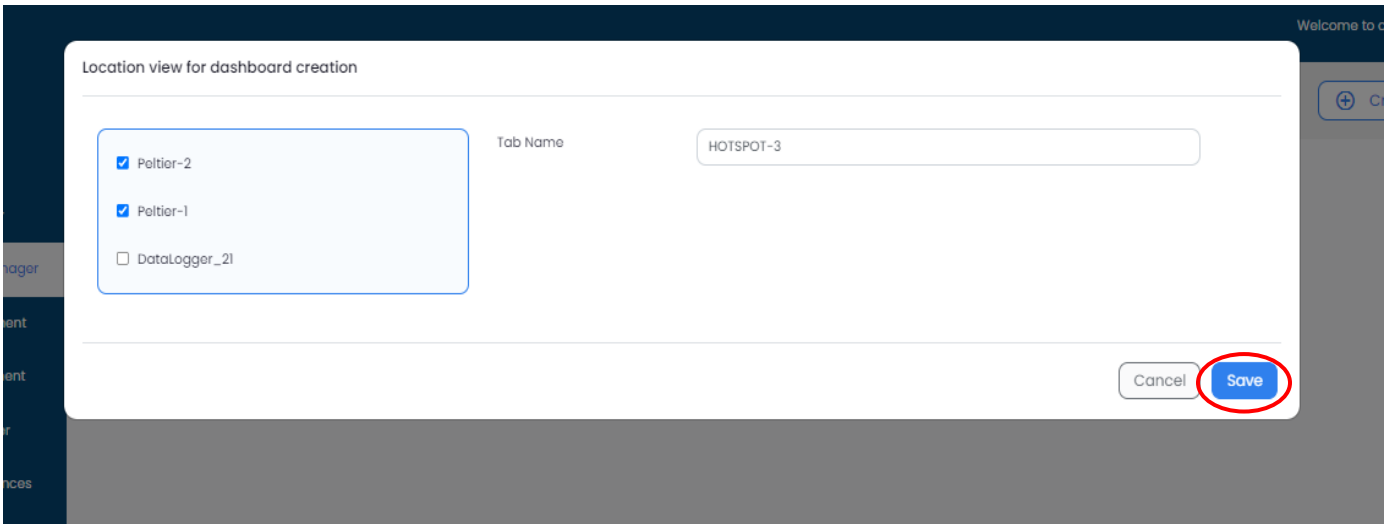
- Click on Create new Tab button to create new tab(area) as shown here.



- After clicking on create new tab dialog will open as shown here.



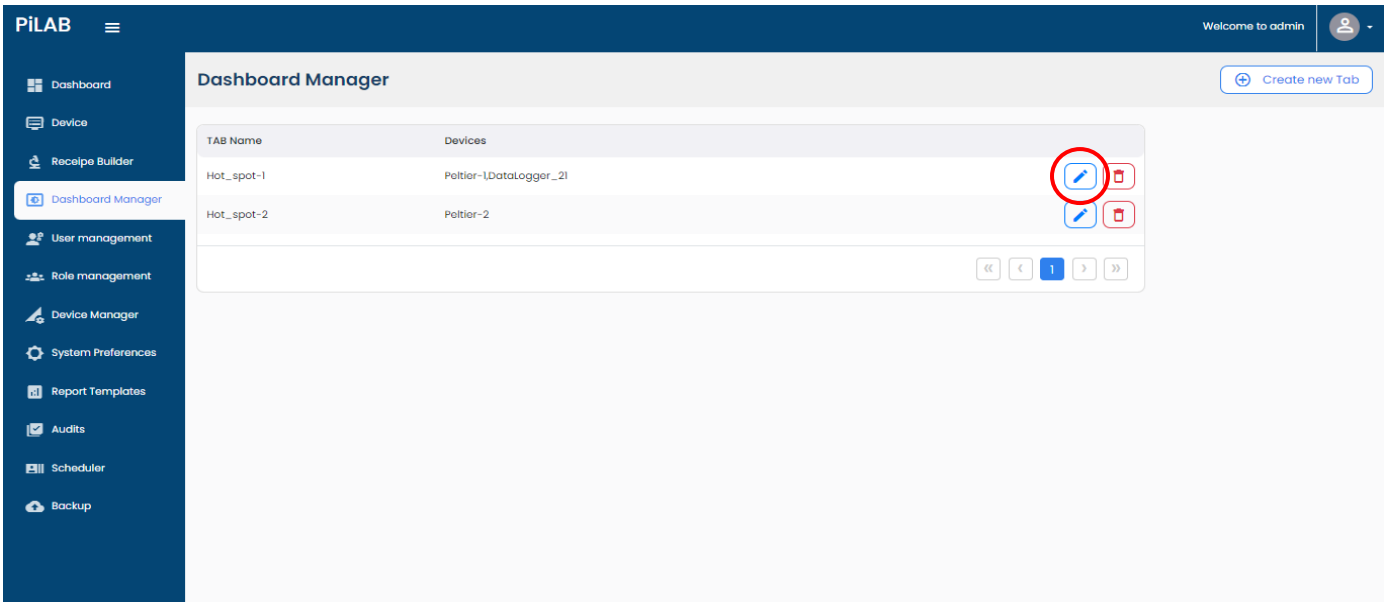
- Click on check boxes of devices and enter data click on save button as shown here.



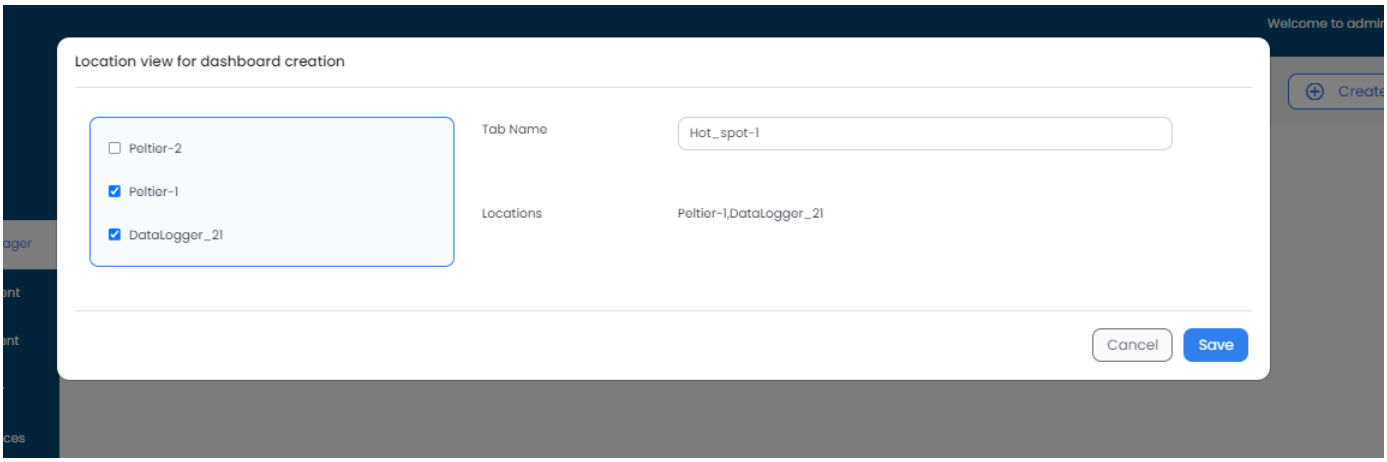
Then dashboard tab(area) will create

3. Dashboard Tab(Area) Edit

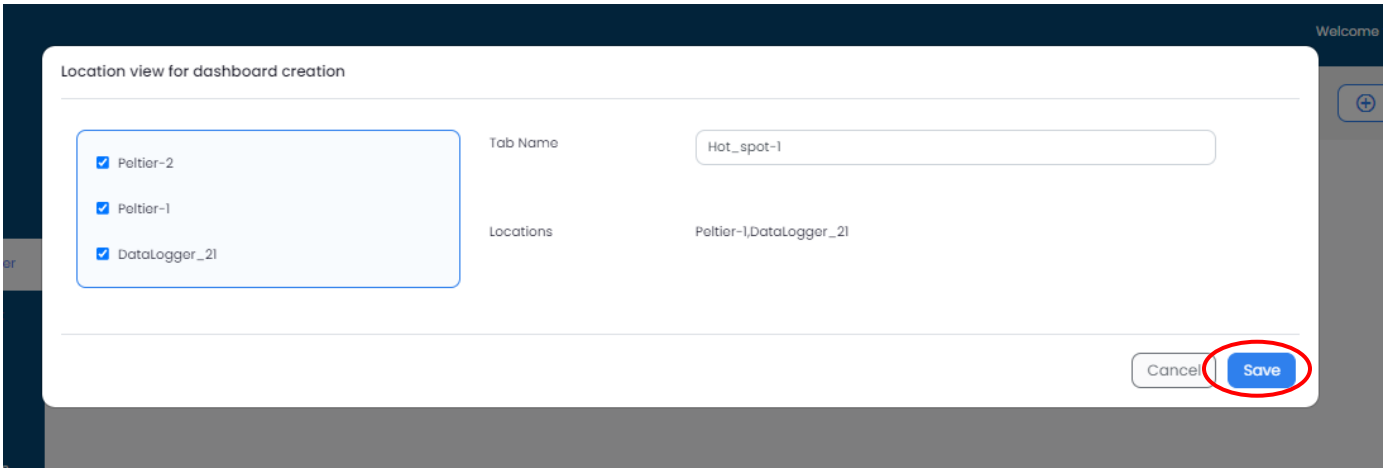
- Click on Edit button to update details as shown here.



- After clicking on edit button dialog will open as shown here.

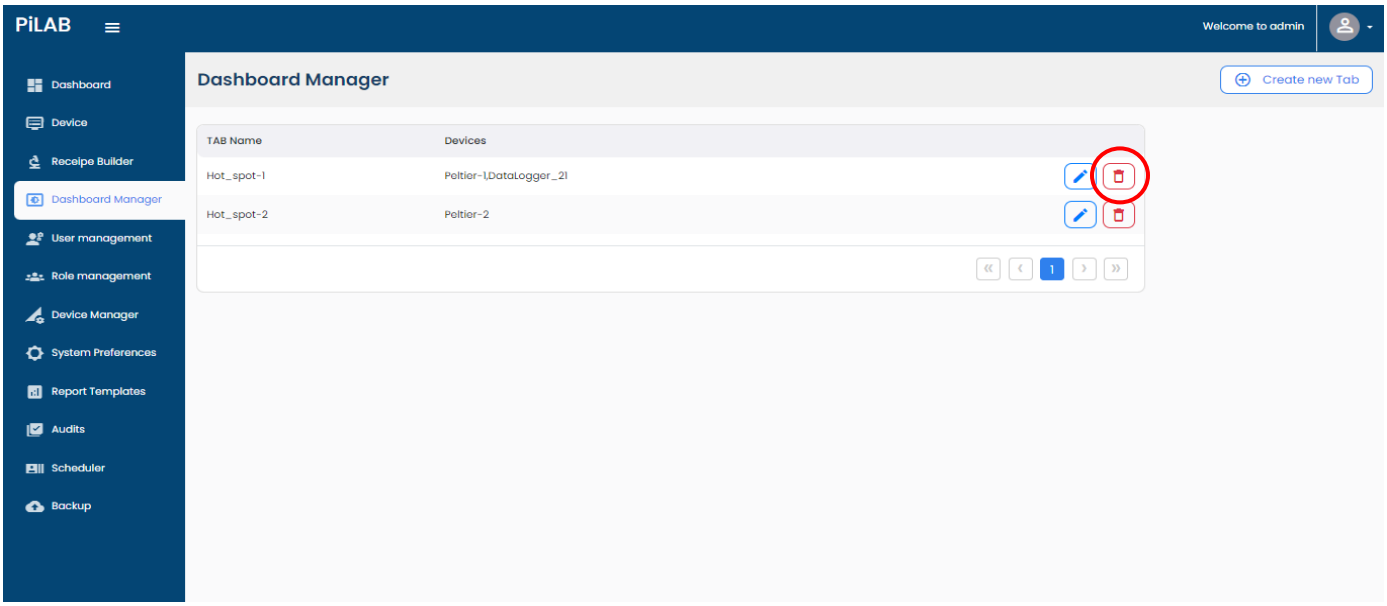


- Update the required details click on save button as shown here.
- Then dashboard tab will update.

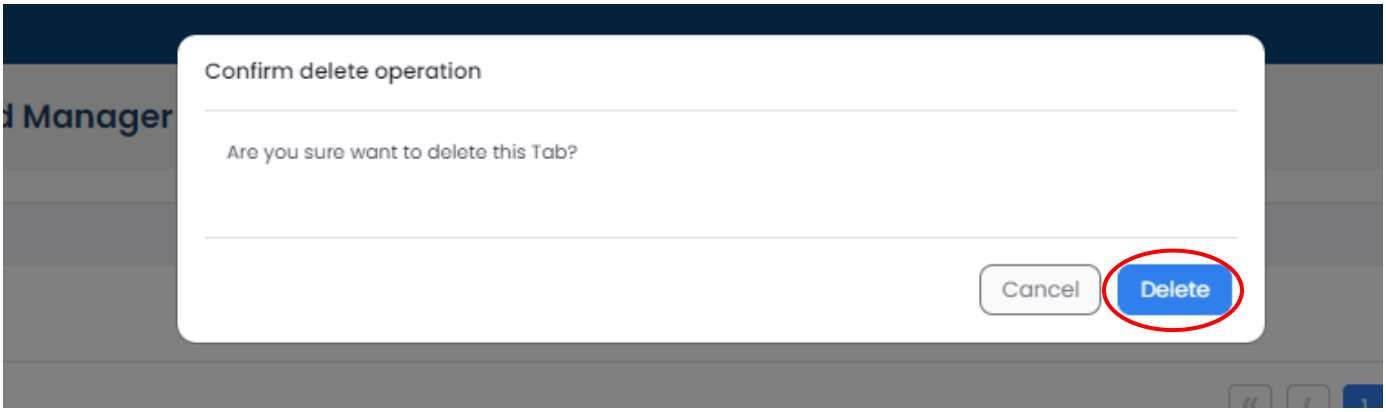


4. Dashboard Tab(Area) Delete

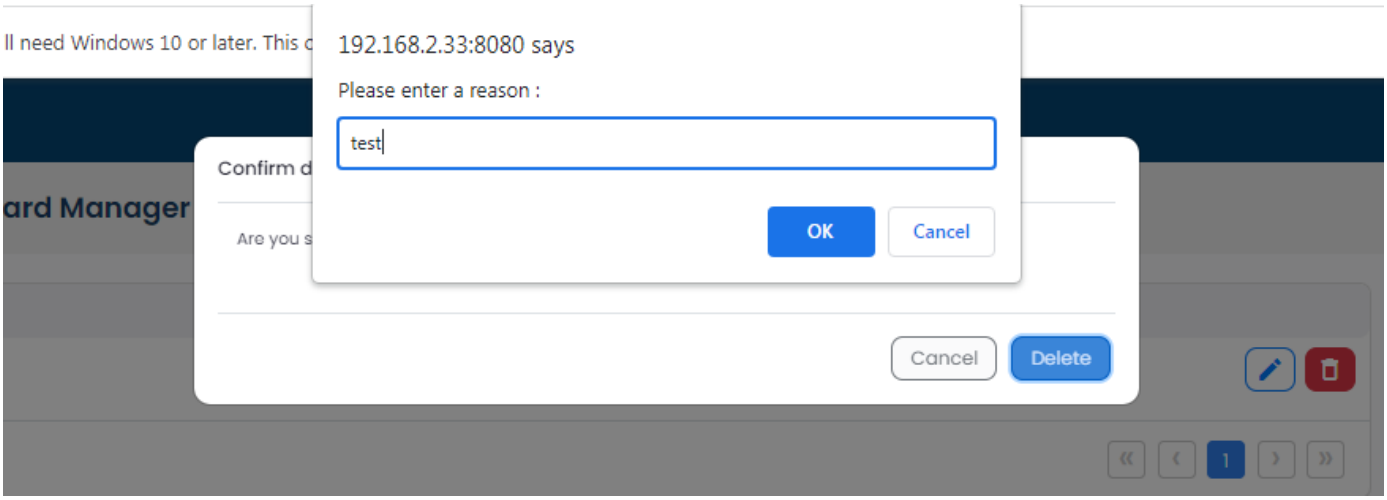
- Click on delete button to delete tab(area) as shown here.



- After clicking delete button dialog will open as shown here.
- Then click on delete button.



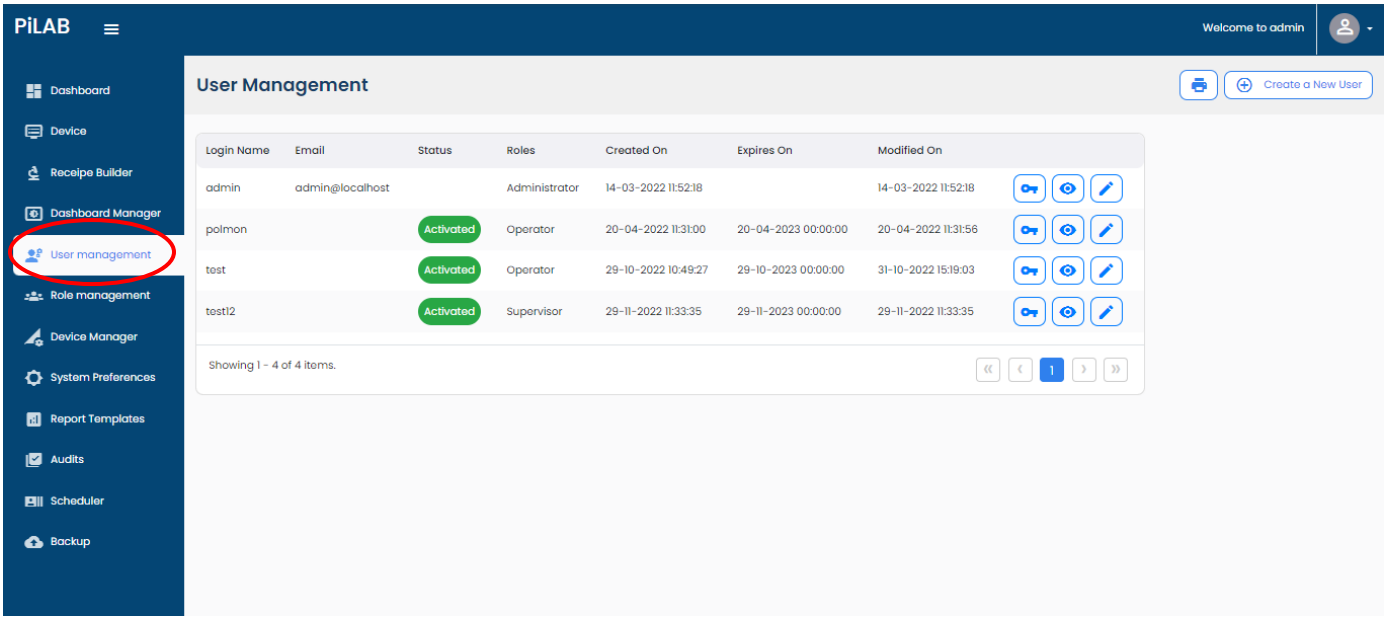
- After clicking delete button it will ask for reason, enter reason click on OK button as shown here.
- Then tab(area) will delete.



8. User Management

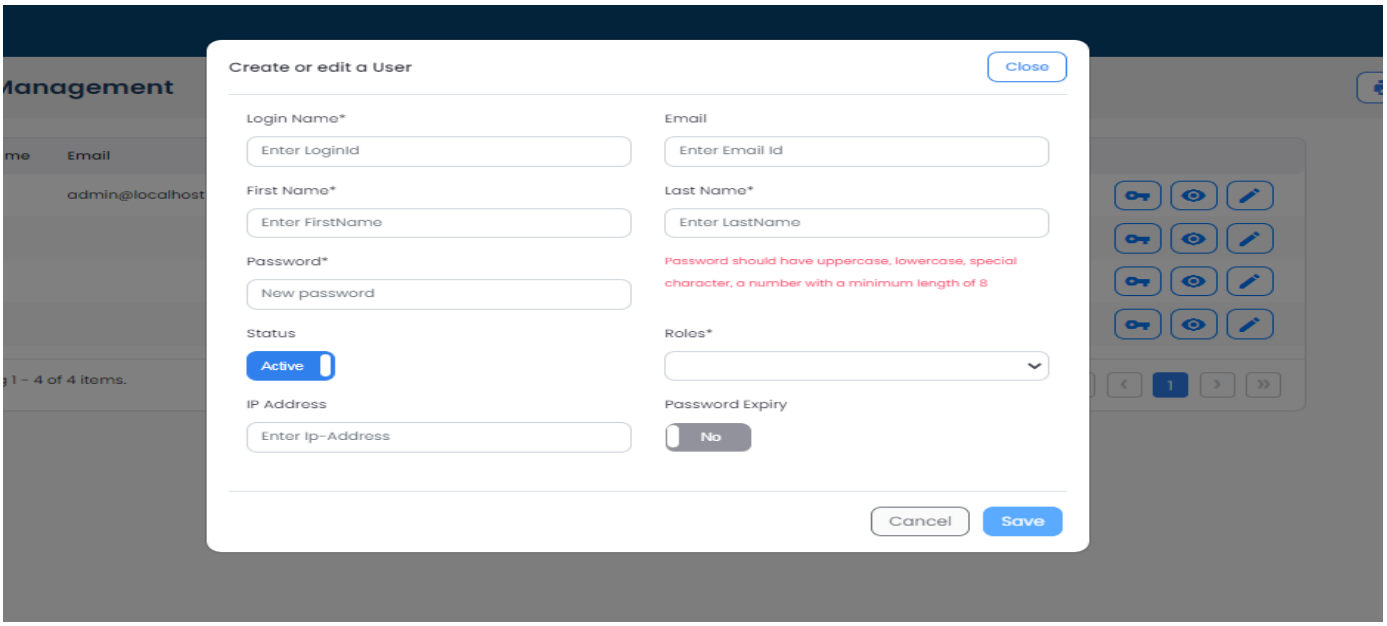
1. User Management Page

- All the created users will display in User Management page as shown here.

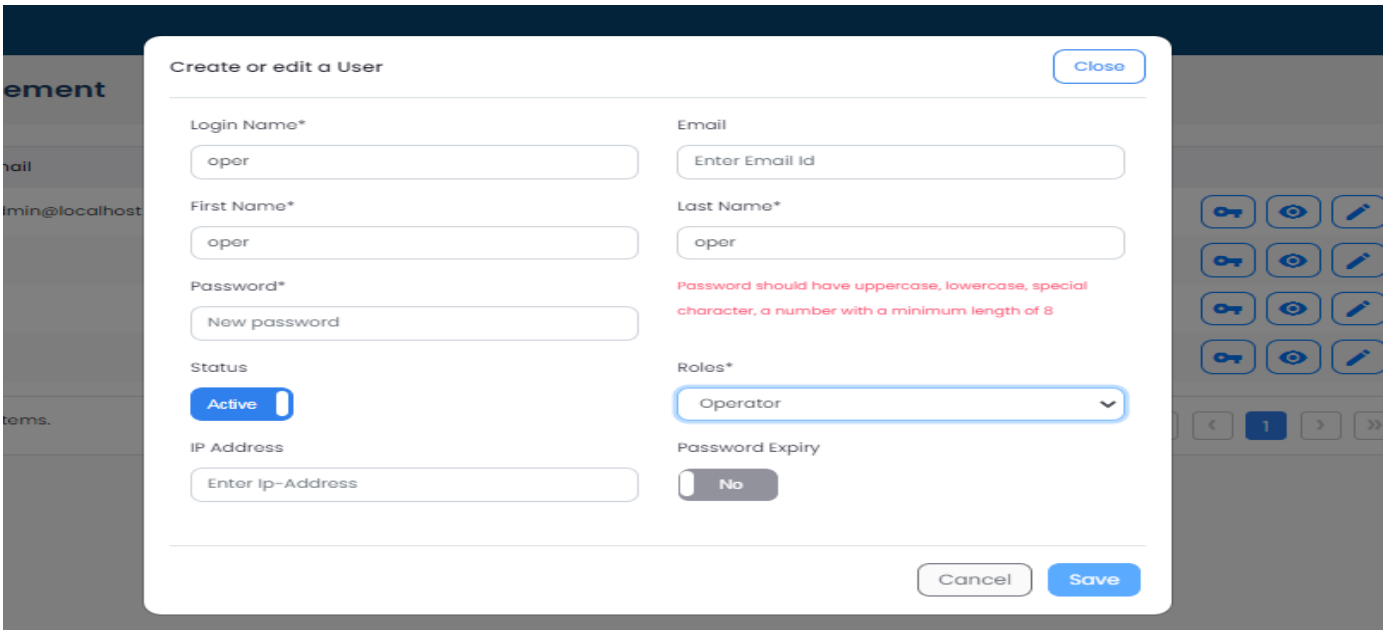


2. User creation

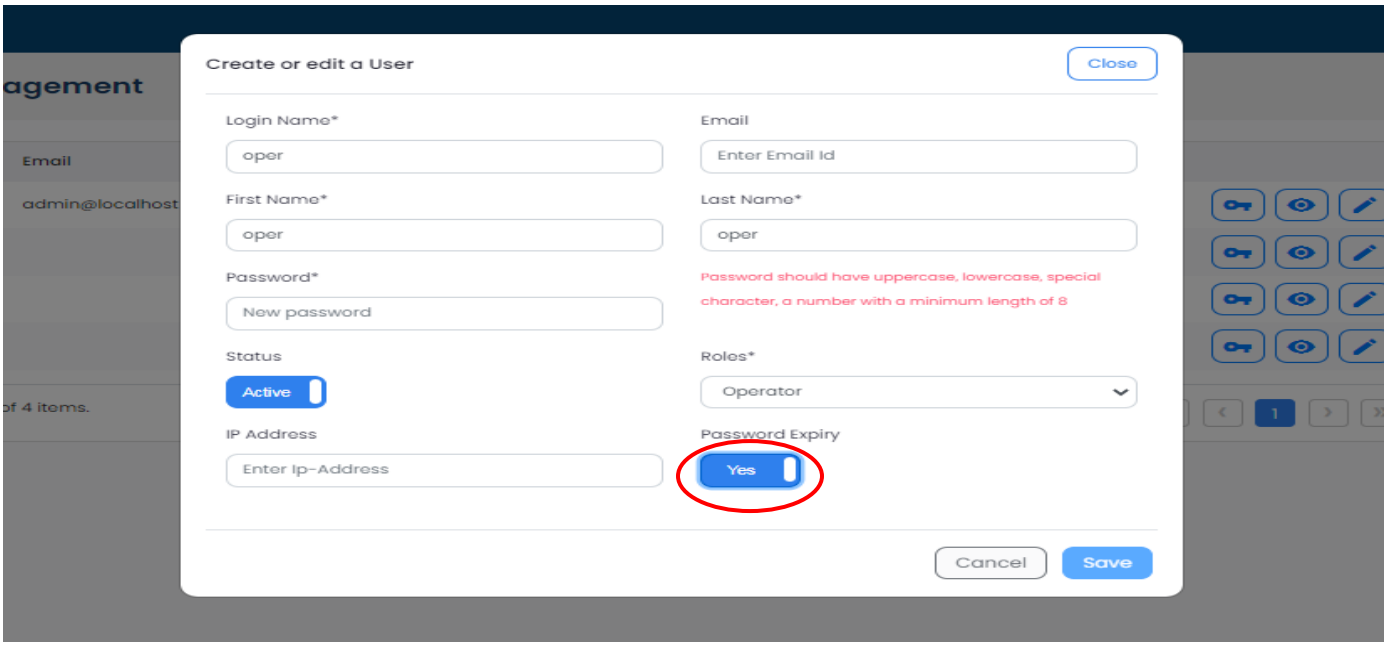
- Click on Create new User button to create user as shown here.



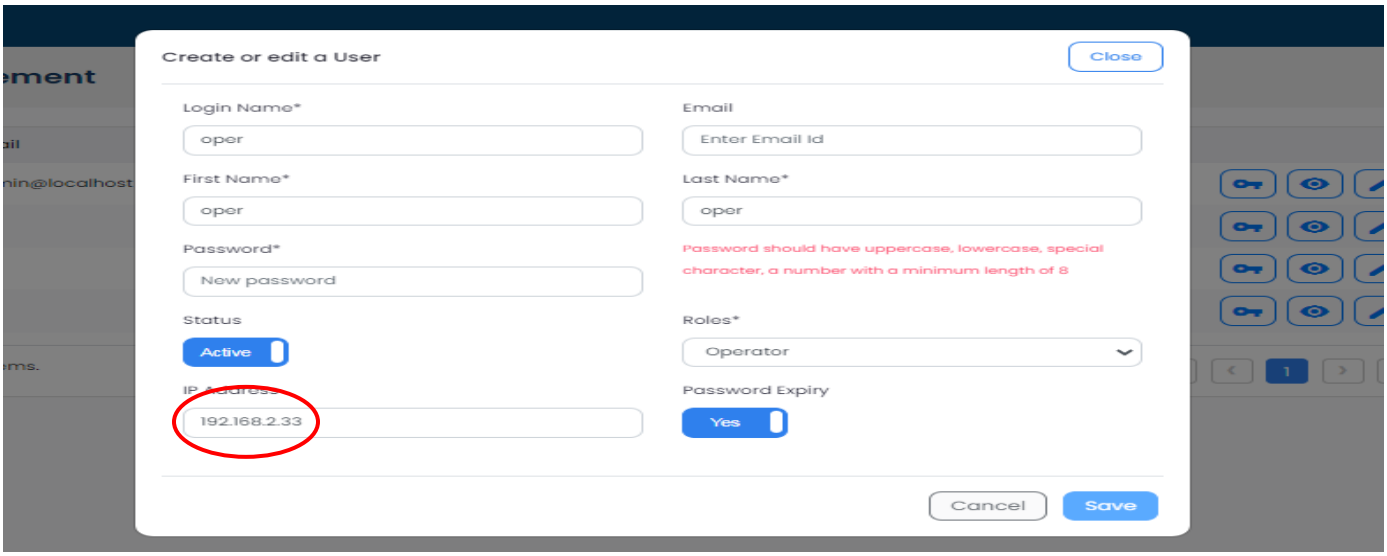
- Enter required details as shown here.



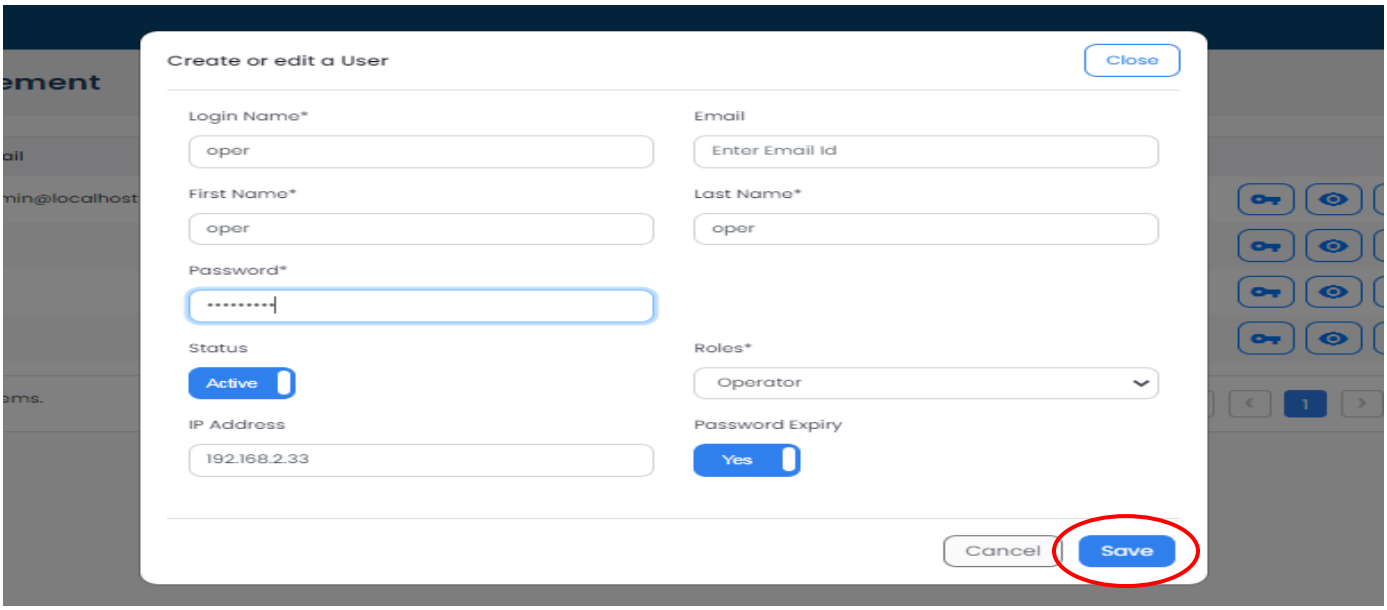
- **Password Expiry.**
- Make password expiry as Yes if you want expire password of user as shown here.



- **IP Address.**
- If you enter IP Address then user will login in that IP Address only.
- If IP Address is needed then only enter in input field otherwise keep it as empty.

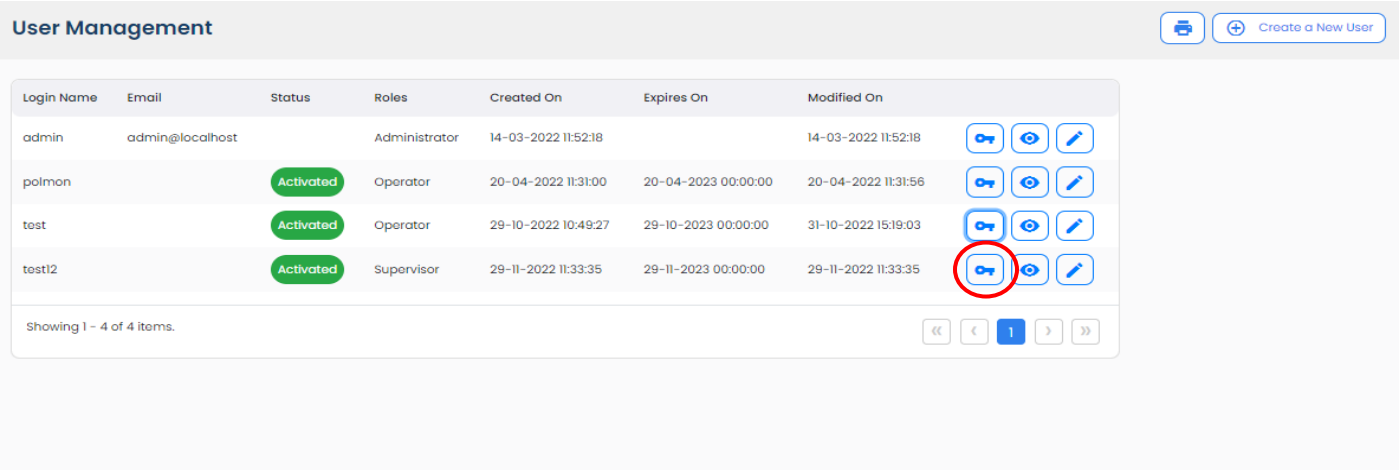


- **Password length.**
- Password must contain uppercase, lowercase, special character, a number with minimum length of 8.
- Enter password as per the policy as shown here.
- After entering all details click on save button as shown, then user will create.

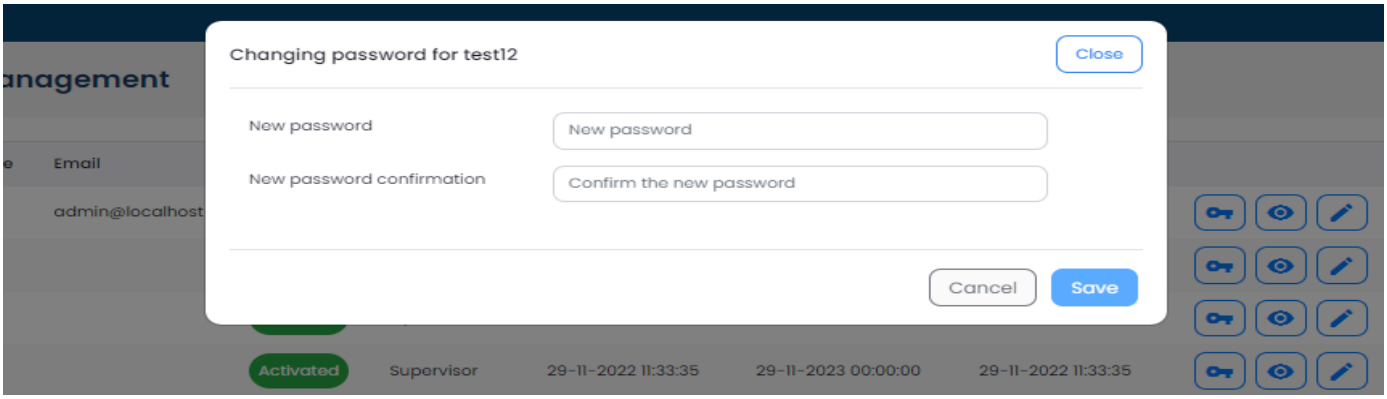


3. User Password change

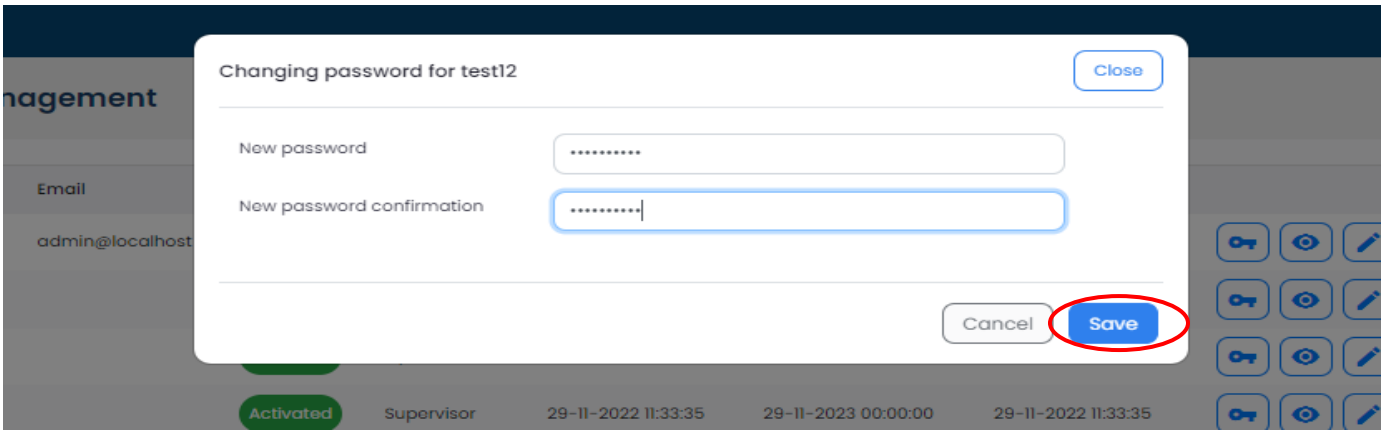
- If you want change password of user then click on key button as shown here.



- After clicking on key button dialog open as shown here.

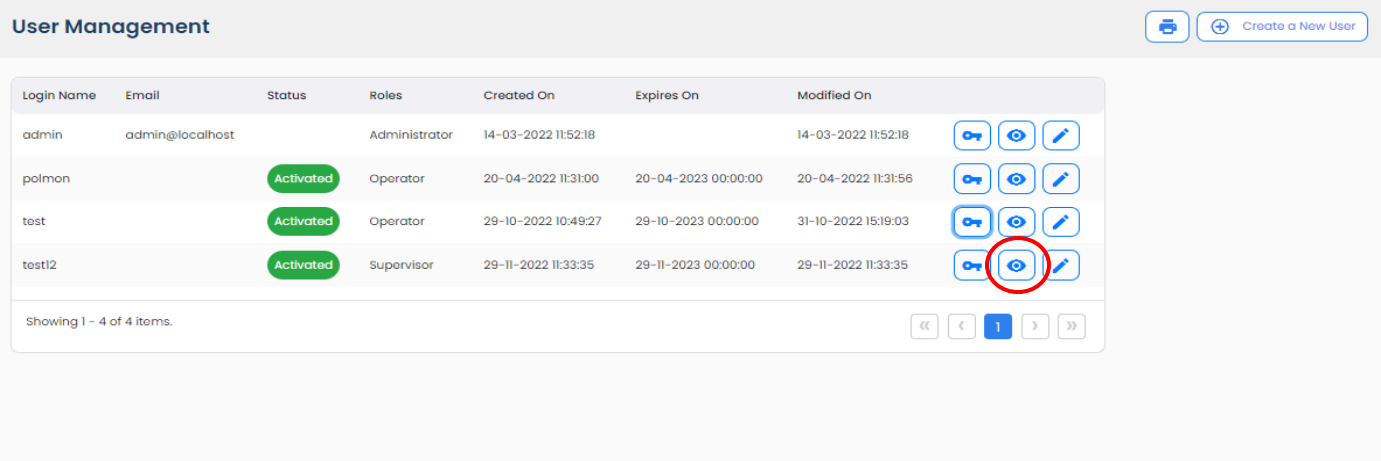


- Enter new password and Click on save button as shown, then password will change.

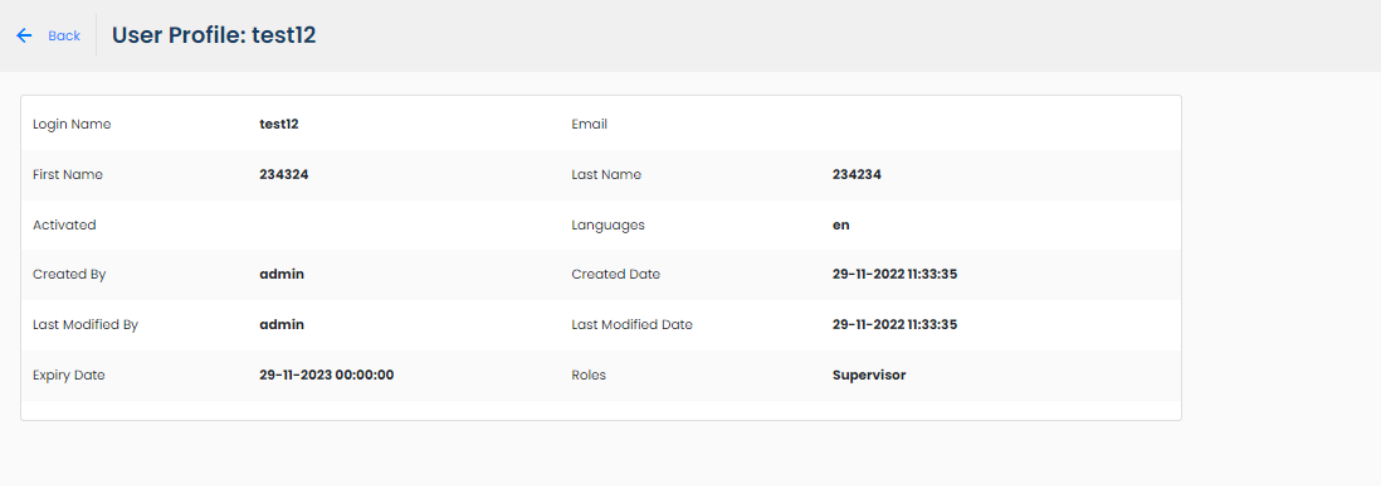


4. User View.

- If you click on view button of the user then all details of the user will display.

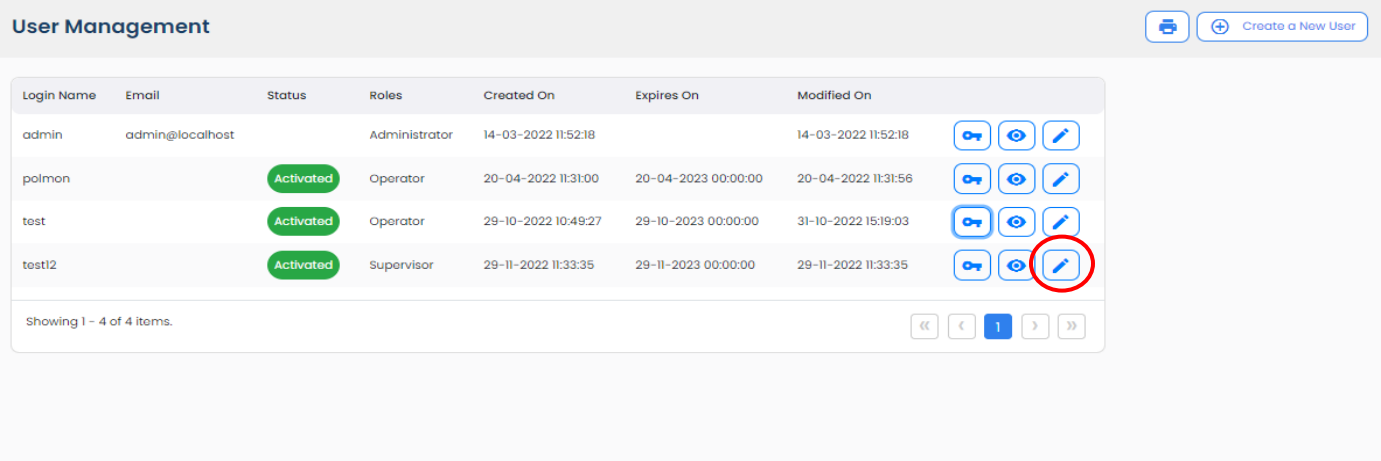


- After clicking on view button page will open as shown here.

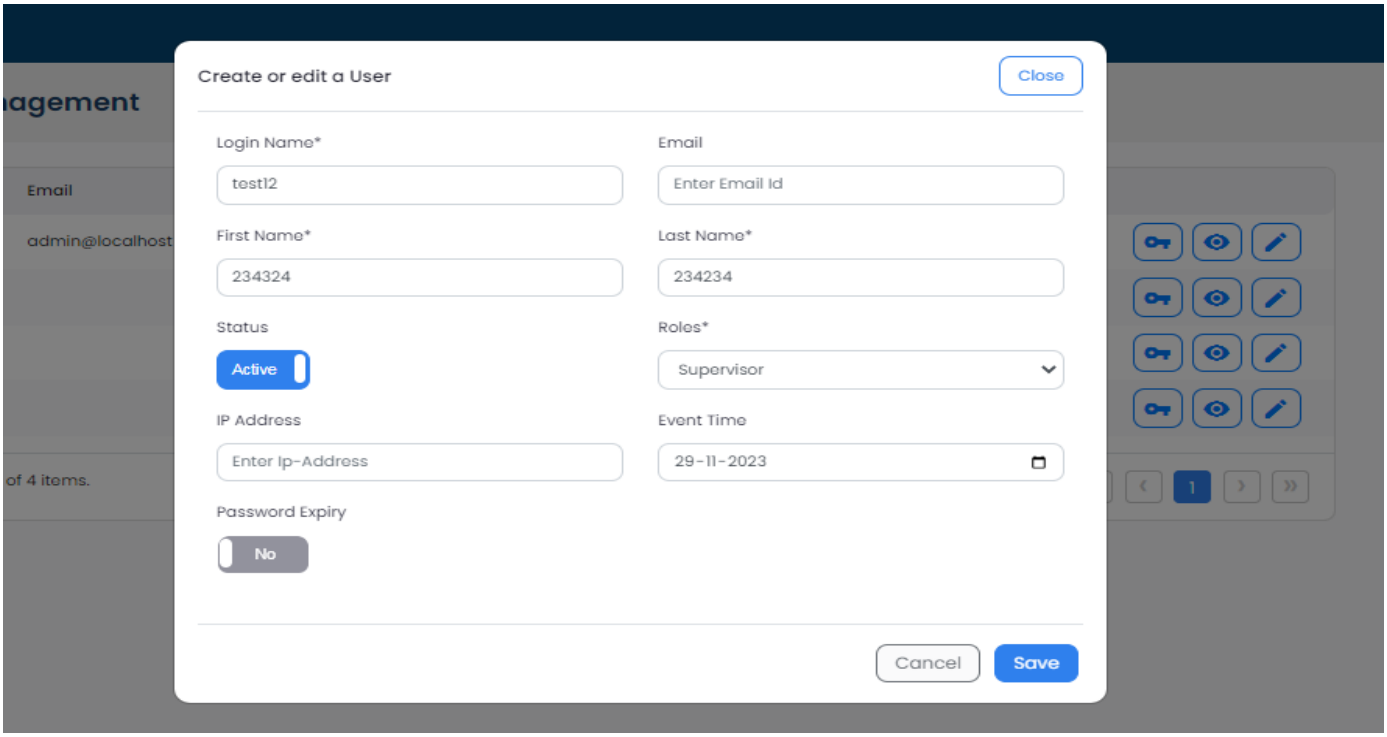


5. User Edit

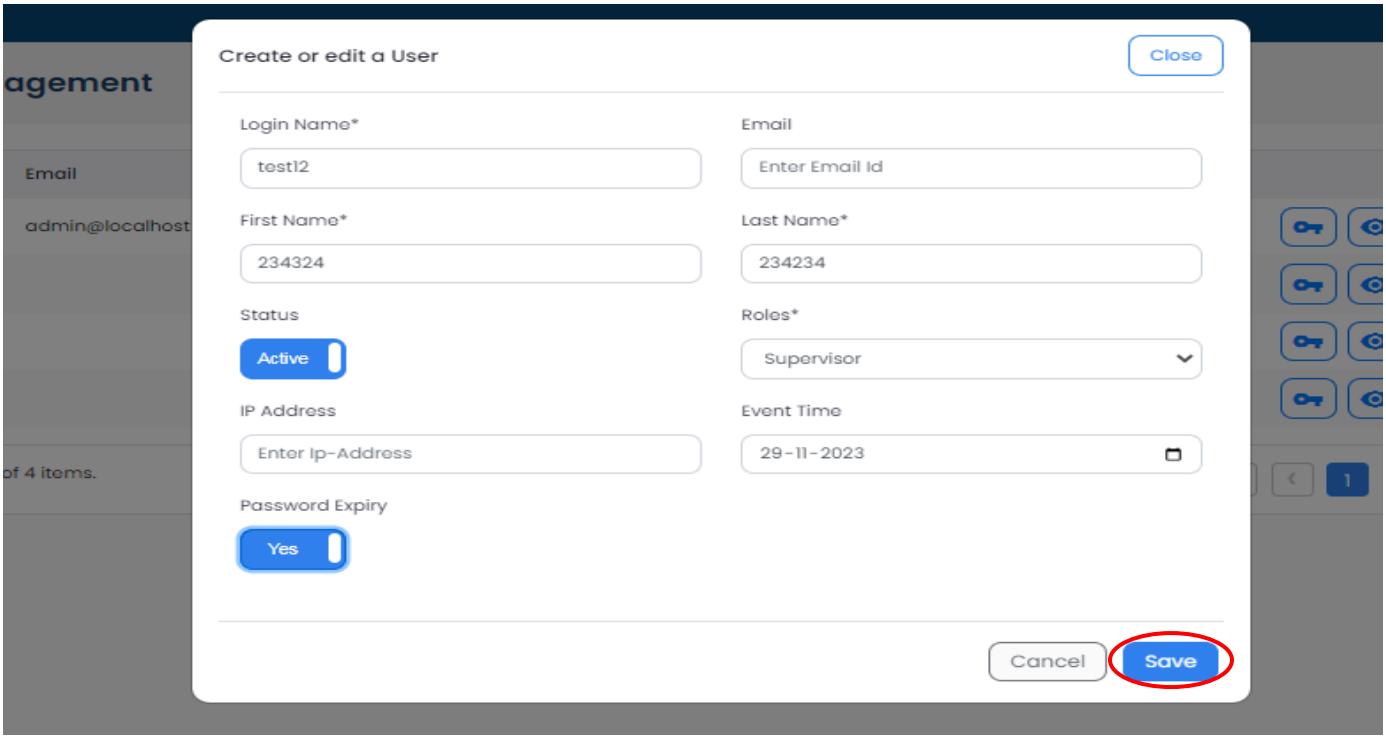
- To edit details of user click on edit button as shown here.



- After clicking on edit button dialog will open as shown here.

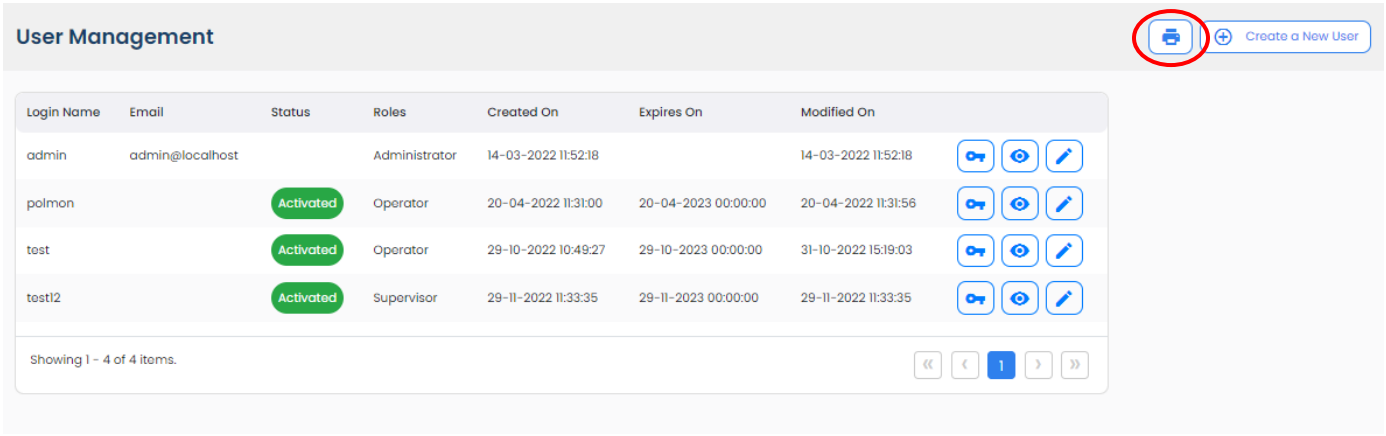


- Update user data click on save button as shown here.



6. User Report

- We can also see user data in report PDF.
- Click on print button to download user report as shown here.

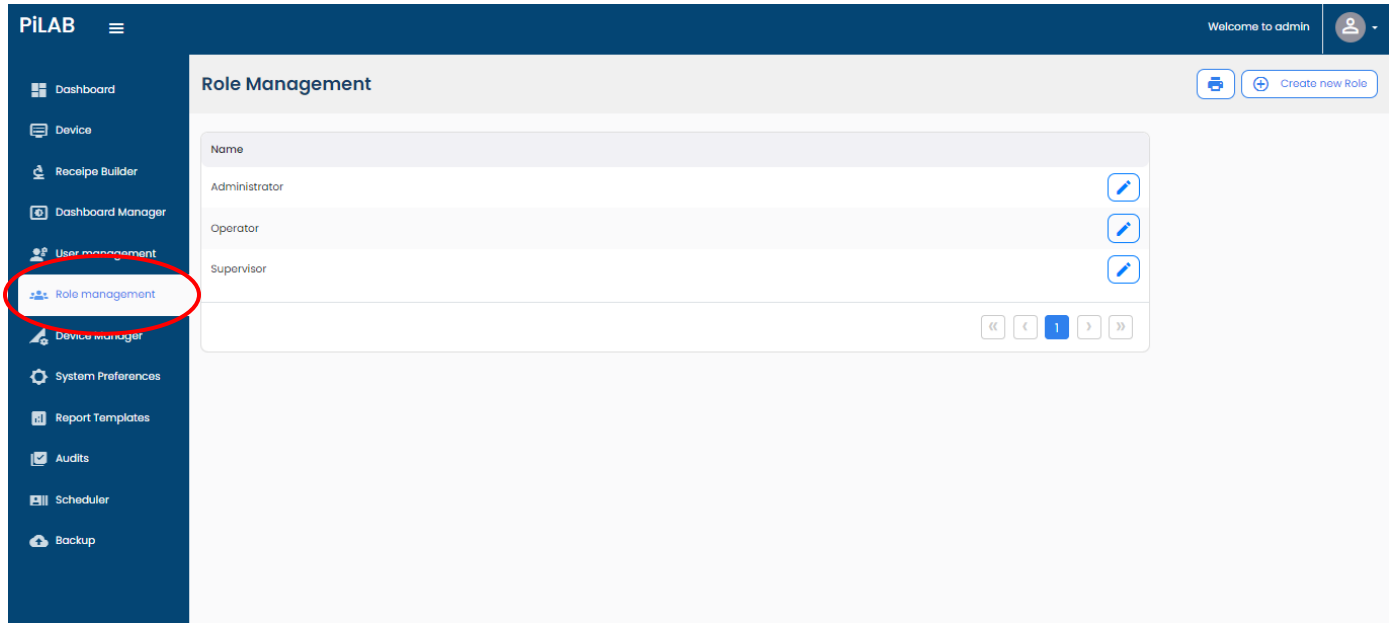


- After clicking on print button report will download.

9. Role Management

1. Role Management Page

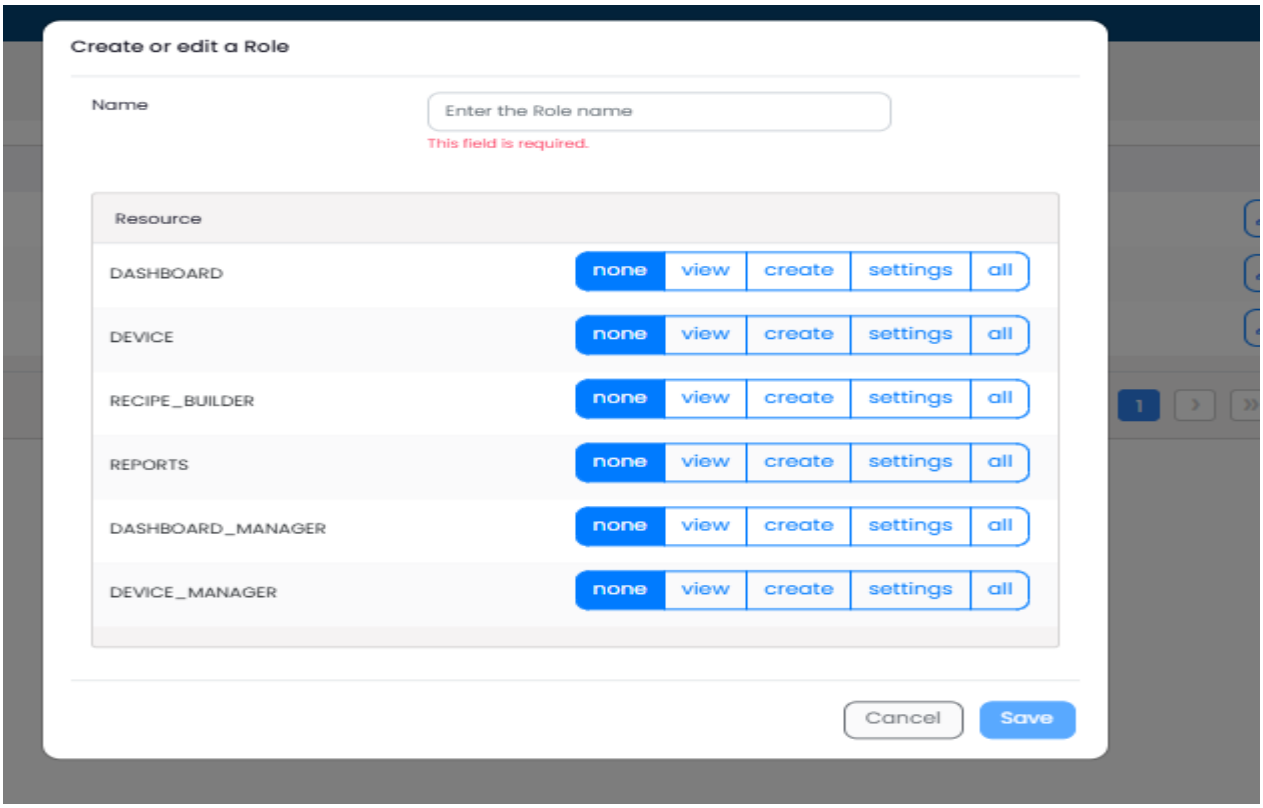
- If we go to Role Management page all the created roles will display as shown.



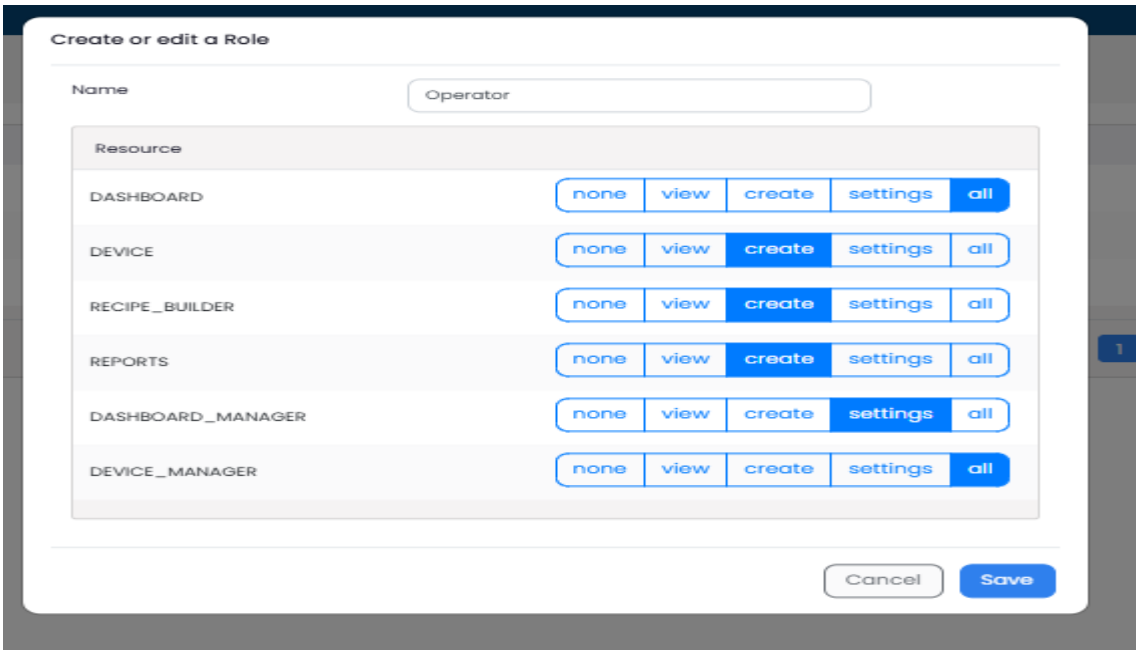
2. Role Creation

- To create new role click on Create new Role button as shown here.

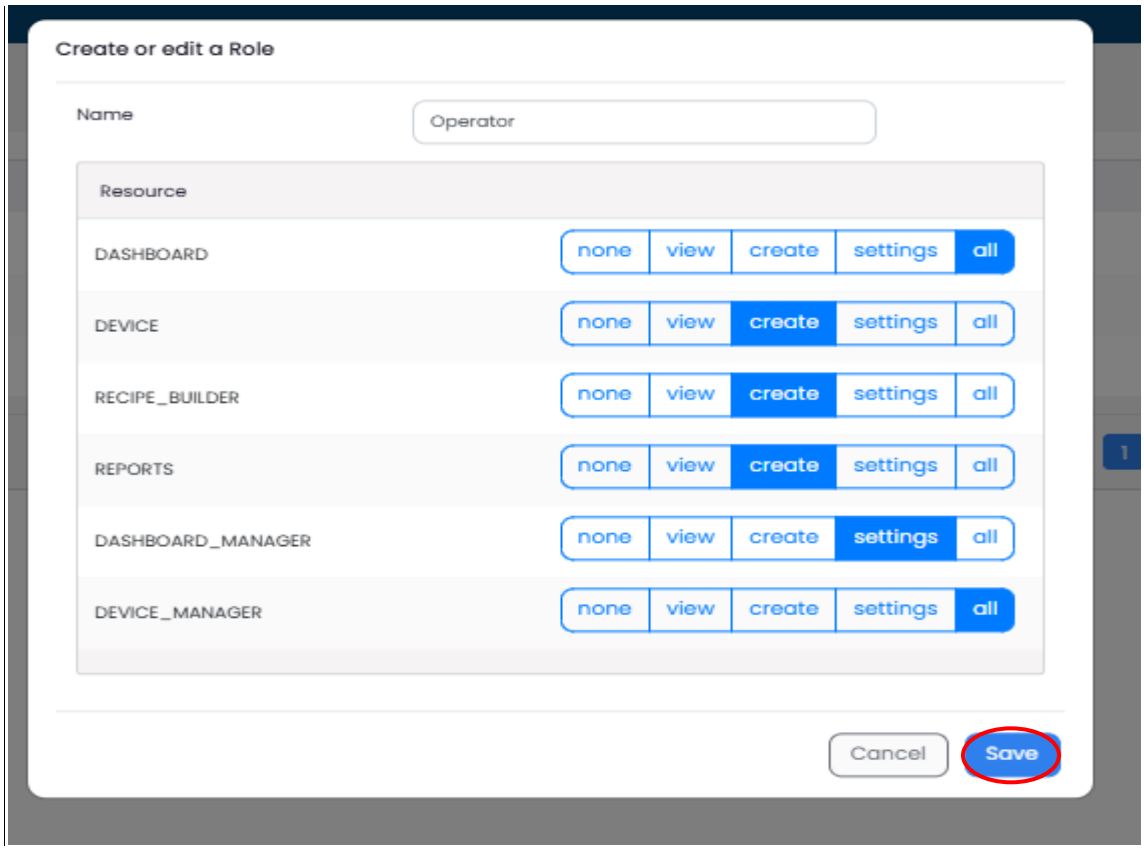
- After clicking on create new role button dialog will open as shown here.



- Enter Role name and select resource permissions as shown here.

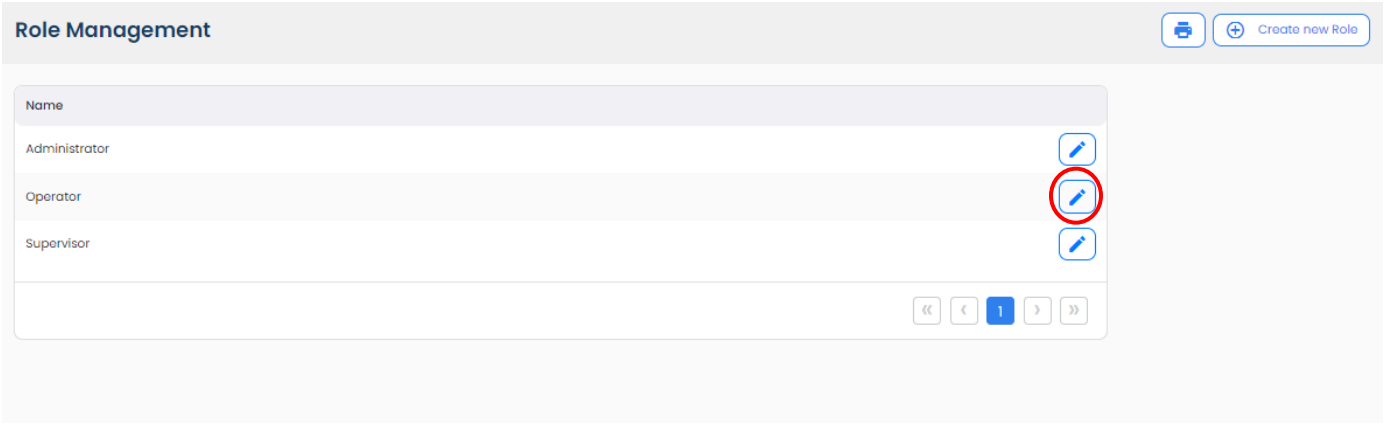


- Then click on save button as shown.
- Then role will create.

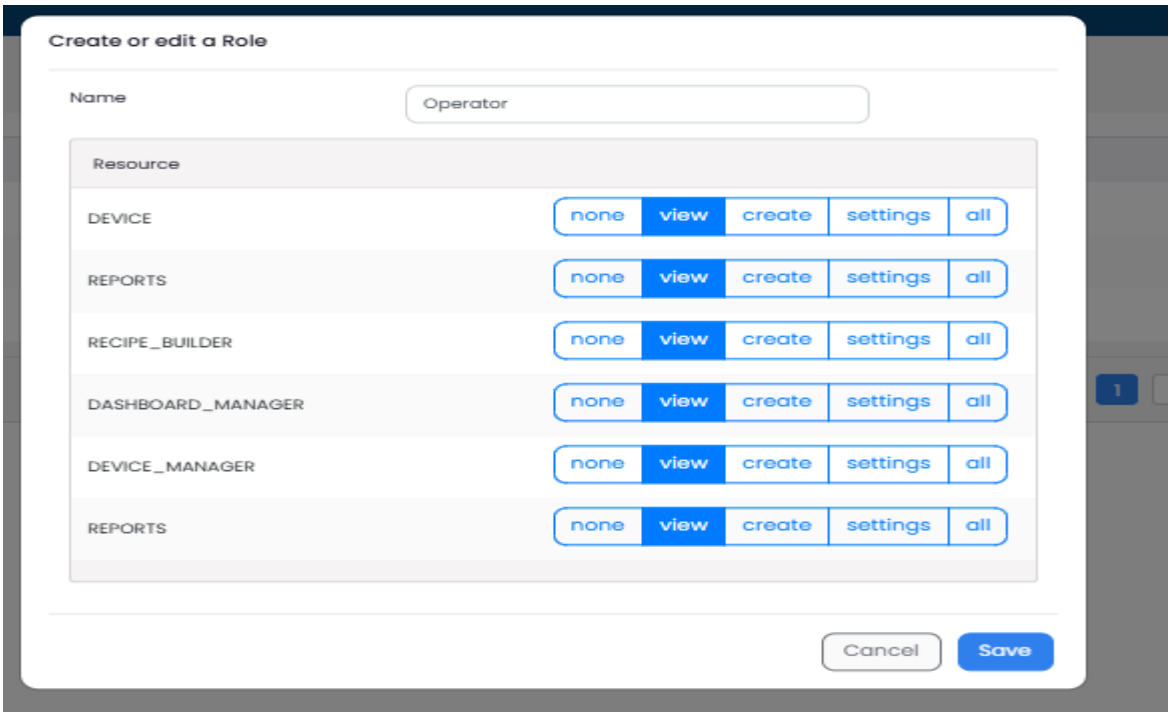


3. Role Edit

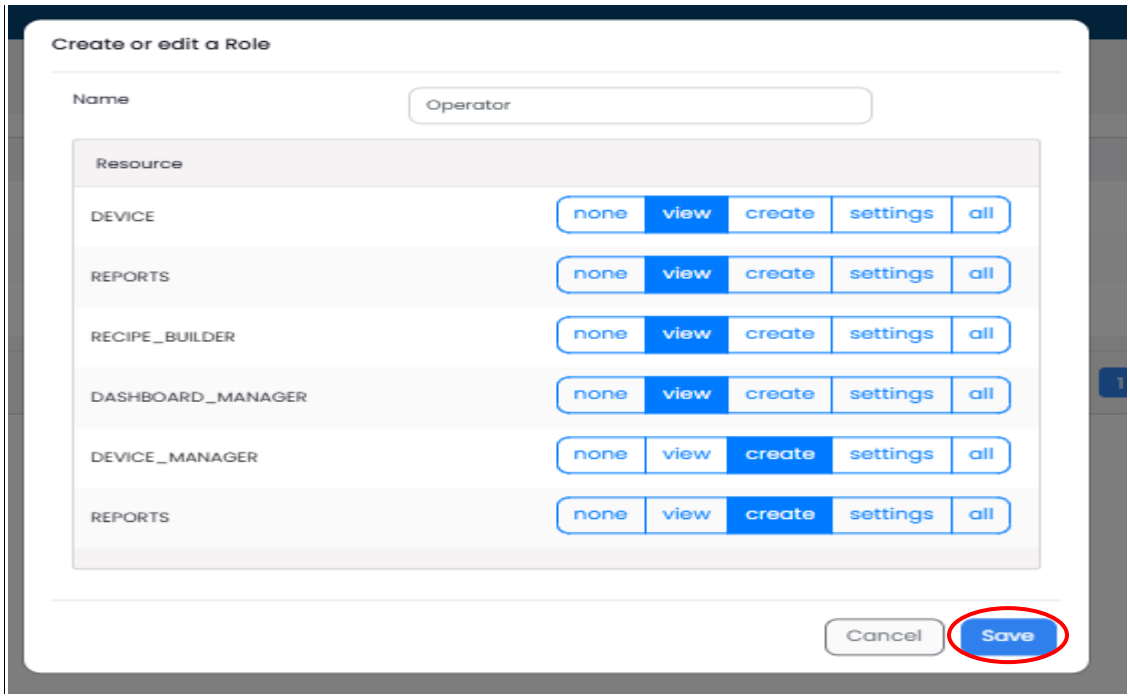
- Click on Edit button to update details as shown here.



- After clicking on edit button dialog will open as shown here.



- Change the required details click on save button as shown.



- Then role will update.

Access control of roles as shown in below table.

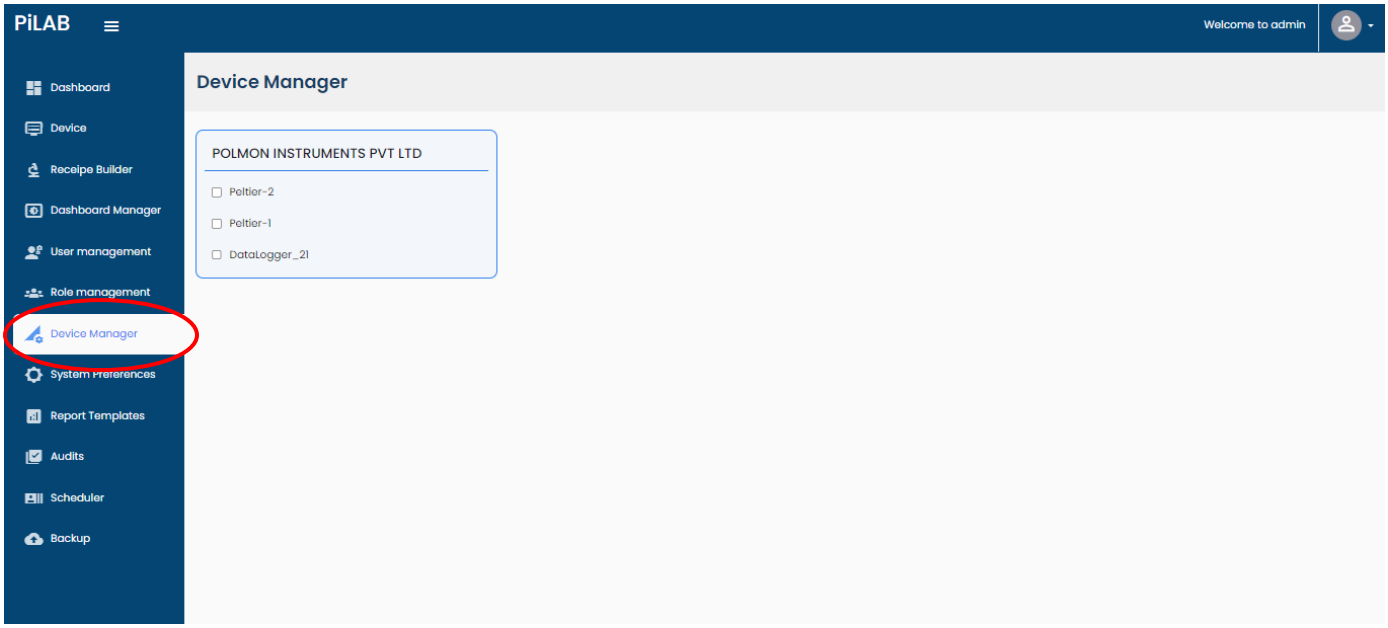
S.No.	Activity	Operator		Supervisor		Administrator	
1	**Dashboard**						
1.1	View	Yes		Yes		Yes	
1.2	Experiment Start	Yes		Yes		Yes	
1.3	Experiment Stop	Yes		Yes		Yes	
1.4	Experiment Pause	Yes		Yes		Yes	
1.5	Report View	Yes		Yes		Yes	
1.6	Report Download	Yes		Yes		Yes	
1.7	Configurations	Yes		Yes		Yes	
2	**Device**						
2.1	Device View	Yes		Yes		Yes	
2.2	Create a new Device	No		Yes		Yes	
2.3	Device Edit	No		No		Yes	
2.4	Device Delete	No		No		Yes	
3	**User-Management**						
3.1	Users View	No		No		Yes	
3.2	Create a new user	No		No		Yes	
3.3	User change password	Yes		Yes		Yes	
3.4	User activate or deactivate	No		No		Yes	
3.5	User edit/Modify	No		No		Yes	
4	**Role-Management**						
4.1	Roles View	No		No		Yes	
4.2	Create a new role	No		No		Yes	
4.3	Role edit/modify	No		No		Yes	
5	**System Preferences**						
5.1	System Preferences View	No		No		Yes	
5.2	System Preferences Edit/save	No		No		Yes	
6	**Report Templates**						
6.1	Report Templates View	Yes		Yes		Yes	
6.2	Create a New Report Template	No		Yes		Yes	
6.3	Report Templates Edit	No		No		Yes	
6.4	Report Templates Delete	No		No		Yes	
7	**Dashboard Manager**						
7.1	View	Yes		Yes		Yes	
7.2	Create	No		Yes		Yes	
7.3	Edit	No		No		Yes	

S.No.	Activity	Operator		Supervisor		Administrator	
7.4	Delete	No		No		Yes	
8	**Audits**						
8.1	Audits View	No		No		Yes	
8.2	Print Audits Table	No		No		Yes	
9	**Device Manager(Permissions)**						
9.1	Add User	No		Yes		Yes	
10	**Recipe Builder**						
10.1	View	Yes		Yes		Yes	
10.2	Create	No		Yes		Yes	
10.3	Edit	No		No		Yes	
10.4	Delete	No		No		Yes	
11	**Schedulers**						
11.1	Create	No		Yes		Yes	
11.2	Edit	No		No		No	
11.3	Delete	No		No		No	
12	**Backups**						
12.1	Backup now	No		Yes		Yes	
13	**Reports**						
13.1	View	Yes		Yes		Yes	
13.2	Download	Yes		Yes		Yes	

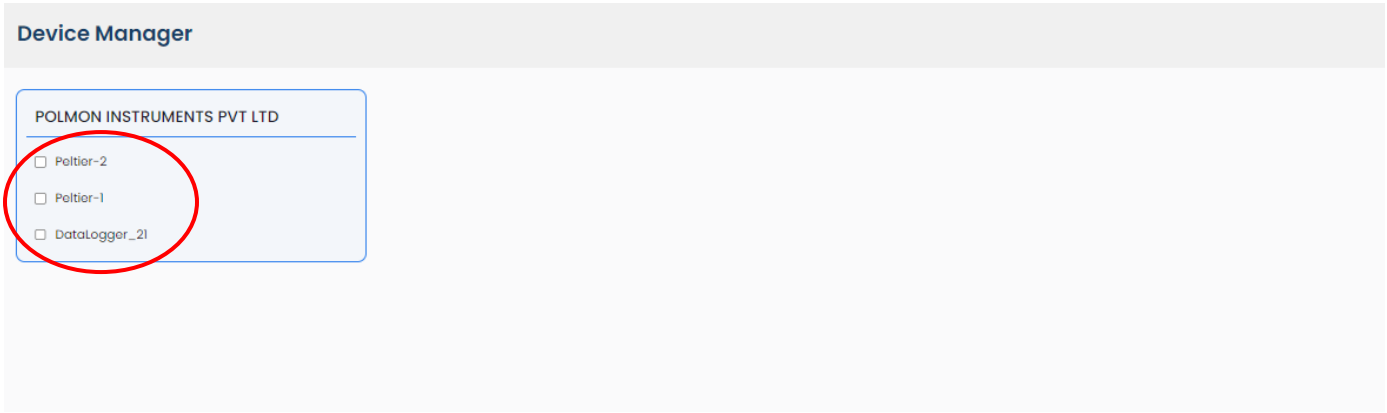
10. Device Manager

1. Device Manager Page

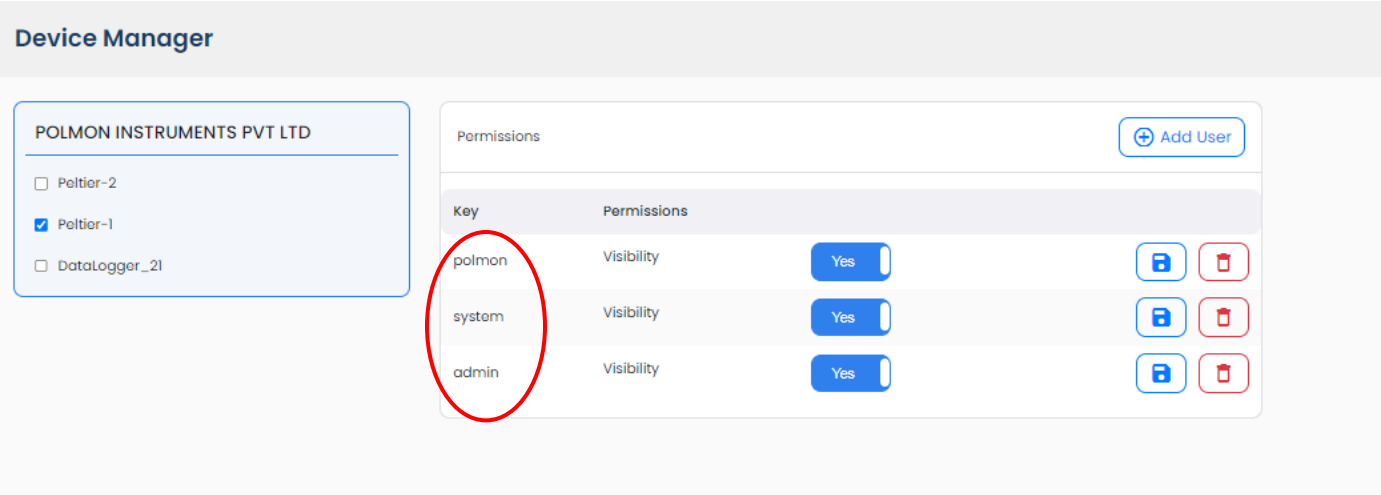
- In Device Manager Page we give permissions to users for devices.
- If we go to device manager page will display as shown here.



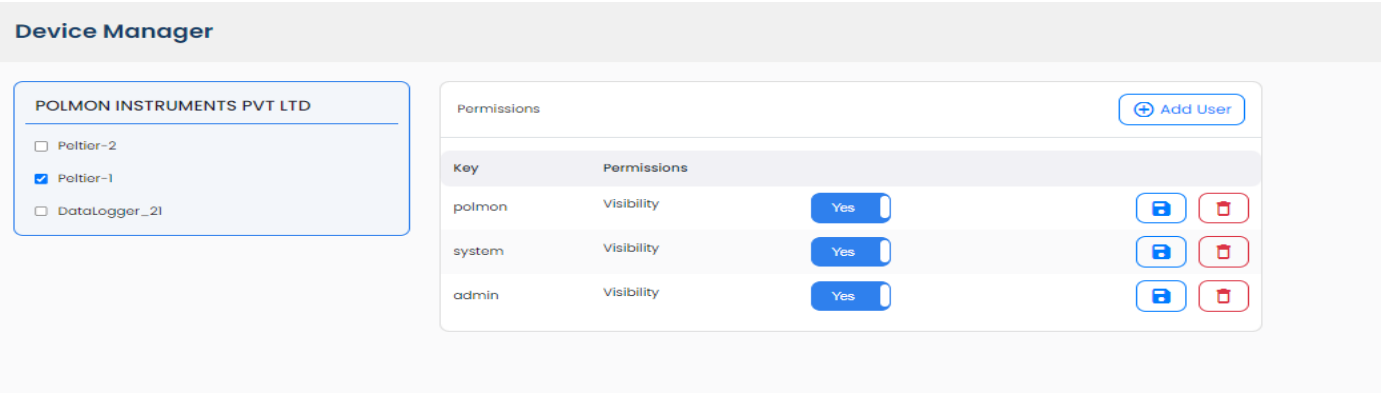
- All the created devices will present in device manager page.
- Click on particular device whatever you want to give permissions as shown.



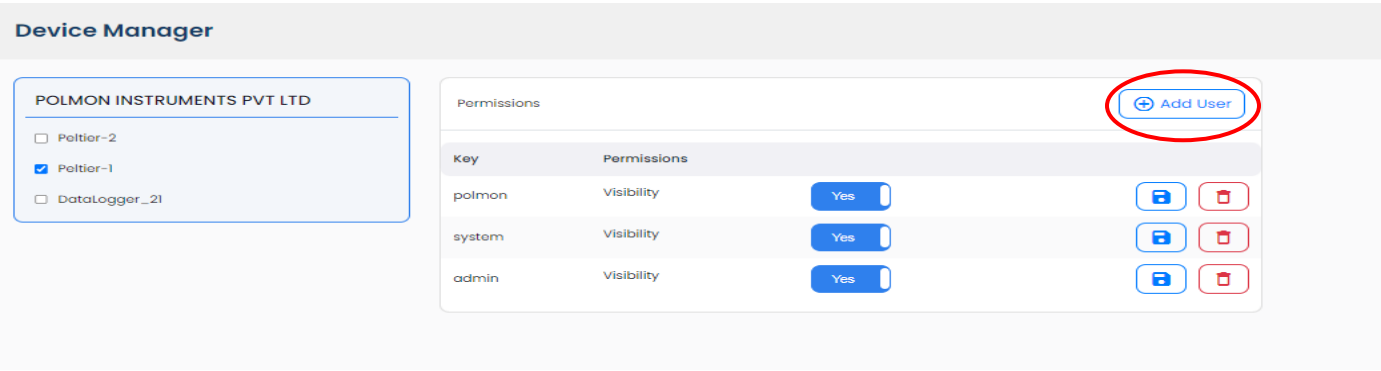
- After clicking on device page, it will display as shown here.
- Here users which are having permissions to that device will display.



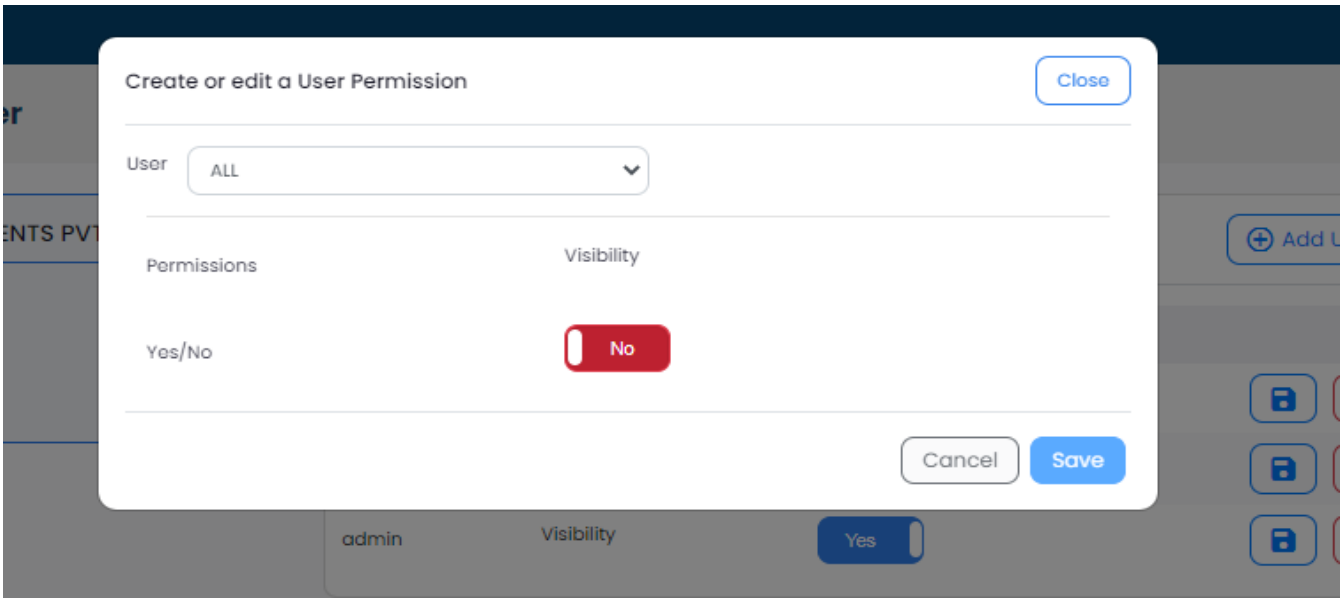
2. **Add user permissions**
   - To give permissions to device first click on device as shown here.



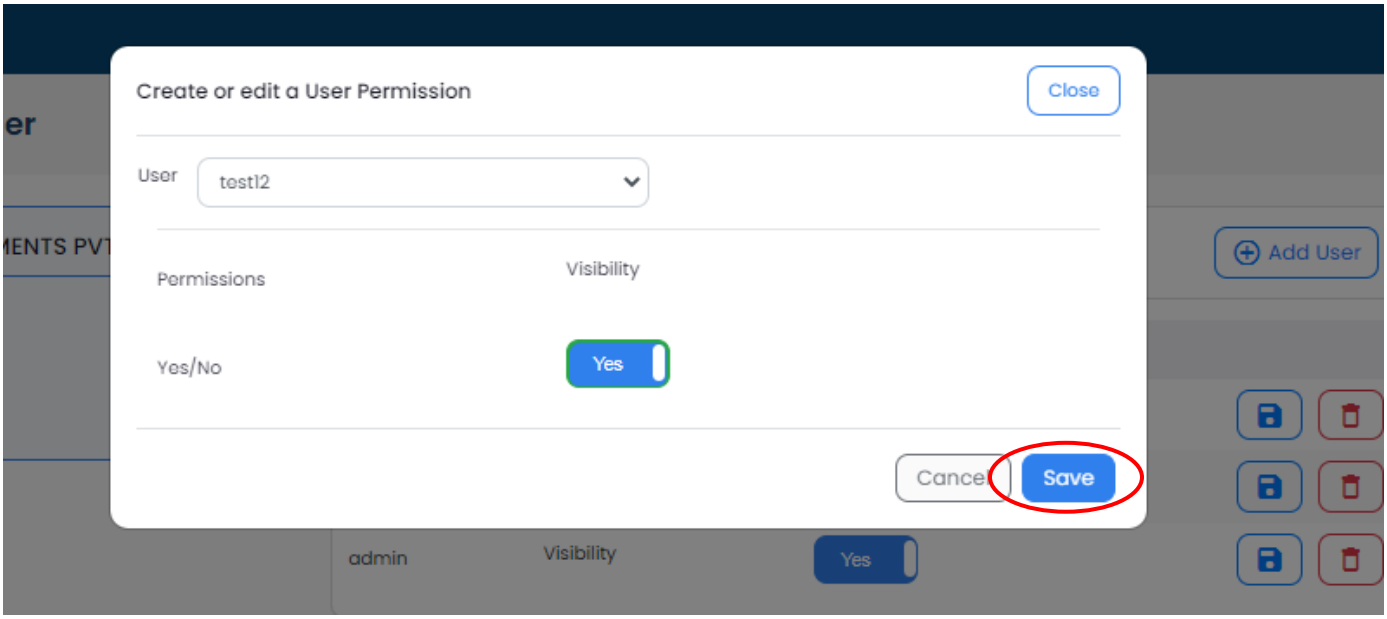
   - Then click on add user button as shown.



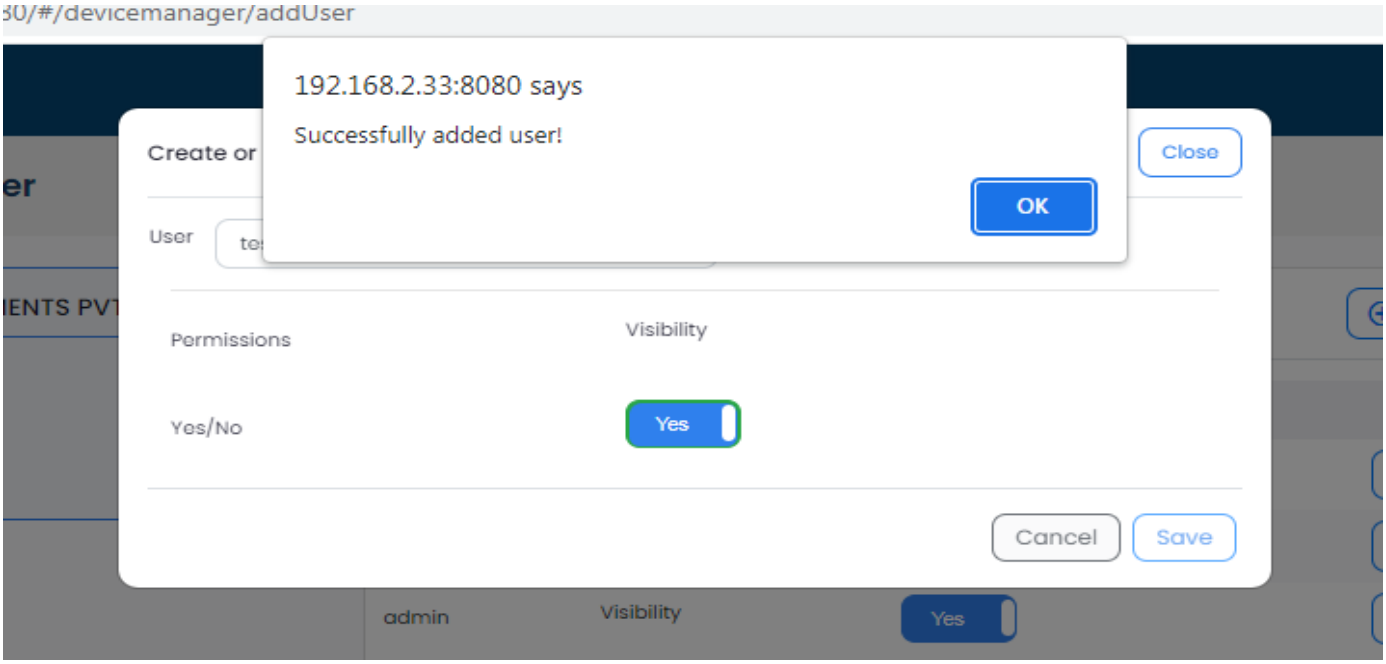
   - After clicking on add user button dialog will open as shown here.



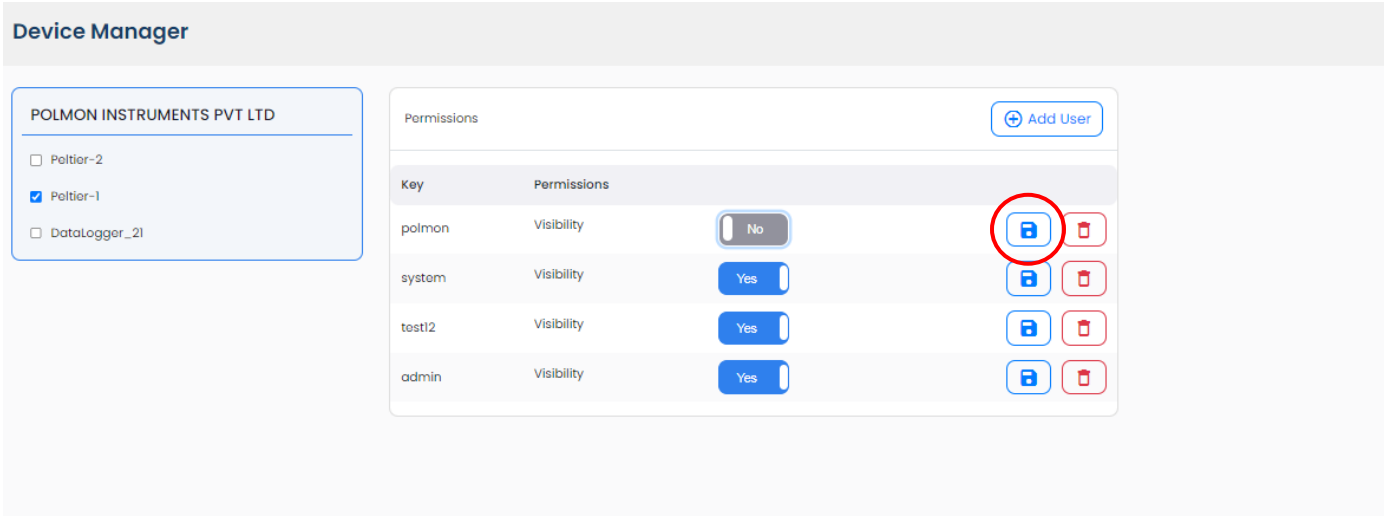
- Then select user from drop down and make visibility toggle button Yes as shown here.
- Then click on save button.



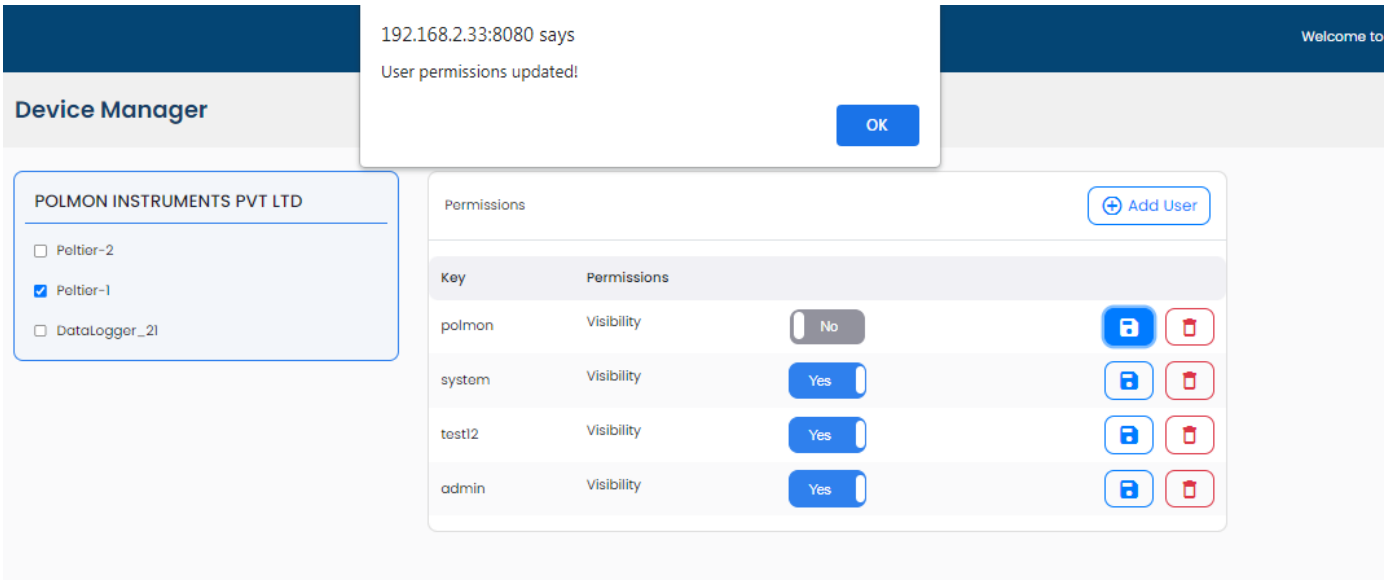
- Then permission added for that device as shown.



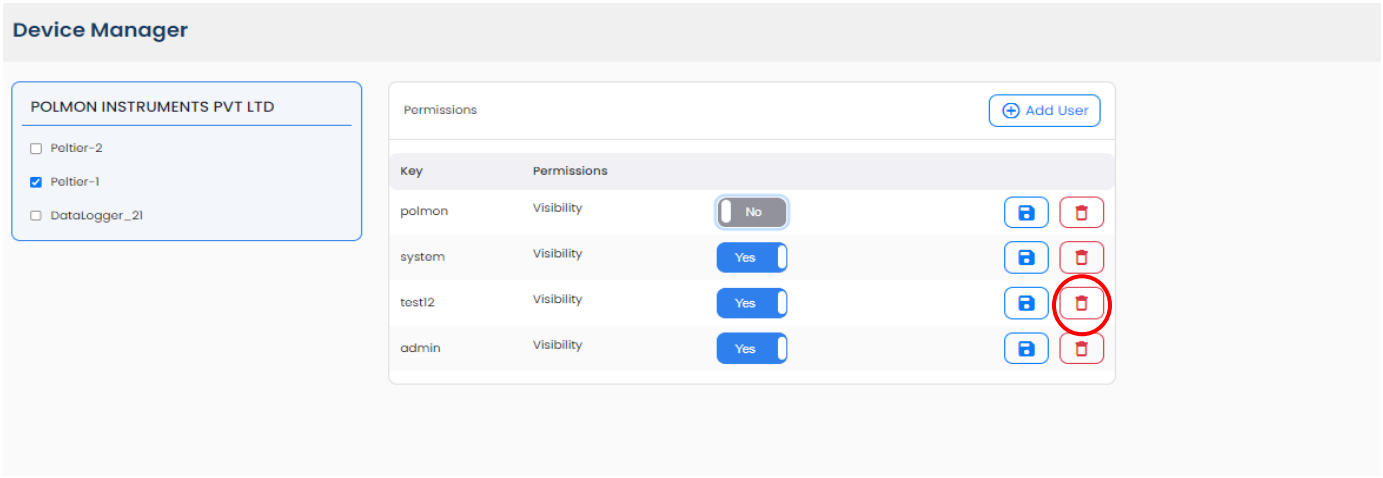
3. **Update user permissions**
   - To update existing user permissions change visibility click button as shown here.



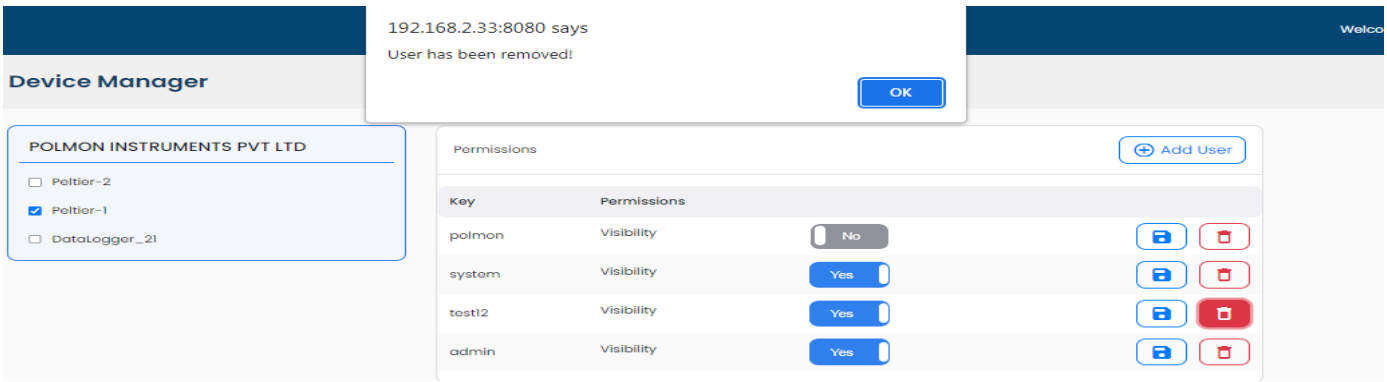
- After clicking on update button permissions will update as shown here.



4. **Remove user permissions**
   - To remove permissions to device click on delete button as shown here.



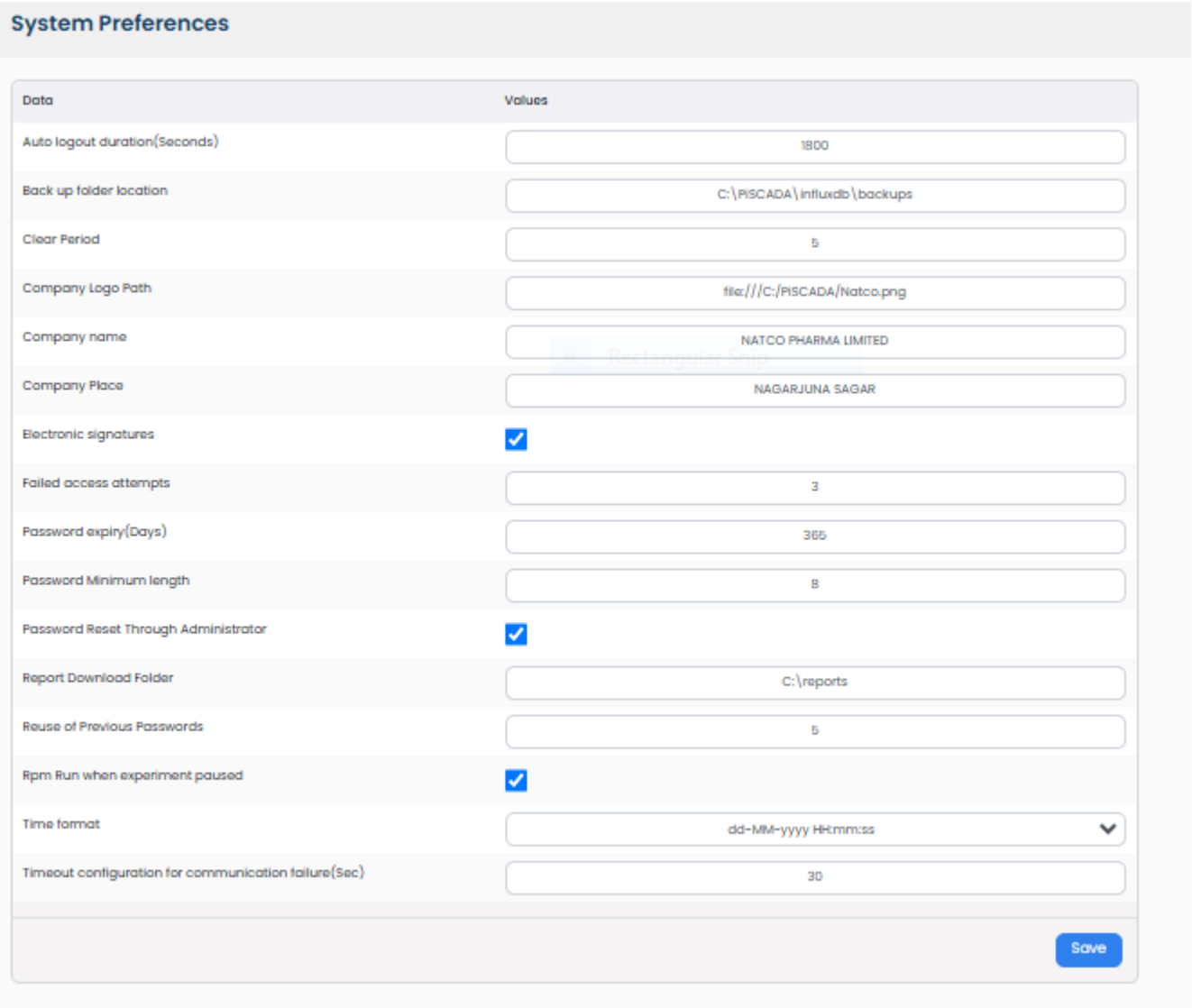
- Then user permissions will remove as shown here.



11. System Preferences

1. System preferences Page

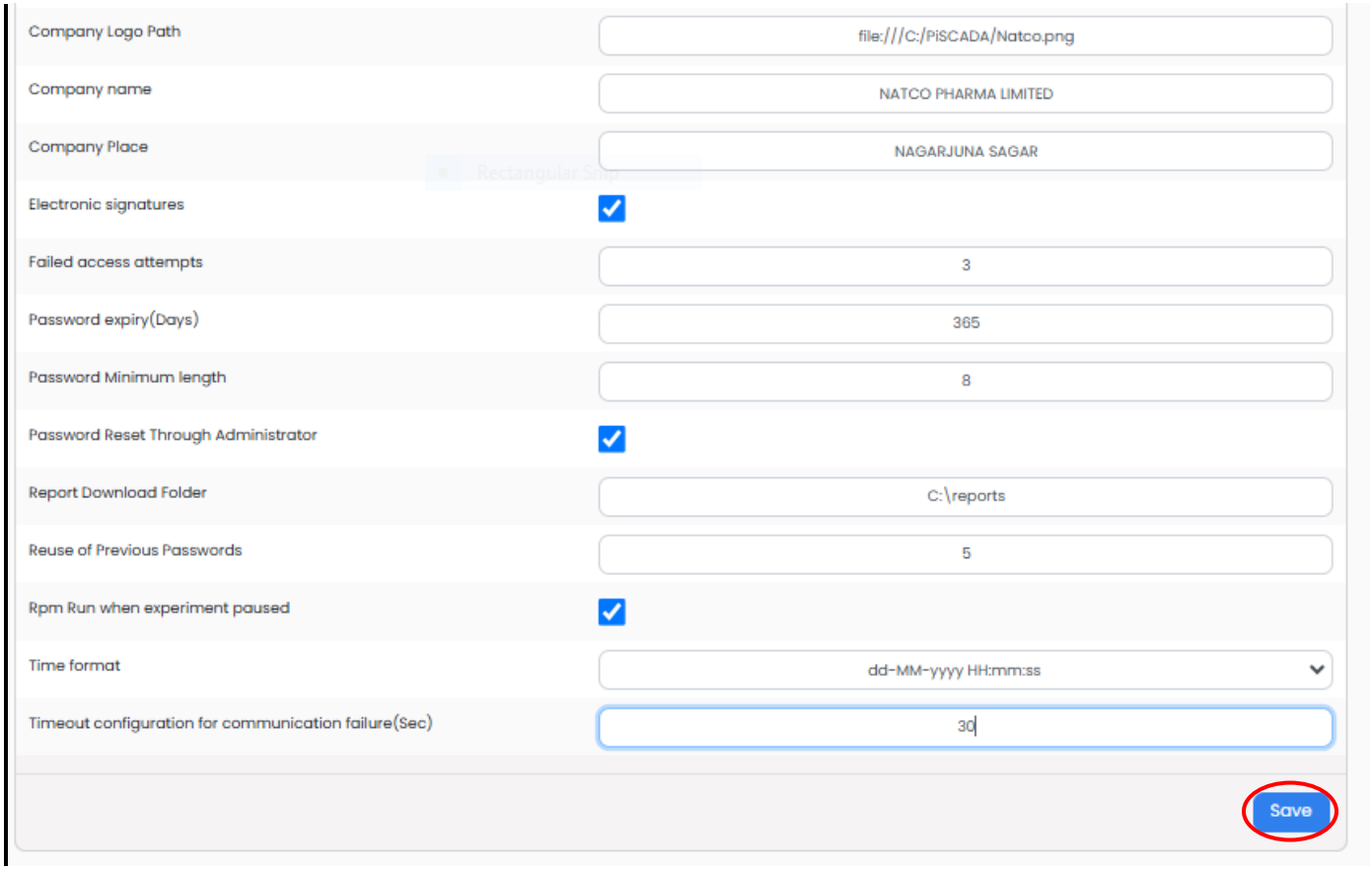
- If we go to system preferences, page will display as shown here.



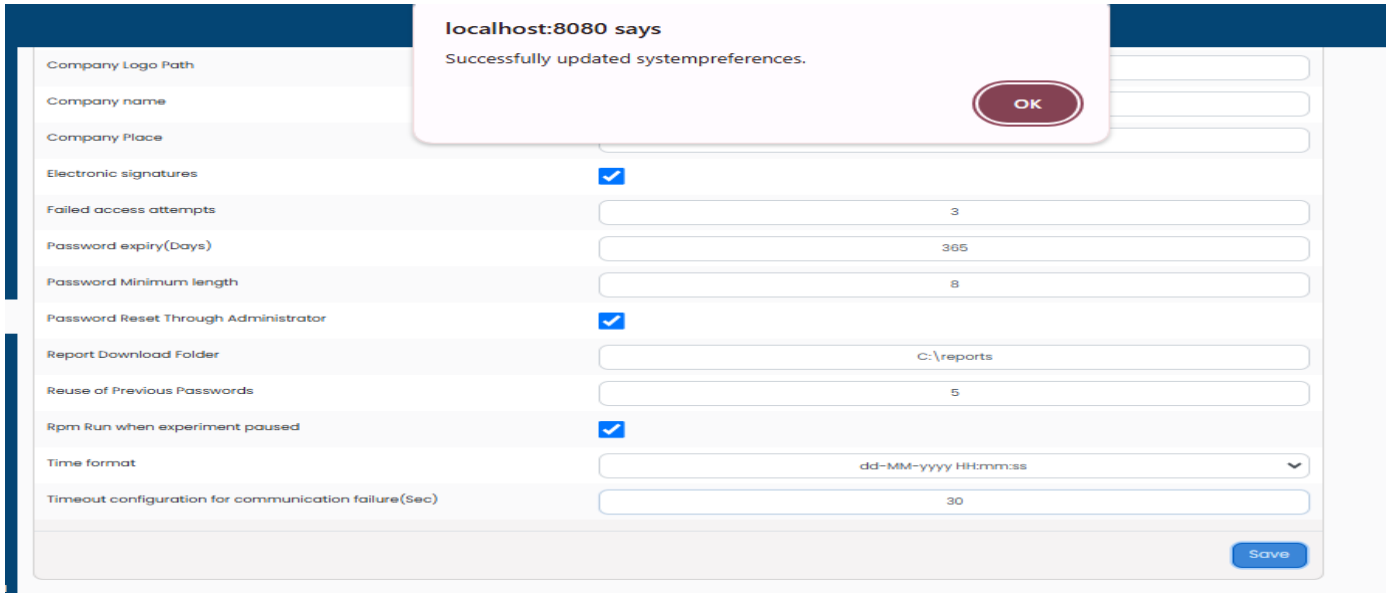
- System preferences having fields which are used in entire PiLAB System.

2. Update System Preferences

- Change data and click on save button as shown below.



- After clicking on save button it will display alert as shown here.

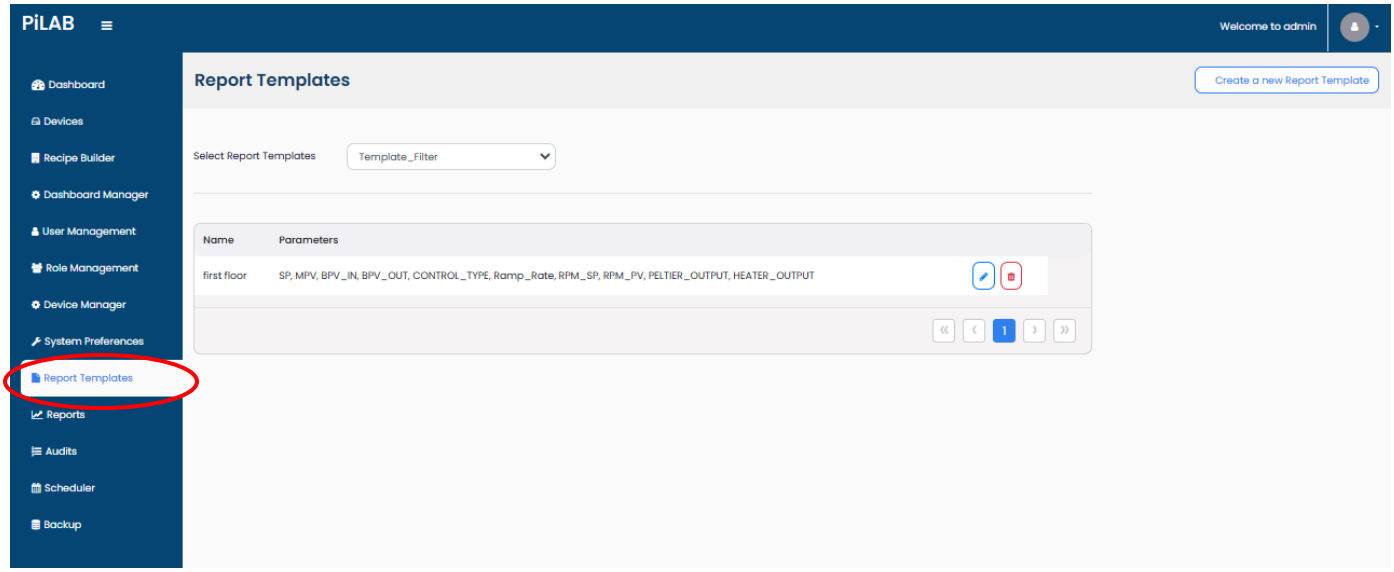


3. **Auto logout duration(Seconds)**
    - After login to PiLAB, if the user is inactive more than the '**Auto logout duration'** then user account shall be logged out automatically.
4. **Backup folder location**
    - In PiLAB, the devices PV's and Configuration backup download path should be mentioned here. If any backup is taken from PiLAB the backup shall be saved in the given path. Path must be in this format only**. Ex: "C:\PiLAB\influxdb\backups".**
5. **Company Logo Path**
    - Whatever Logo is required in Reports, the "logo path" must be given here. You can copy the path here this logo can be used in right side of the reports. Path must be in this format only. **Ex: file:///C:/ PiLAB /polmon.png.**
6. **Company Name**
    - Whatever company name is required in Reports, we should mention that company name here.
7. **Company Place**
    - Whatever company place is required in Reports, we should mention that company place here.
8. **Failed access attempts**
    - While login to PiLAB, if wrong password is entered more than the **"Number of wrong password attempts"**, then user account shall be locked.
9. **Password Expiry(Days)**
    - User password will expire after days mentioned in **"Password Expiry (Days)"** field.
10. **Password Minimum Length**
    - The user's password minimum length can be configured here and PiLAB doesn't allow creating the password with less than the minimum length.
11. **Password Reset Through Administrator**
    - If password reset through administrator is checked then only Administrator can reset the expired password of the user, if it is unchecked user can reset the expired password.
12. **Report Download Folder**
    - All the Scheduled reports will download in this folder path, Ex: C:\reports.
13. **Reuse of Previous Passwords**
    - In PiLAB up to how many previous passwords can be reused.
14. **Time format**
    - All reports time format can be configured here, by selecting the **"Time format"** from the drop down list.
15. **Timeout configuration for communication failure**
    - We can configure the "Timeout for communication failure between Device and PiLAB". If the communication failure is more than or equal to configured timestamp in this field then "communication failure" will generate.

12. Report Templates

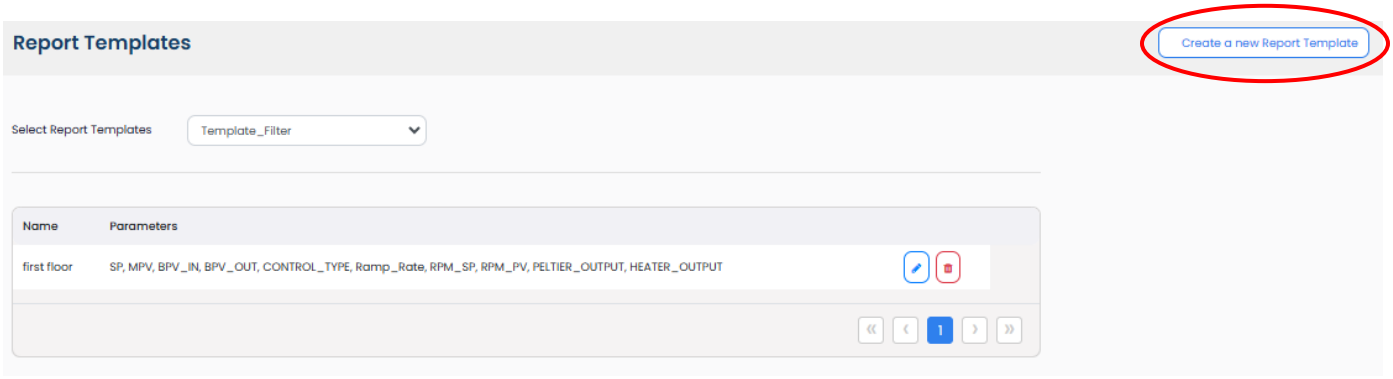
1. Report Templates page

- If we go to report templates page all the created reports will display as shown here.

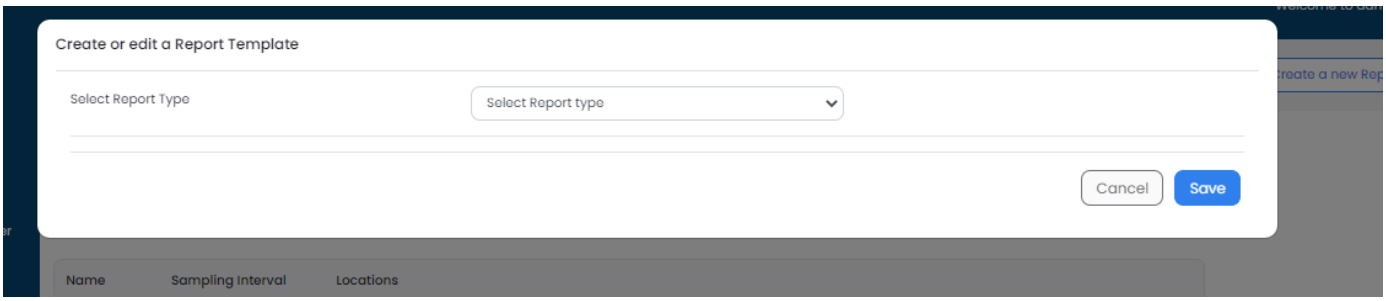


2. Report Templates Creation

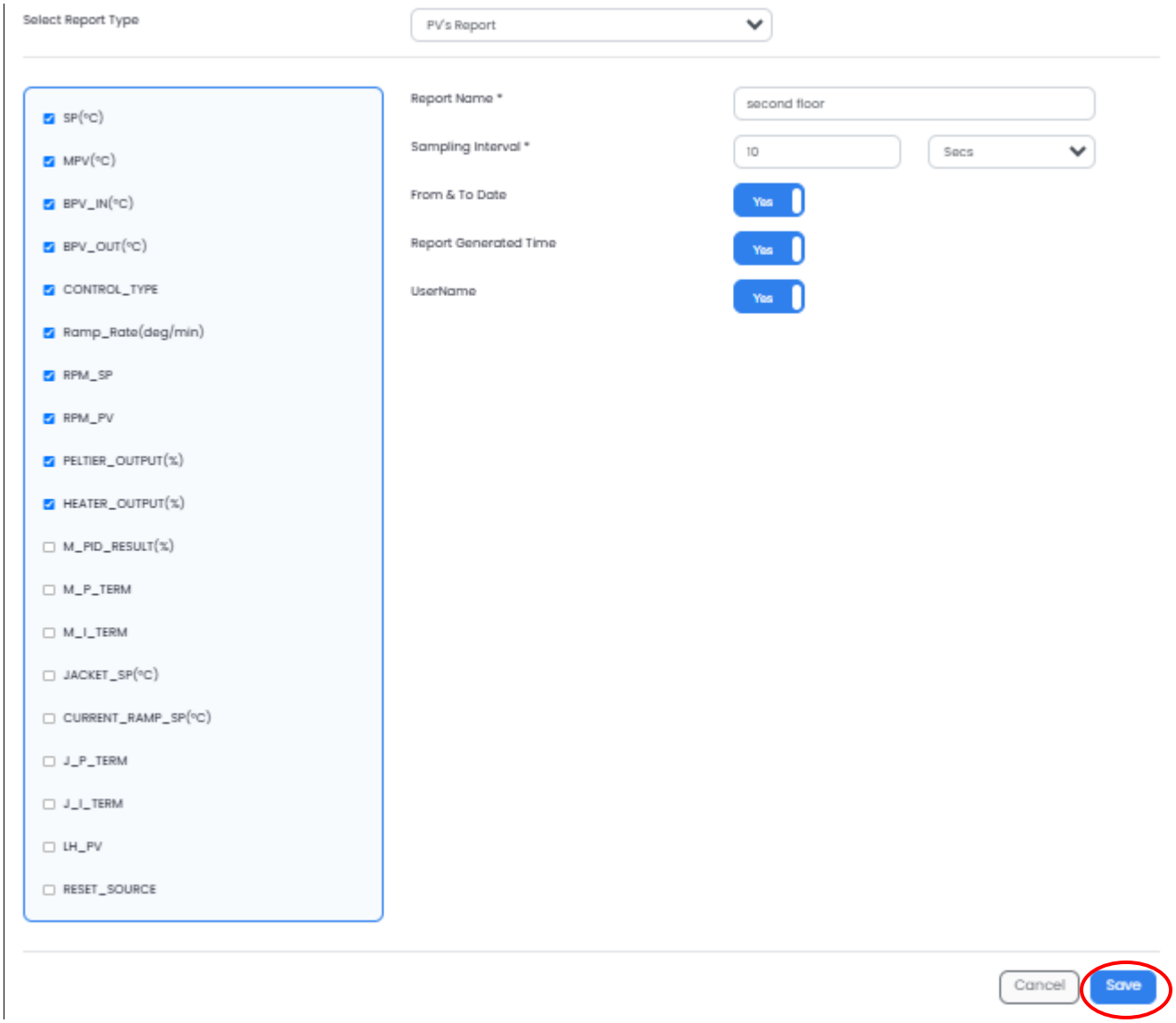
- Click on create new report button as shown here.



- After clicking on button dialog will open as shown.



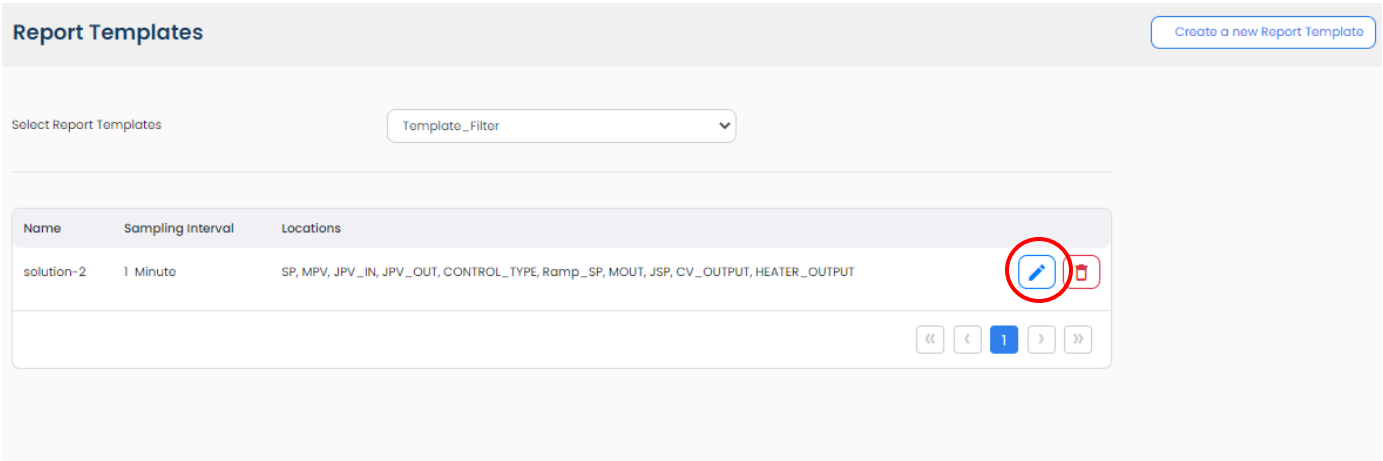
- Select required parameters and enter data then click on save button as shown.



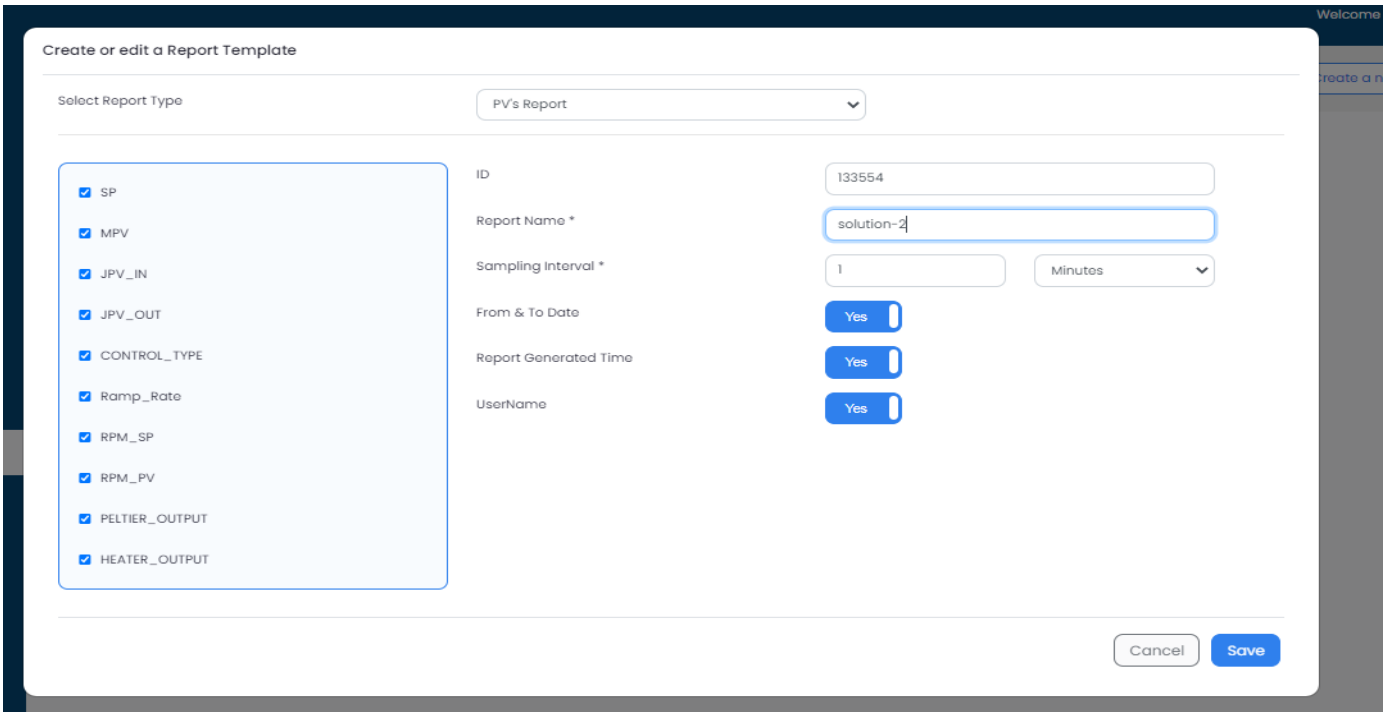
- Report template will create.

3. Report Templates Edit

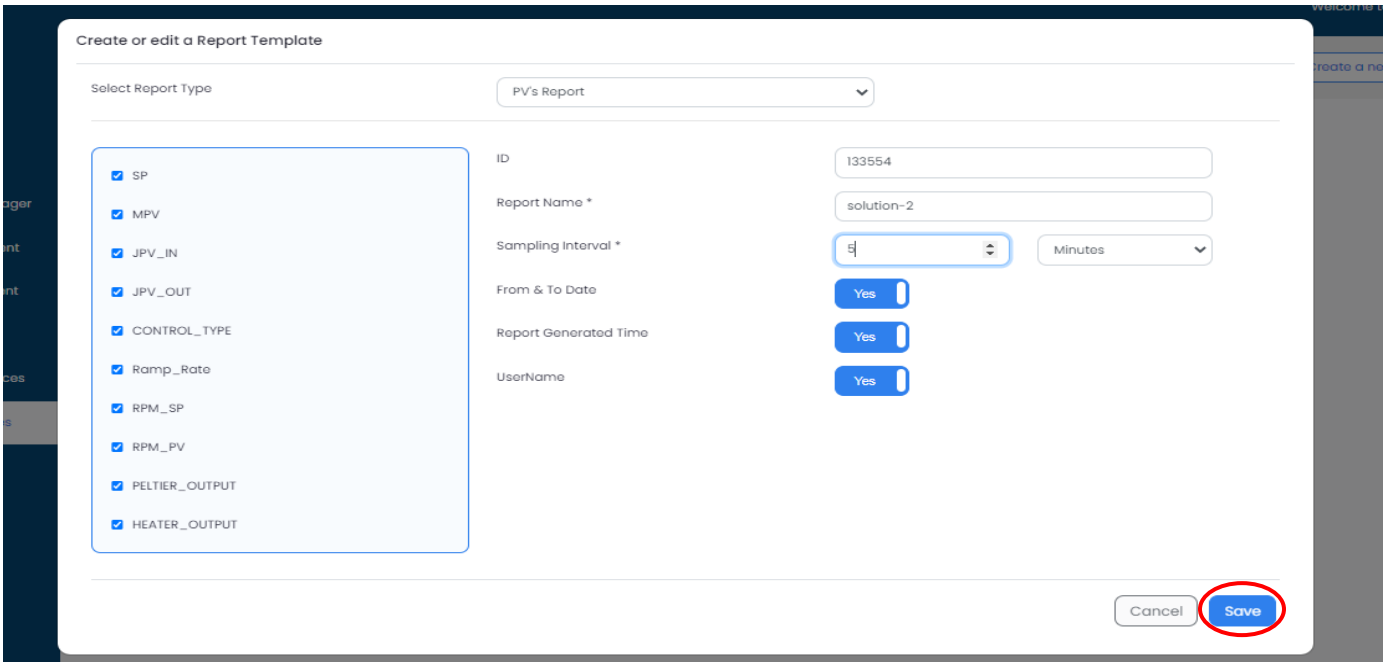
- Click on Edit button as shown here.



- After clicking on edit button dialog will open as shown.

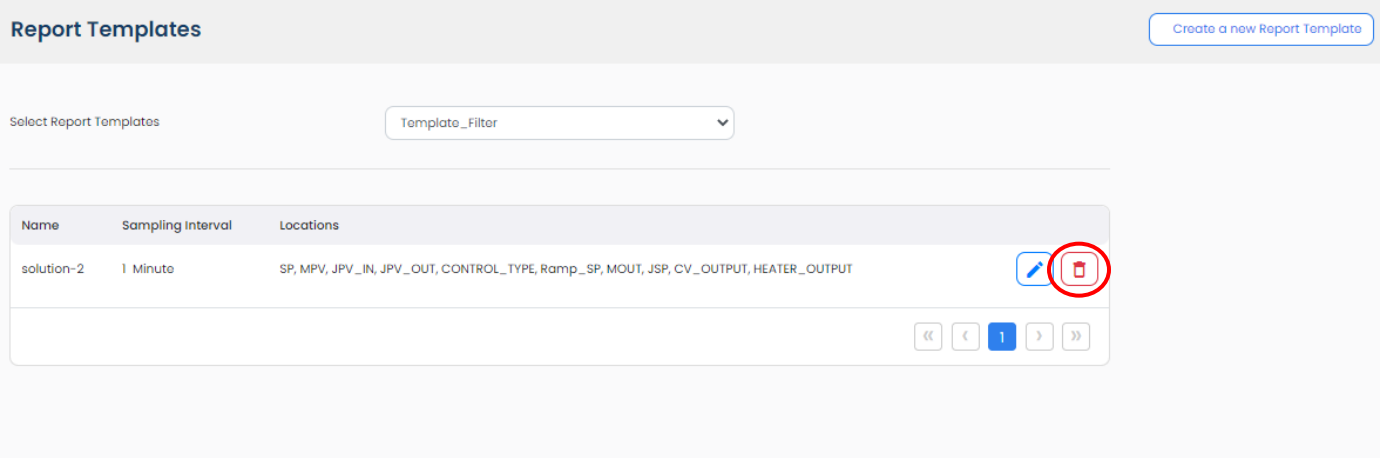


- Update required data click on save button.

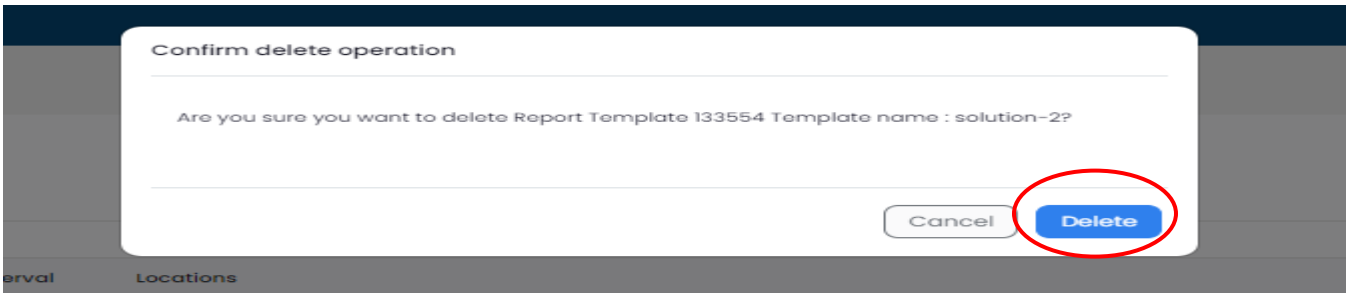


- Then report template will update.

4. **Report Template delete**
   - Click on delete button to delete report template as shown here.



   - After clicking on delete button it will ask for confirmation, click on Delete as shown.

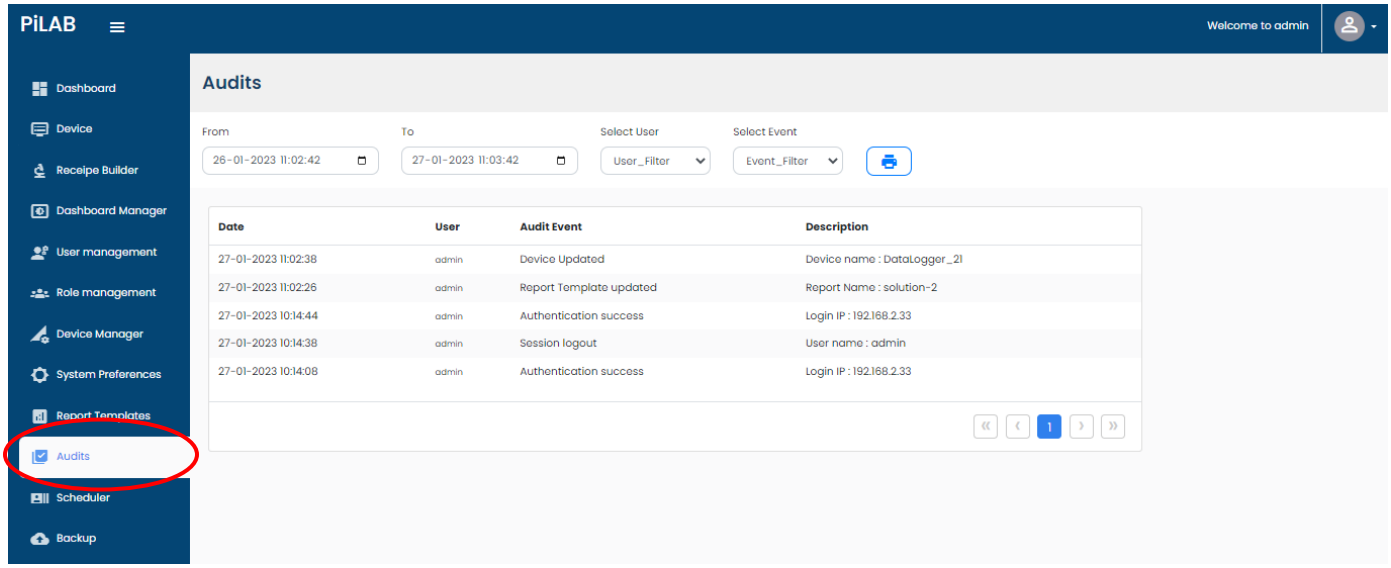


   - Then report template will delete.

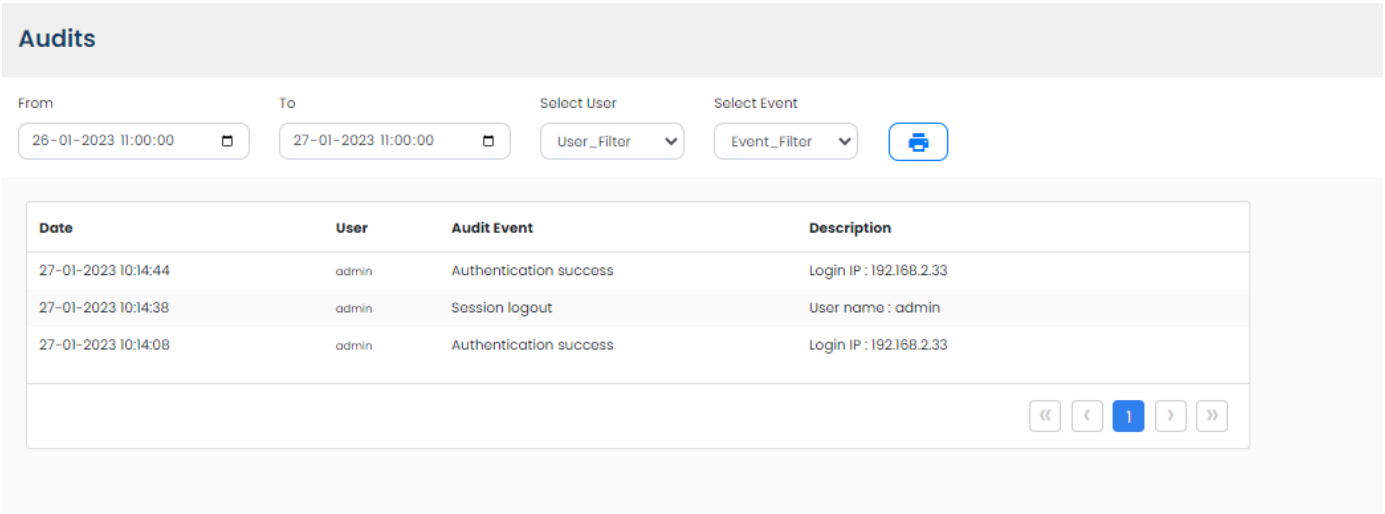
13. Audits

1. Audits Page

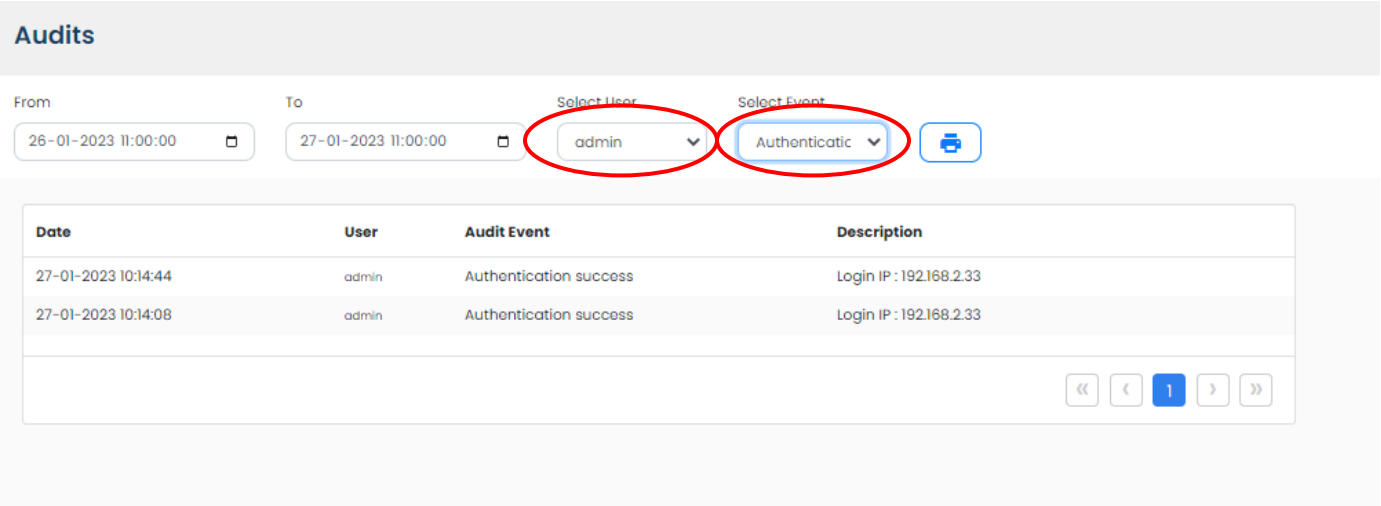
- If we go audits page all audit events of PiLAB will display as shown.



- We can see all events of PiLAB in Audits Page.
- We can Filter Audits using Date filter, User Filter and Event Filter.
- If we select from and to date then all audit events in that duration will display as shown.

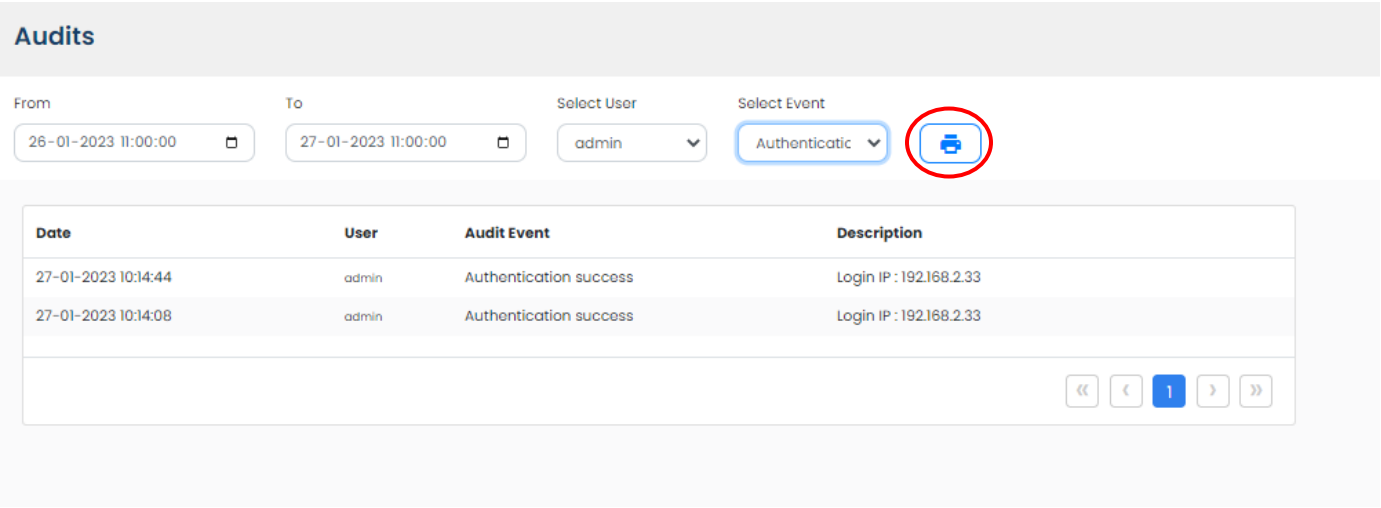


- We can filter audits depending on user and event filters as shown.



2. Audits Report

- We can also down report of audits.
- Click on print button to download audit report as shown here.

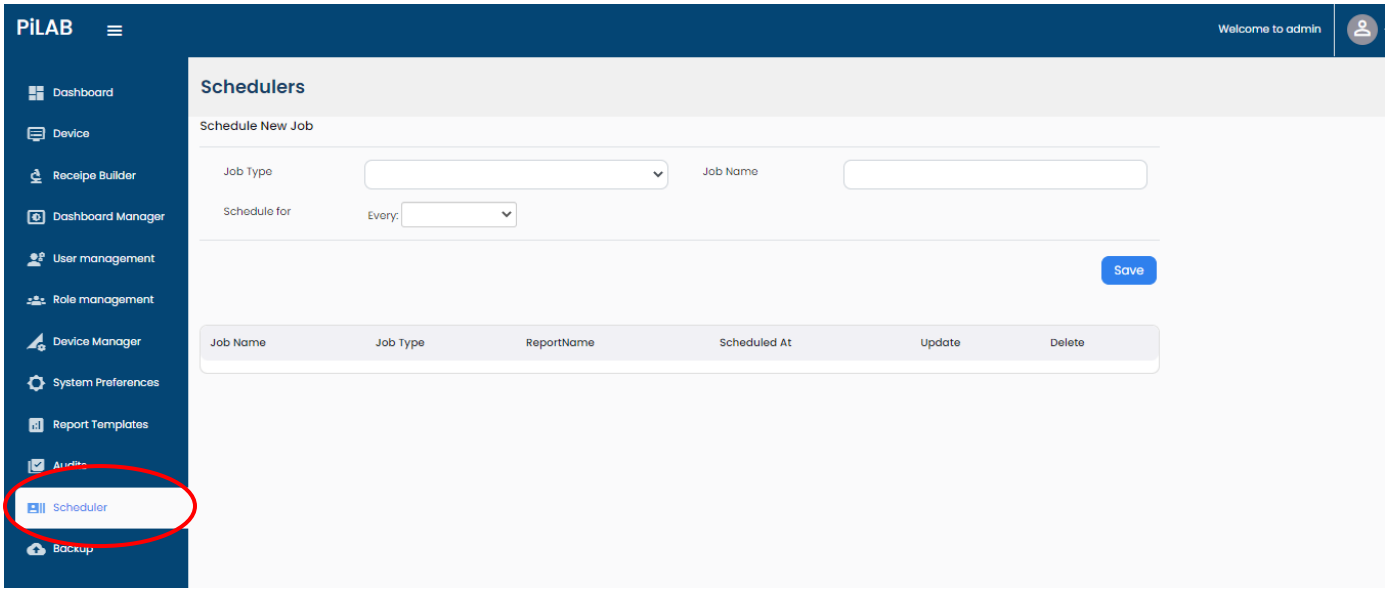


- Then report will download.

14. Scheduler

1. Scheduler Page

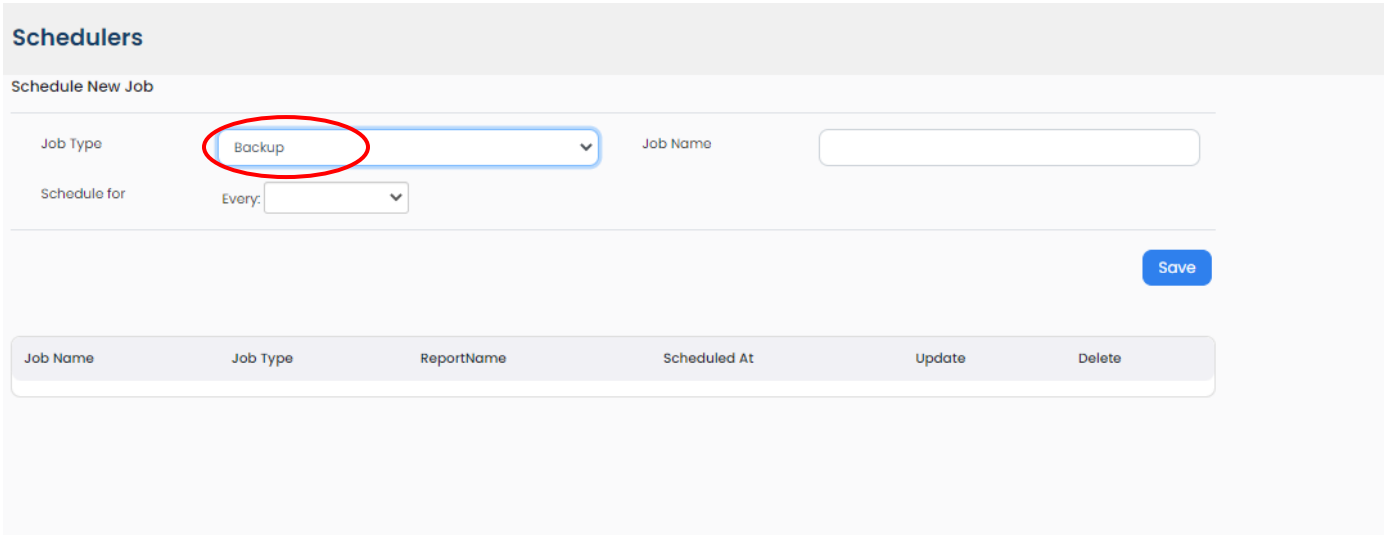
- If we go to scheduler page will display as shown here.



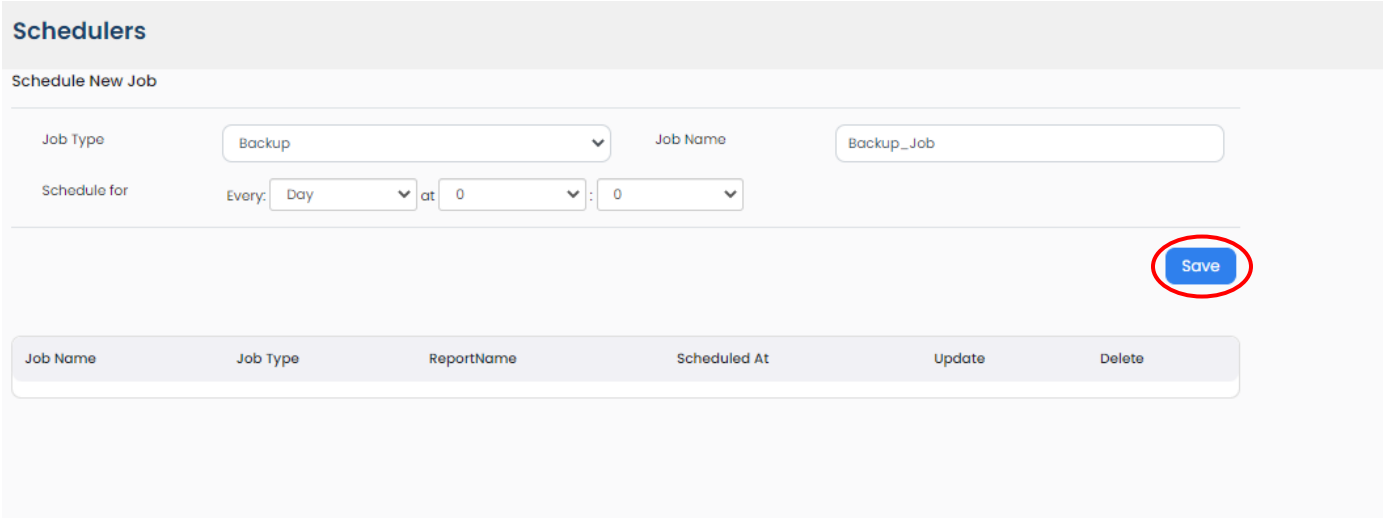
- We can create, update and delete the Schedule job in Schedule page.

2. Schedule Job Creation

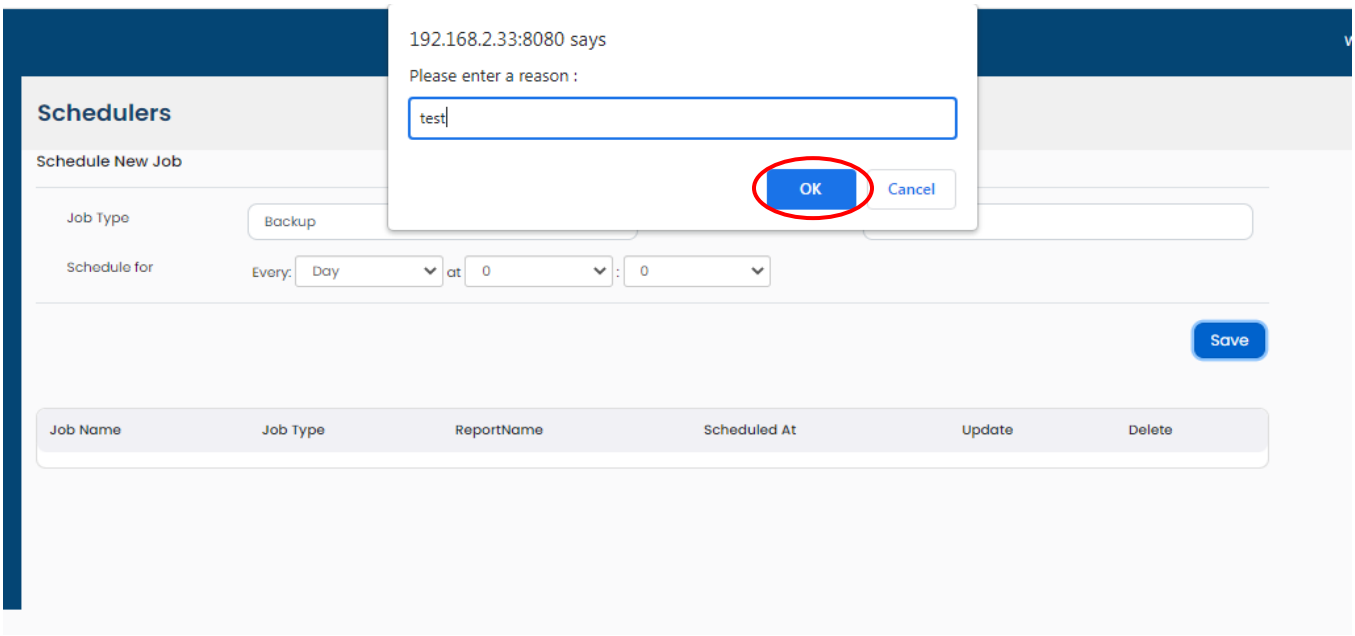
- In Scheduler page we can create new schedule job.
- Select job type from dropdown as shown here.



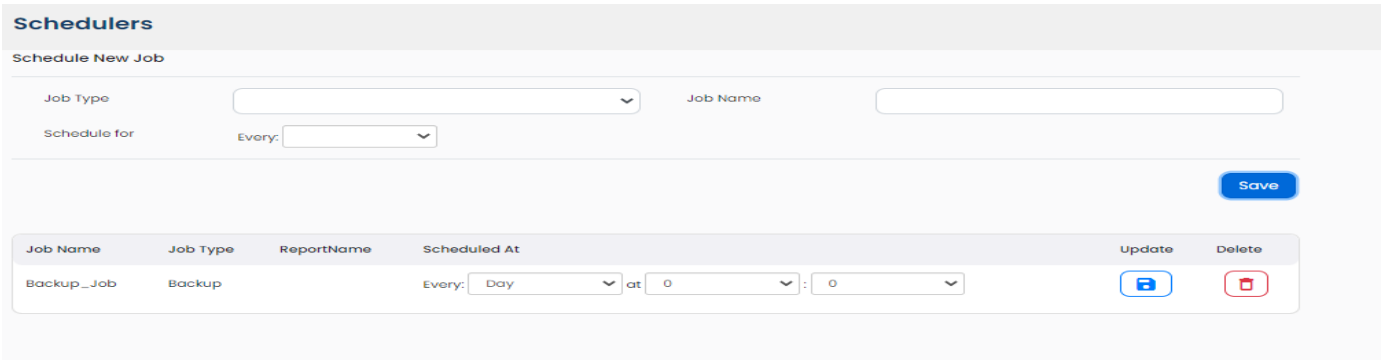
- Now Enter Job Name and select Schedule for from dropdown as shown here.
- Then click on save button.



- After Clicking on save button it will ask for reason as shown here.
- Enter reason click on OK.

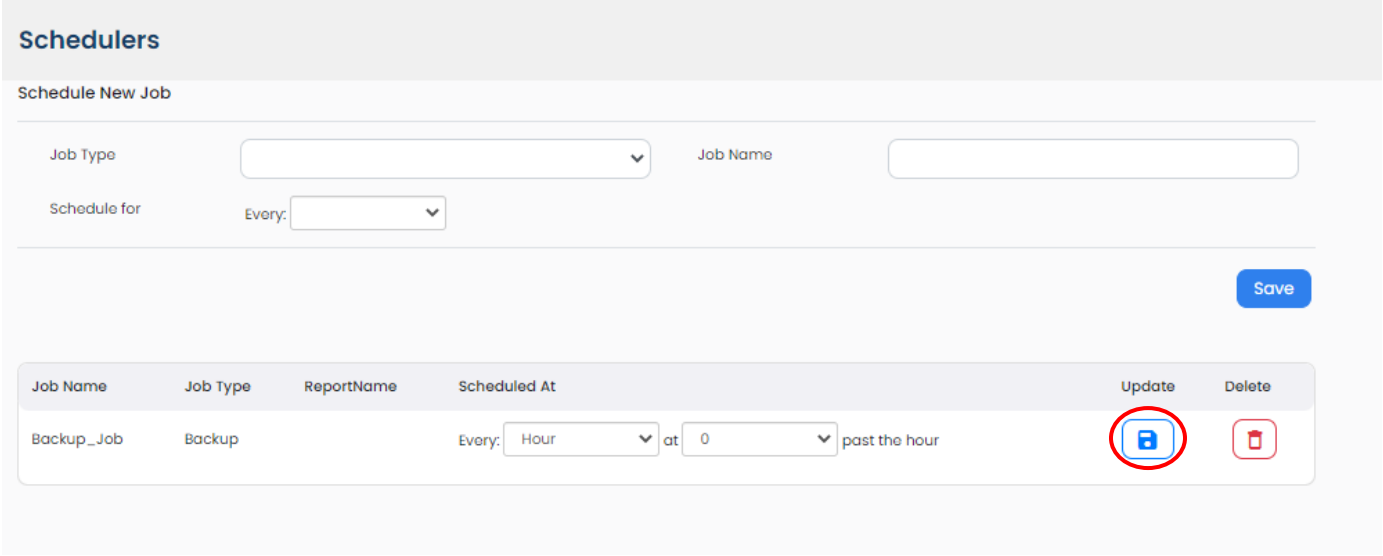


- Then schedule job will create as shown here.

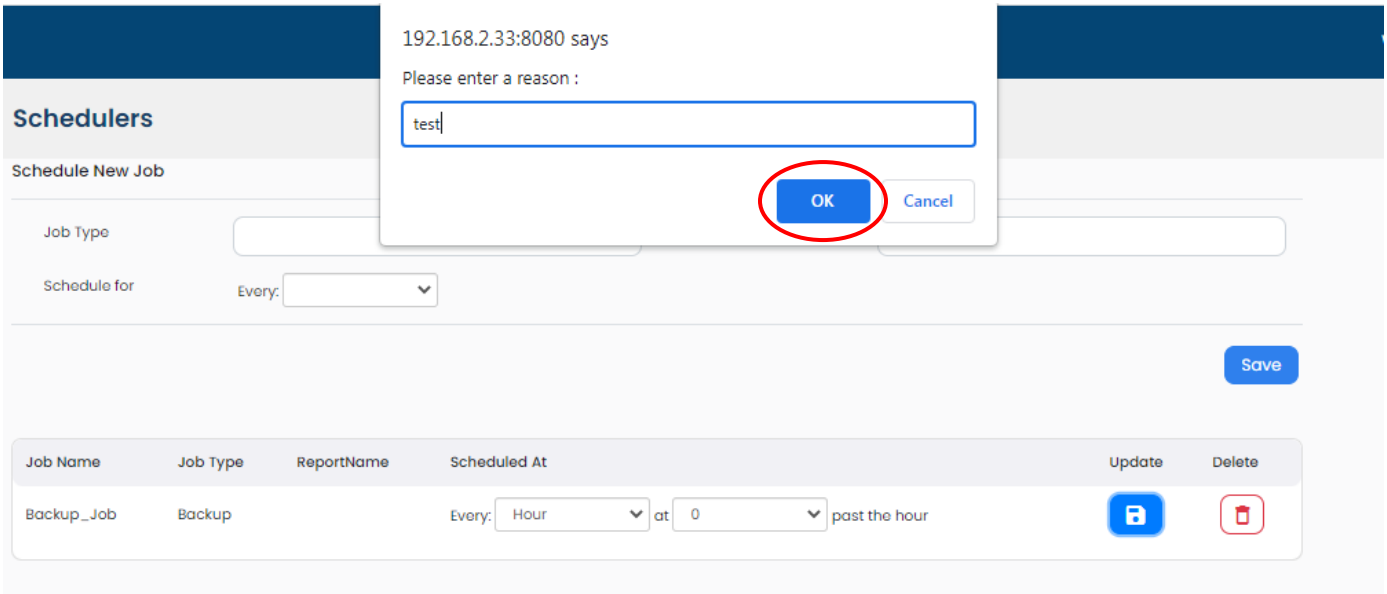


3. Schedule Job Edit

- Change data of the schedule job and click on update button as shown.

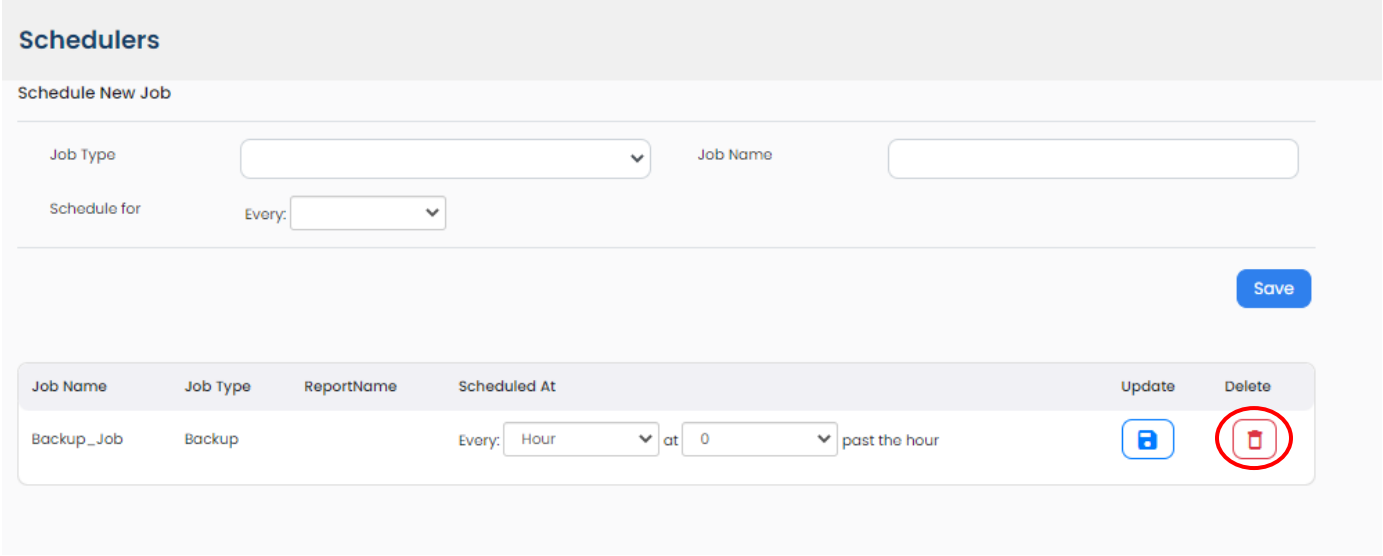


- Then it will ask for reason enter reason and click on OK button as shown here.

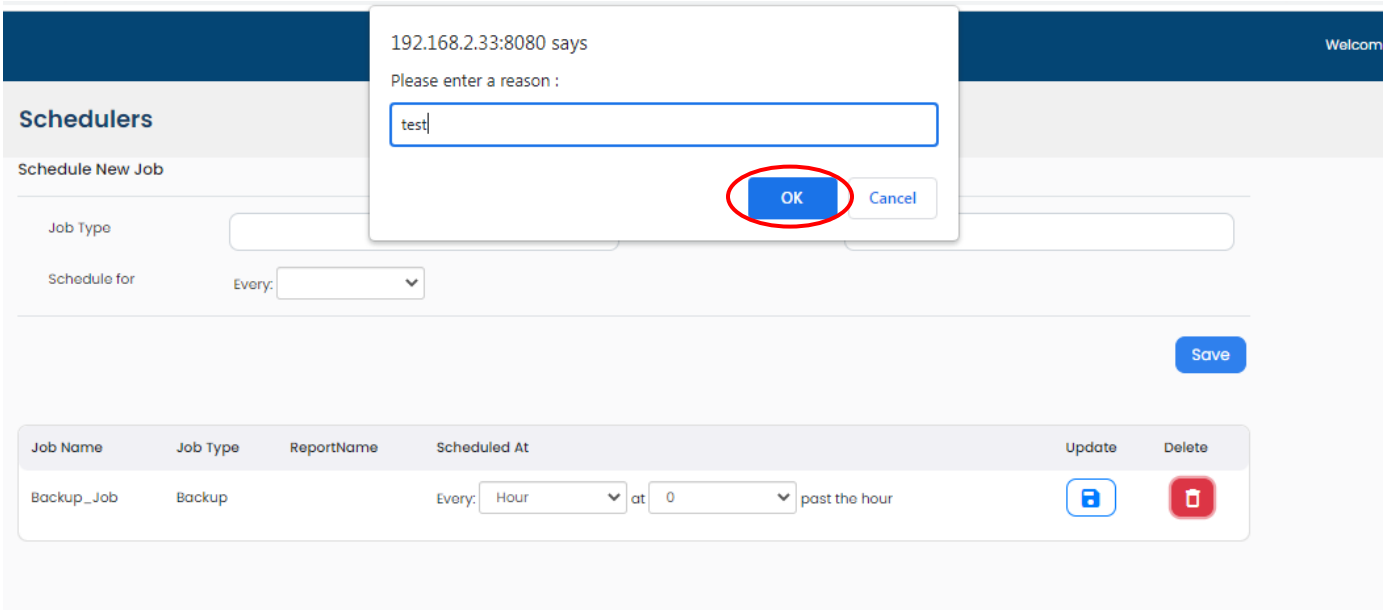


- Then schedule job will update.

4. **Schedule Job Delete**
   - Click on delete button to delete schedule job as shown here.



   - After clicking on delete button it will ask reason enter reason and click on OK button.

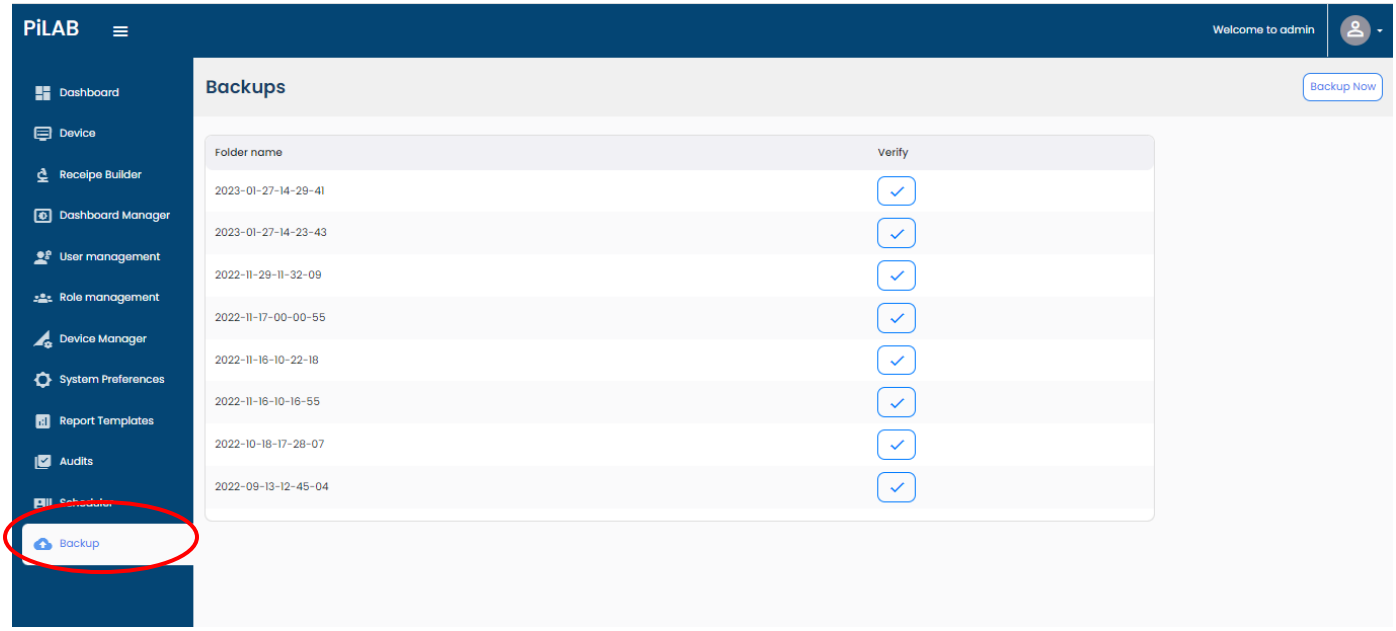


   - Then schedule job will delete.

15. Backup

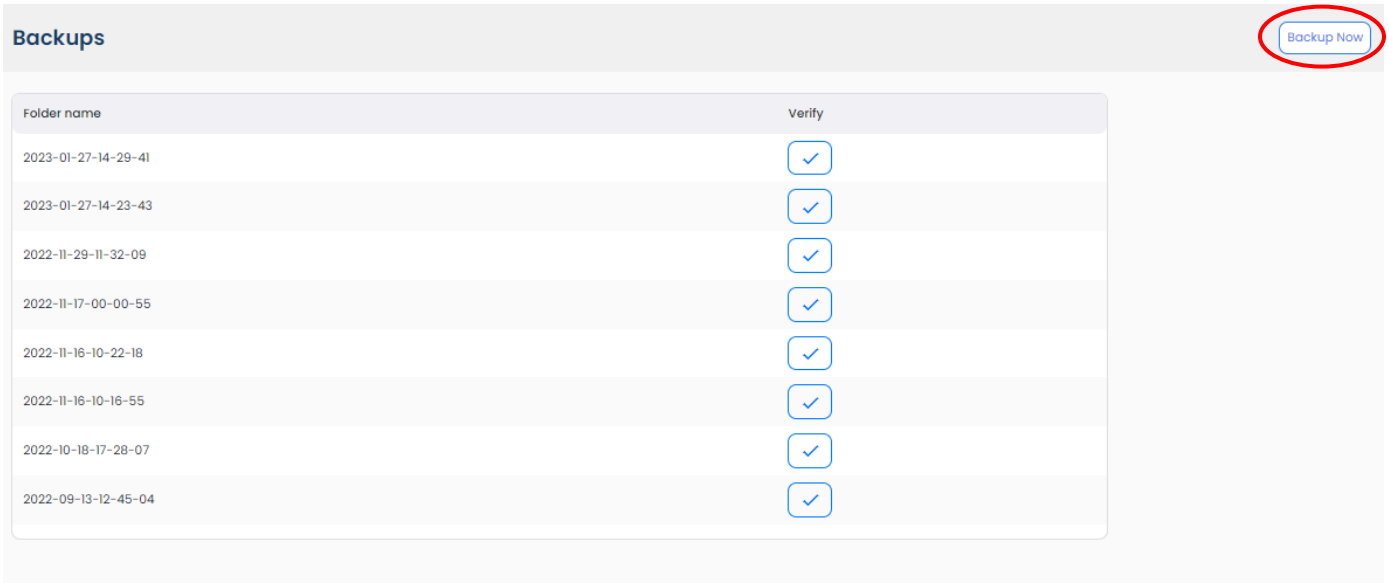
1. Backup Page

- If we go to backup page all backups will display as shown.

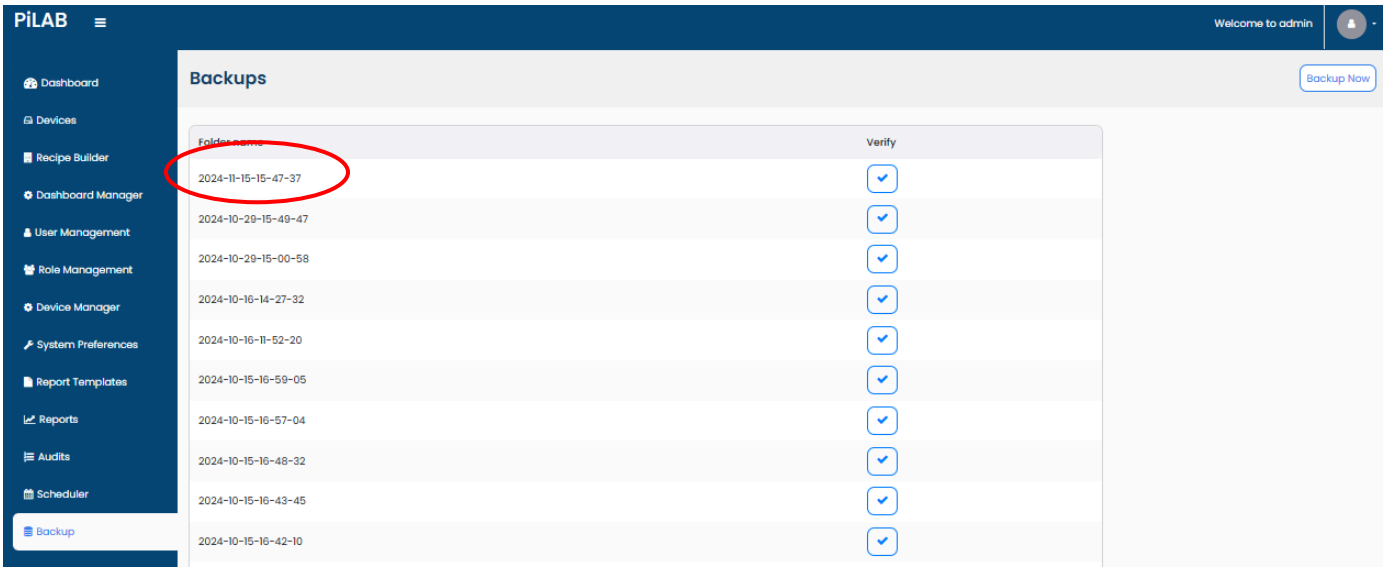


2. Backup Creation

- Click on Backup Now button to create backup as shown here.

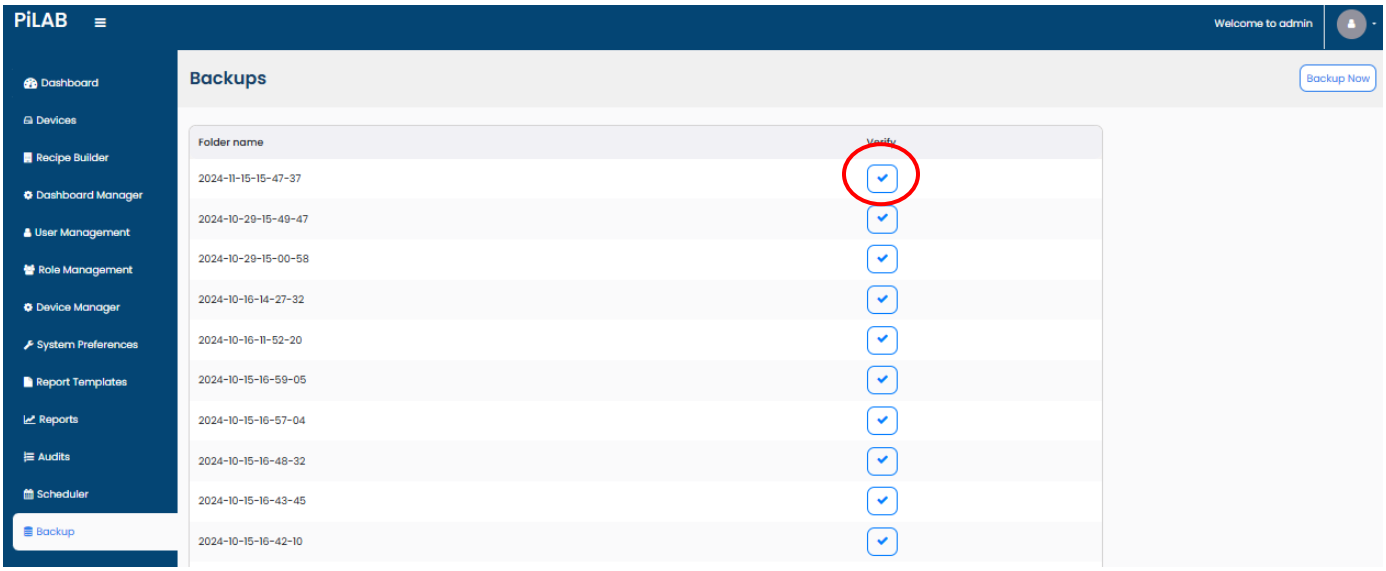


- Then backup will create as shown here.

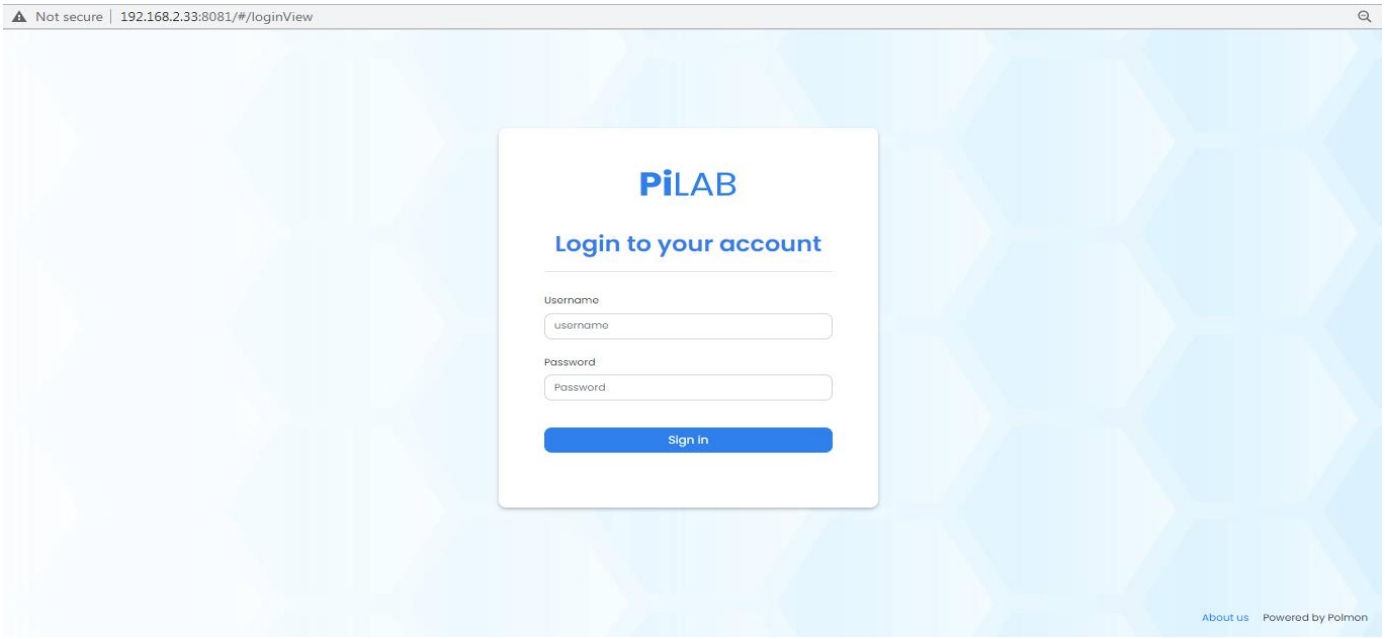


3. Backup Verification

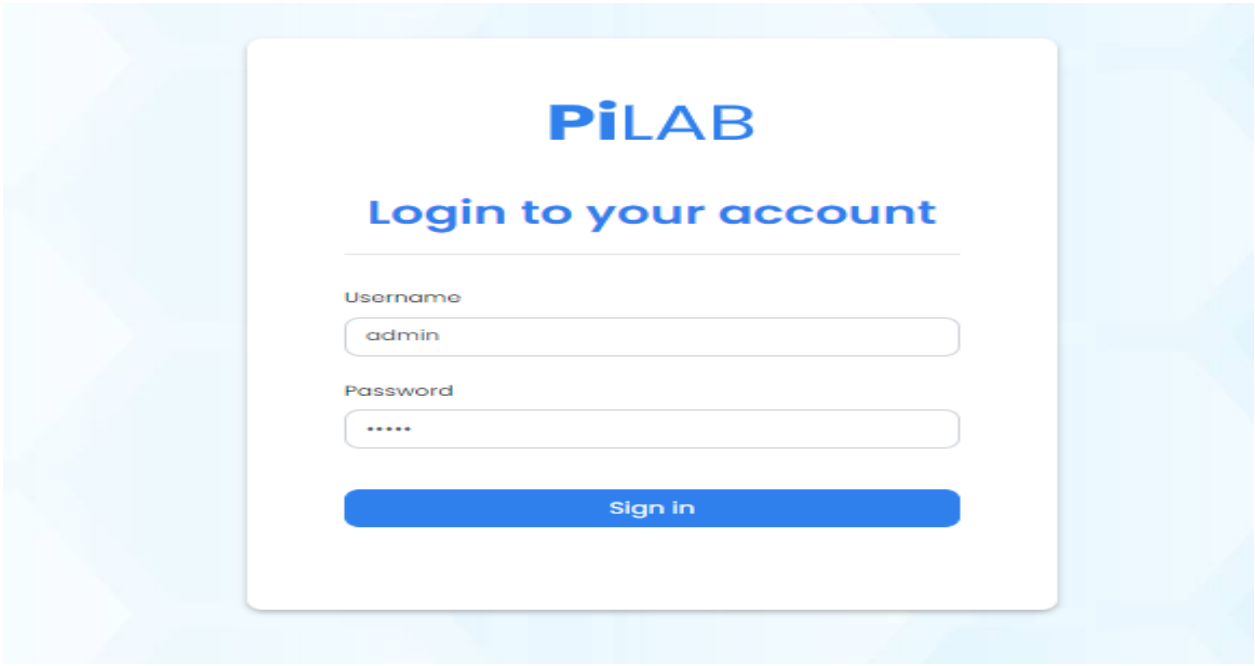
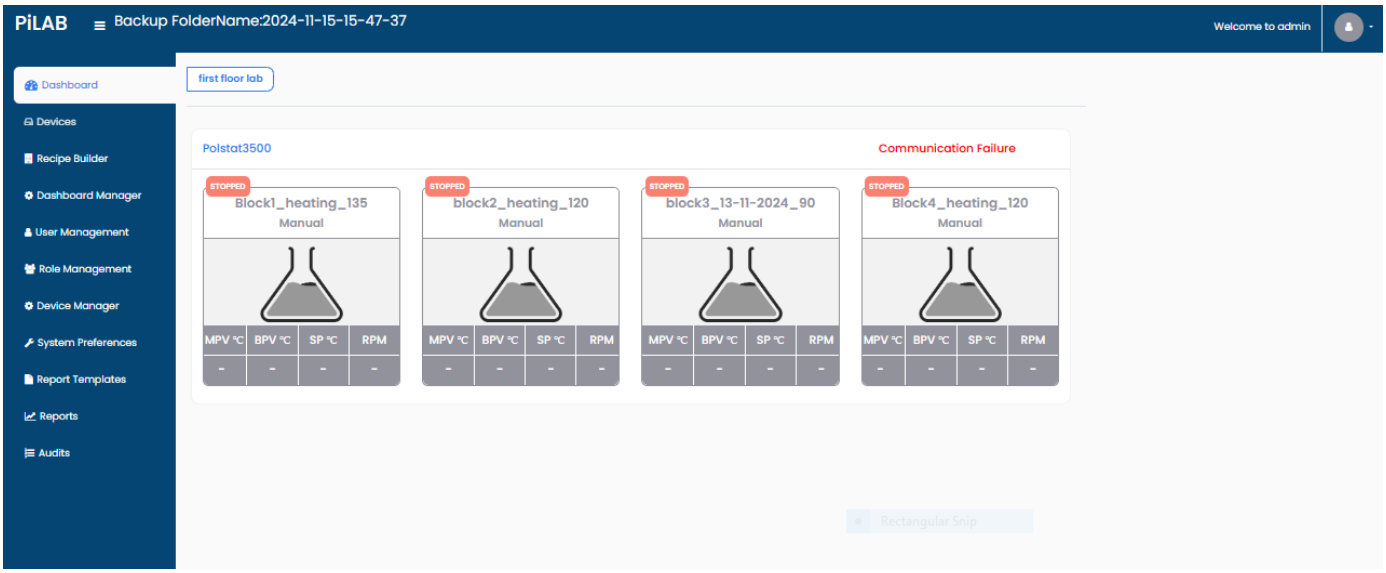
- Click on verify button in order to verify the backup.



- After clicking verify button a new window will open with 8081 port after few minutes in chrome as shown here.



- Now login with username and password as shown here.



- PiLAB Verification application will open as shown here.
- We can verify data of entire backup in this verify application.