Oracle® Communications
EAGLE Element Management System Reporting Studio

Upgrade/Installation Guide

Release 47.0
F99472-02

July 2025

CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN) (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-2136003.html).
Before upgrading your system, access the My Oracle Support web portal (https://support.oracle.com) and review any Knowledge Alerts that may be related to the System Health Check or the Upgrade.

Before beginning this procedure, contact My Oracle Support and inform them of your upgrade plans.

Refer to Appendix B for instructions on accessing My Oracle Support.

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1.0 INTRODUCTION

1.1 Purpose and Scope

The scope of this document is to describe the installation, upgrade and configuration of Reporting Studio release 47.0 to be used with release 47.0 of OCEEMS.

1.2 Acronyms and Terminology

TERM	DESCRIPTION
Ad Hoc Reporting	Creating reports on the fly without any predefined template.
Configuration	Managing i-net Clear Reports configurations. A configuration contains all options to configure i-net Clear Reports.
Data Source Configuration	Configuring the data sources to be used for report generation.
OCEEMS Reporting Studio	Term used for all the reporting features accessible from OCEEMS
Report Designer	An interface for designing and editing report templates files.
Repository	Directory containing existing reporting templates
Task Planner	Scheduling/Planning report templates to generate reports at desired time.
Template	i-net Clear Reports template (.rpt format) for creating report.

Table 1: Acronyms and Terminology

2.0 SOFTWARE REQUIREMENTS

Either of the following web browsers should be present on the OCEEMS client:

- Microsoft® Edge Version 125.0.2535.51 (Official build) (64-bit) or later
- Mozilla Firefox® Version 115.11.0 or later
- Google Chrome Version 125.0.6422.112 (Official Build) (64-bit) or later

The configuration of Reporting Studio 47.0 has been tested on the browsers mentioned above. It is recommended to use them for optimal performance.

3.0 INSTALLATION/UPGRADE OF REPORTING STUDIO R47.0 (I-NET CLEAR REPORTS 23.x or 25.x)

Reporting Studio 47.0 is based on i-net Clear Reports version 23.x or 25.x. The earlier versions of Reporting Studio were based on i-net Clear Reports version 17.x. Therefore, an upgrade path shall also be available for customers using version 46.6 of Reporting Studio.

3.1 Prerequisite

'netstat' command must be installed on the system.

1 Disk space requirement in /tmp

To run i-net Clear Reports, the size of '/tmp' directory should be greater than 1GB. This is a system requirement for i-net Clear reports and cannot be changed.

2 Contents of Reporting Studio zip file

The following items shall be available inside the Reporting Studio 47.0 zip.

S. No.	ITEM	NAME	PURPOSE
1	i-net Clear Reports RPM	i-net Clear Reports RPM clear-reports-server-<version>.rpm The following names are acceptable: - clear-reports-server-23.10.422.rpm - clear-reports-server-25.4.260.rpm	Installation RPM for i-net Clear Reports
2	E5MS Filter Jar	E5msFilter-<version>.jar	Used for Reporting Studio functionality
3	NMS Server Classes Jar	NmsServerClasses.jar	Used for Reporting Studio functionality
4	MySQL JDBC Connector Jar	mysql_connector.jar	Used to create connection to EAGLE Element Management System's database
5	Authentication Plugin	authentication.script.zip	Used for Reporting Studio functionality

The i-net Clear Reports installation RPM (item 1 in above table) shall be used for installation/upgrade of i-net Clear Reports 23.x. The rest of the items in the zip file (items 2, 3 ,4 and 5 in the table above) shall be used after installation of i-net Clear Reports.

3 License key from i-net Clear reports

A valid license for i-net Clear Reports version 23.x or i-net Clear Reports version 25.x should be available on the system before proceeding with installation/upgrade to Reporting Studio 47.0. In case the license for i-net Clear Reports is not available, contact My Oracle Support. Refer to Appendix B for instructions on accessing My Oracle Support.

3.2 Installation of Reporting Studio

Follow the instructions of the respective version that you are using:

I. **clear-reports-server-25.4.260.rpm**
II. **clear-reports-server-23.10.422.rpm**

Follow the steps for clear-reports-server-25.4.260.rpm
The steps for installation of Reporting Studio 47.0 are given below. **These steps should be performed by super user 'root'.**

❖ **Check for Port Availability**

1. In the system, check whether the 9000 port is free or not. i-net Clear Reports run on port 9000. Run the following command:

   # netstat -tulpn|grep 9000

   a) If output of the above command is blank, as shown below, then skip step 2:

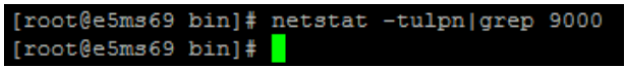


Figure 1: Blank output of netstat command

   b) If output of the above command is similar to the following, then move to the Step 2:
   tcp6 0 0 :::9000 :::* LISTEN 17869/java

   In the above output, the number "17869" is the PID of the process.

Figure 2: Non-Blank Output of netstat command

2. Run the following command to kill the process in the Step 1.b.
   # kill -9 <PID of the process at step 1.b>
   e.g. kill -9 17869

3. Unzip the Reporting Studio zip file to the **reporting-studio** directory using the command given below:
   # unzip <reporting studio zip> -d reporting-studio

The versions of the following versions as follows:

iNet 25	**reporting-iNet25-47.0.0.1.0-470.2.1.zip**
iNet 23	**V1043085-01.zip**

4. Move to the new **reporting-studio** directory created in above step and verify the contents of reporting studio zip file by running the following command:

   # cd reporting-studio
   # ll

5. Check all jars and scripts are available as per EMS and i-net release:

```
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# ll
total 261732
-rw-r--r--. 1 root root    275426 Jun 18 06:47 authentication.script.zip
-rw-r--r--. 1 root root 256608588 Jun 18 05:21 clear-reports-server-25.4.260.rpm
-rw-r--r--. 1 root root      8364 Jun 24  2025 E5msFilter-iNet25-47.0.0.1.0-470.2.1.jar
-rw-r--r--. 1 root root   2428320 May  5 13:57 mysql_connector.jar
-rw-r--r--. 1 root root   8682589 May  5 13:57 NmsServerClasses.jar
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]#
```

Figure 3: Contents of the Reporting Studio Zip

6. Once you are inside the same **reporting-studio** directory created in the above steps, install the i-net Clear Reports RPM by running the following command:

   # rpm -ivh clear-reports-server-25.4.260.rpm

```
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# rpm -ivh clear-reports-server-25.4.260.rpm
Verifying...                          ################################# [100%]
Preparing...                          ################################# [100%]
Updating / installing...
   1:clear-reports-server-25.4.260-1  ################################# [100%]
Created symlink /etc/systemd/system/multi-user.target.wants/clear-reports.service → /usr/lib/systemd/system/clear-reports.service.
.............................
################################################################################
#
#
#       Continue setup using the following URL in a browser:
#       http://localhost:9000/setup/a27bb8e8-cbf3-4c35-b36b-12bfe47fe87d
#
#
################################################################################


[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]#
```

Figure 4: Installation of clear-reports-server rpm

7. Copy jars and plugin to same folder as done in below logs:
   cp E5msFilter-iNet25-47.0.0.1.0-470.2.1.jar NmsServerClasses.jar /usr/share/i-net-clear-reports/lib/
   cp mysql_connector.jar /usr/share/i-net-clear-reports/lib/driver/
   cp authentication.script.zip /usr/share/i-net-clear-reports/plugins/

8. Run the following commands from the root user to ensure that the non-root user has the permission to restart/start/stop/status clear-reports-service. Assuming the admin username is emsadmuser, run the below command. If the User ID of adminuser name is different, replace emsadmuser with the admin username in the following commands.

   echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports restart' | sudo tee -a /etc/sudoers
   echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports start' | sudo tee -a /etc/sudoers
   echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports stop' | sudo tee -a /etc/sudoers
   echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports status' | sudo tee -a /etc/sudoers

```
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]#
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports restart' | sudo tee -a /etc/sudoers
emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports restart
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports start' | sudo tee -a /etc/sudoers
emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports start
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports stop' | sudo tee -a /etc/sudoers
emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports stop
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]# echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports status' | sudo tee -a /etc/sudoers
emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports status
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]#
[root@EMS4 reporting-iNet25-47.0.0.1.0-470.2.1]#
```

Figure 5: Giving permission to non-root user to start/stop/restart clear-reports-server

9. Move to the directory `/Tekelec/WebNMS/bin` and run the script `inetService.sh restart` with the non-root user to restart the i-net service.

 # cd /Tekelec/WebNMS/bin
 # sh inetService.sh restart

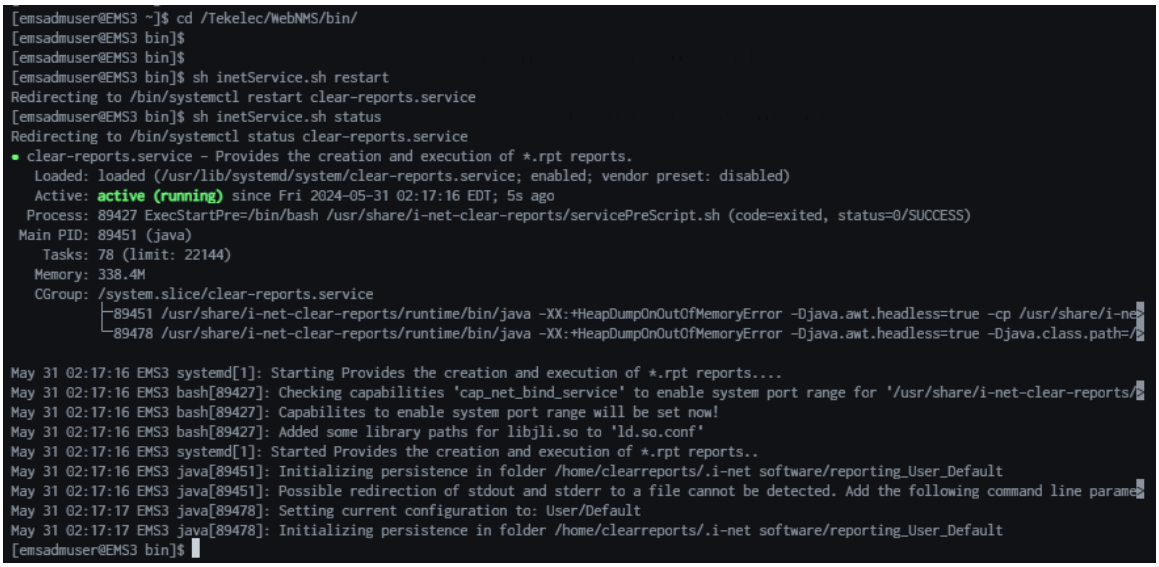


Figure 6: Restarting i-net server.

10. Go to a browser (preferably Chrome) and open the URL: `http://<IP Address of the Server>:9000`. The following screen will open.

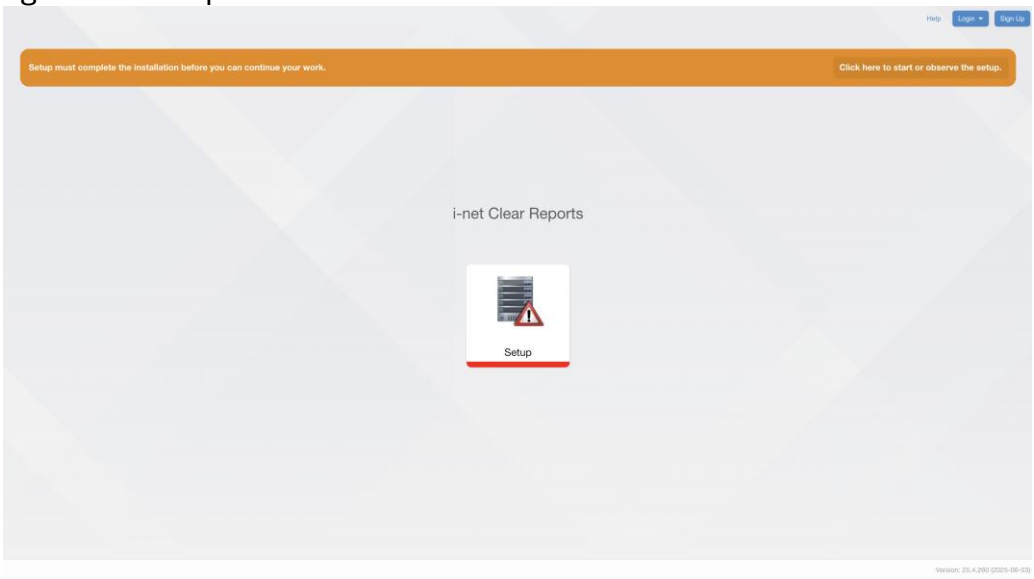
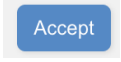


Figure 7: i-net Clear Reports home page

11. Click the 

button to accept the cookies (at the bottom of the screen, this only comes the first time when you are opening this page). Click the **Setup** option on the i-net Clear Reports home page. It will open the i-net Clear Reports Setup window as shown below:

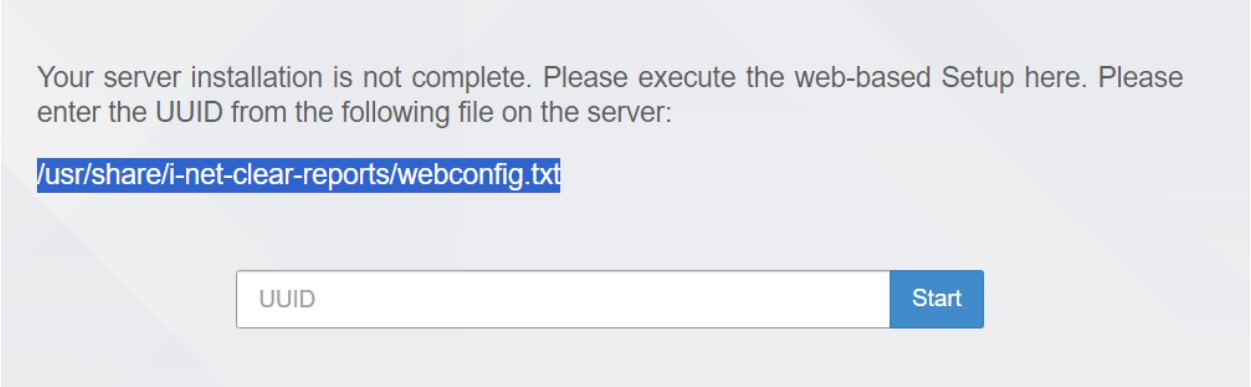


Figure 8: i-net Clear Reports Setup window

12. Log in with the non-root user and go to i-net installation directory. Run the following commands to view the contents of `webconfig.txt` file. Get UUID form `webconfig.txt`. Copy the UUID value. After copying the UUID, paste the same UUID in text box at the i-net Clear Reports Setup window in the browser.

    [emsadmuser@EMS4 bin]$ cat /usr/share/i-net-clear-reports/webconfig.txt
    PROTOCOL http
    ADDRESS localhost
    PORT 9000
    URL http://localhost:9000
    UUID 15cc3eb0-e8cb-43d3-8877-96db2d146c60

13. Click **Start** as shown in the following screenshot after pasting the UUID.

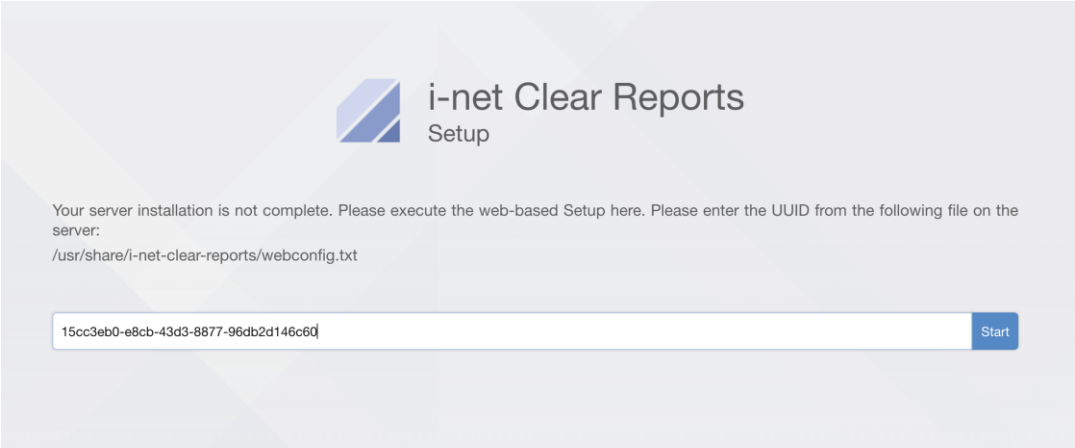


Figure 9: Pasting the UUID in the UUID text box

14. On clicking **Start** in the previous step, it will continue with the setup. Then click on the "**Modify settings"**. Fill in the **Product License** and **Webserver Settings** as follows:
    - Click the edit button . Fill in the License details in the popup.

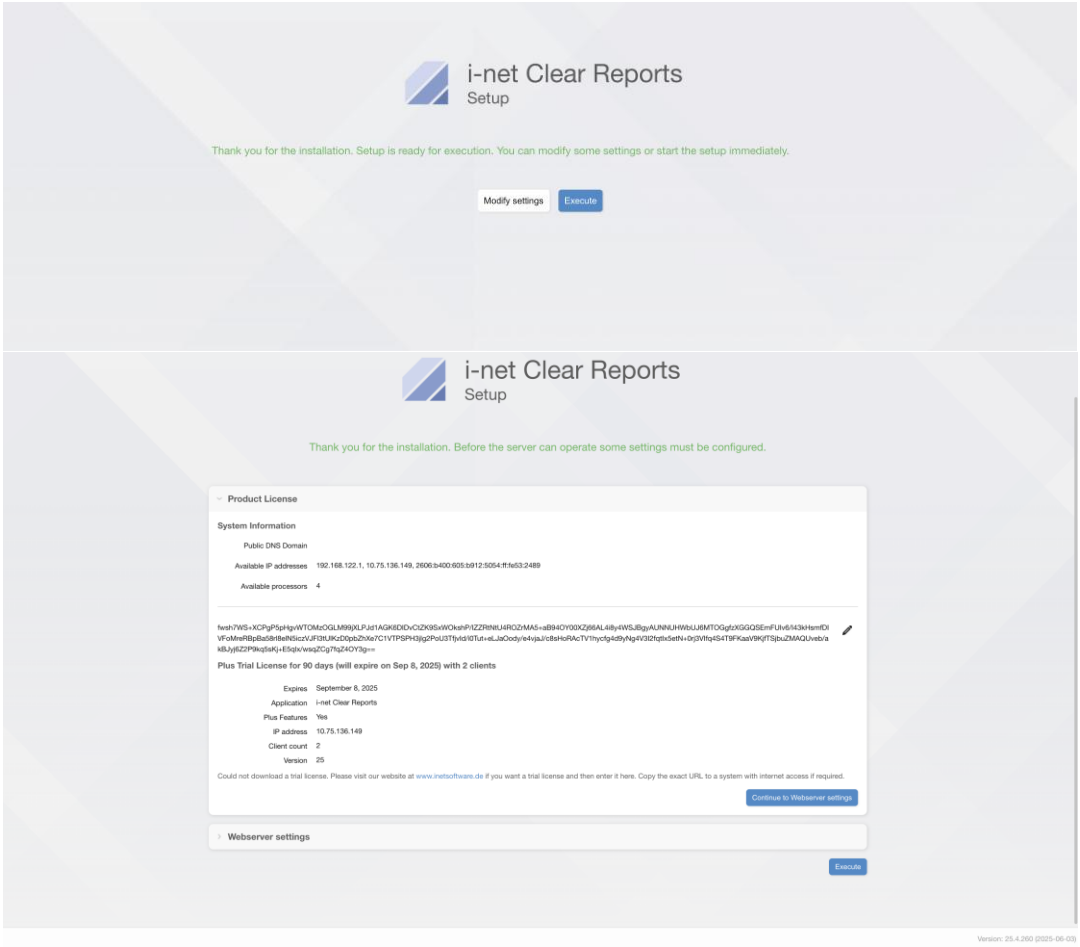


Figure 10: Product License and Webserver Settings

15. Enter the i-net Clear Reports 25.x Product License, by clicking **Edit**:

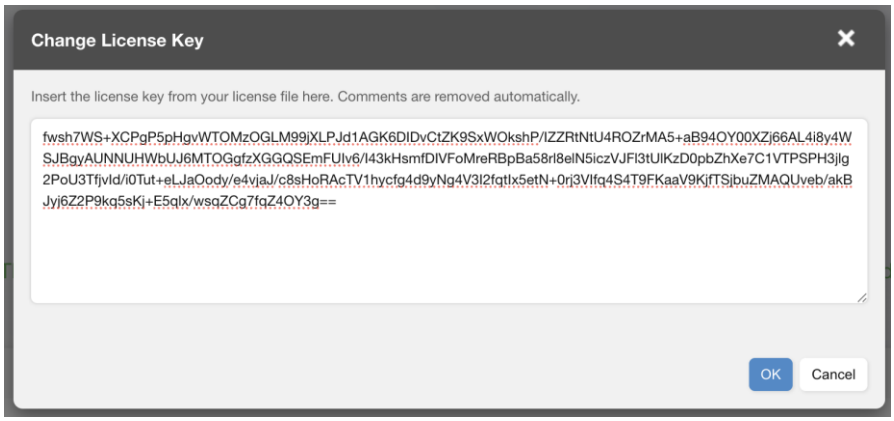


Figure 11: Entering the i-net Clear Report License

Click **OK** after entering the License.

16. Click **Continue to Webserver Settings**.
17. Open **Webserver Settings** and change the port (using the edit button) from 80 to 9000 and update the Base URL with http://<ip_of_the_EMS_server>:9000, as follows:

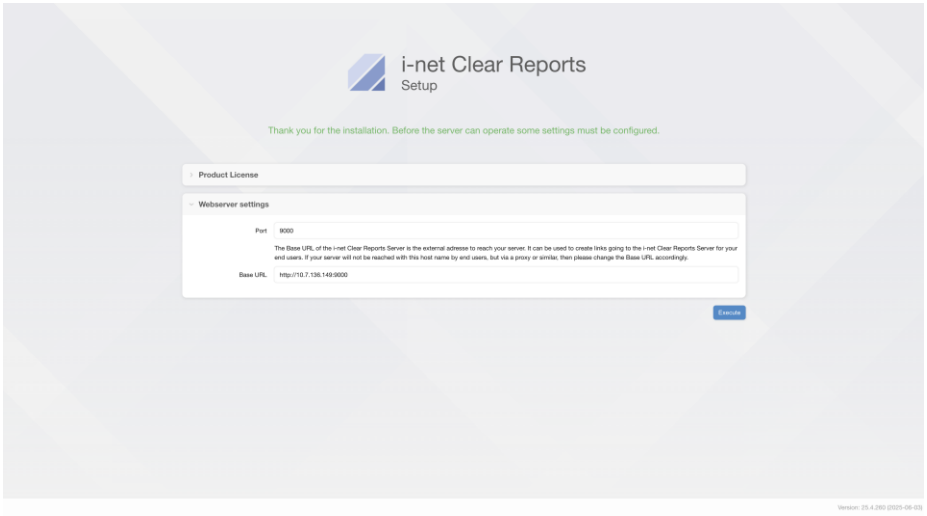


Figure 13: Changing port from 80 to 9000

Click the "Execute" button as shown in above screenshot, after changing the Port and Base URL.

18. After clicking **Execute** in the previous step, the i-net Clear Reports installation will be completed as shown below:

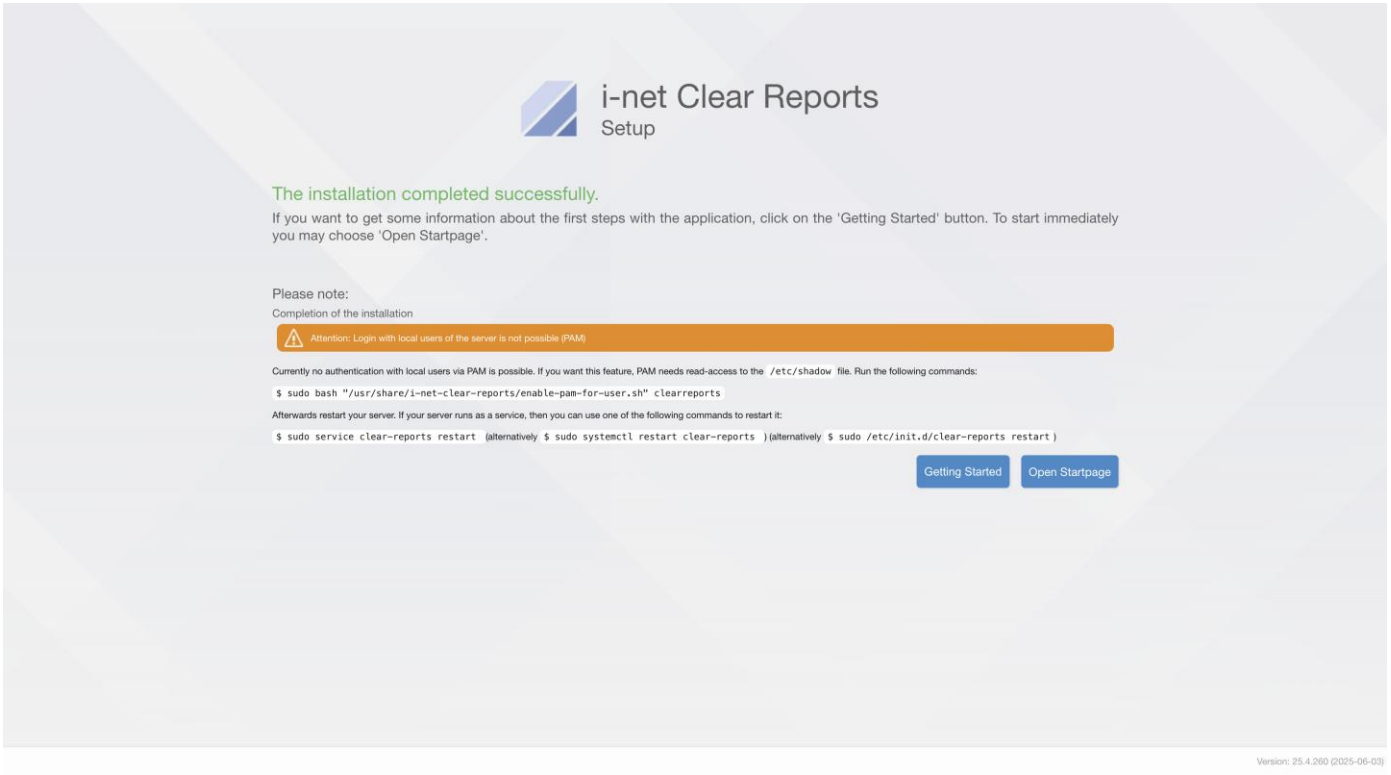


Figure 14: i-net Clear Reports installation completed

I. Follow the steps for clear-reports-server-23.10.422.rpm

The steps for installation of Reporting Studio 47.0 are given below. **These steps should be performed by super user 'root'.**

❖ Check for Port Availability

1. In the system, check whether the 9000 port is free or not. i-net Clear Reports run on port 9000. Run the following command:

   # netstat -tulpn|grep 9000

   a. If output of the above command is blank, as shown below, then skip step 2:

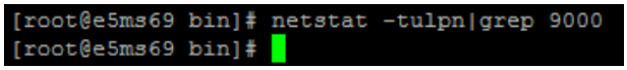


Figure 1: Blank output of netstat command

   b. If output of the above command is similar to the following, then move to the Step 2:
   tcp6 0 0 :::9000 :::* LISTEN 17869/java

   In the above output, the number "17869" is the PID of the process.

Figure 2: Non-Blank Output of netstat command

2. Run the following command to kill the process in the Step 1.b.
   # kill -9 <PID of the process at step 1.b>
   e.g. kill -9 17869

3. Unzip the Reporting Studio zip file to the **reporting-studio** directory using the command given below:
   # unzip <reporting studio zip> -d reporting-studio

4. Move to the new **reporting-studio** directory created in above step and verify the contents of reporting studio zip file by running the following command:

   # cd reporting-studio
   # ll

5. Check all jars and scripts are available as per EMS and i-net release:

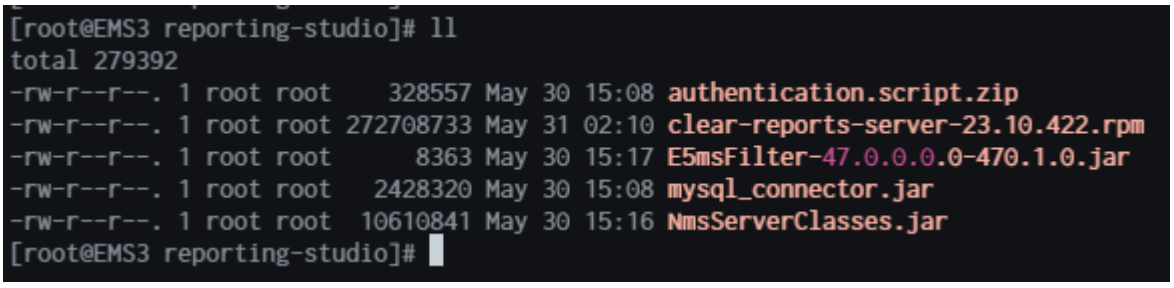


Figure 3: Contents of the Reporting Studio Zip

6. Once you are inside the same **reporting-studio** directory created in the above steps, install the i-net Clear Reports RPM by running the following command:

 # rpm -ivh clear-reports-server-23.10.422.rpm

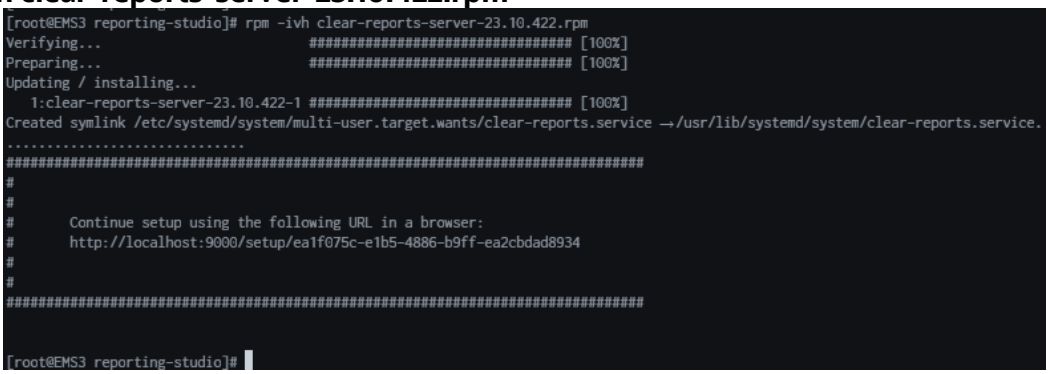


Figure 4: Installation of clear-reports-server rpm

7. Copy jars and plugin to same folder as done in below logs:

   # **cp NmsServerClasses.jar E5msFilter-47.0.0.0.0-470.1.0.jar /usr/share/i-net-clear-reports/lib/**
   # **cp mysql_connector.jar /usr/share/i-net-clear-reports/lib/driver/**
   # **cp authentication.script.zip /usr/share/i-net-clear-reports/plugins/**

8. Run the following commands from the root user to ensure that the non-root user has the permission to restart/start/stop/status clear-reports-service. Assuming the admin username is emsadmuser, run the below command. If the User ID of adminuser name is different, replace emsadmuser with the admin username in the below commands.

   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports restart' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports start' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports stop' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports status' | sudo tee -a /etc/sudoers

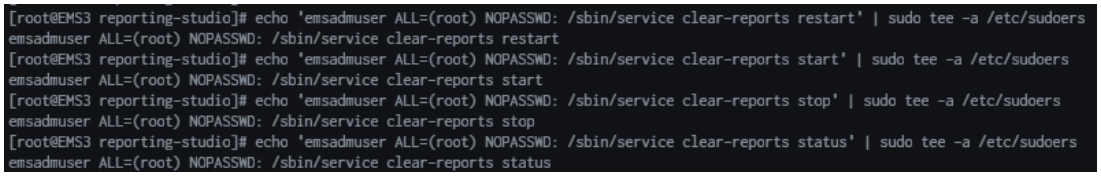


Figure 5: Giving permission to non-root user to start/stop/restart clear-reports-server

9. Move to the directory `/Tekelec/WebNMS/bin` and run the script `inetService.sh restart` with the non-root user to restart the i-net service.

   # cd /Tekelec/WebNMS/bin
   # sh inetService.sh restart

```
[emsadmuser@EMS3 ~]$ cd /Tekelec/WebNMS/bin/
[emsadmuser@EMS3 bin]$
[emsadmuser@EMS3 bin]$
[emsadmuser@EMS3 bin]$ sh inetService.sh restart
Redirecting to /bin/systemctl restart clear-reports.service
[emsadmuser@EMS3 bin]$ sh inetService.sh status
Redirecting to /bin/systemctl status clear-reports.service
● clear-reports.service - Provides the creation and execution of *.rpt reports.
   Loaded: loaded (/usr/lib/systemd/system/clear-reports.service; enabled; vendor preset: disabled)
   Active: active (running) since Fri 2024-05-31 02:17:16 EDT; 5s ago
  Process: 89427 ExecStartPre=/bin/bash /usr/share/i-net-clear-reports/servicePreScript.sh (code=exited, status=0/SUCCESS)
 Main PID: 89451 (java)
    Tasks: 78 (limit: 22144)
   Memory: 338.4M
   CGroup: /system.slice/clear-reports.service
           ├─89451 /usr/share/i-net-clear-reports/runtime/bin/java -XX:+HeapDumpOnOutOfMemoryError -Djava.awt.headless=true -cp /usr/share/i-ne
           └─89478 /usr/share/i-net-clear-reports/runtime/bin/java -XX:+HeapDumpOnOutOfMemoryError -Djava.awt.headless=true -Djava.class.path=/

May 31 02:17:16 EMS3 systemd[1]: Starting Provides the creation and execution of *.rpt reports....
May 31 02:17:16 EMS3 bash[89427]: Checking capabilities 'cap_net_bind_service' to enable system port range for '/usr/share/i-net-clear-reports/
May 31 02:17:16 EMS3 bash[89427]: Capabilites to enable system port range will be set now!
May 31 02:17:16 EMS3 bash[89427]: Added some library paths for libjli.so to 'ld.so.conf'
May 31 02:17:16 EMS3 systemd[1]: Started Provides the creation and execution of *.rpt reports..
May 31 02:17:16 EMS3 java[89451]: Initializing persistence in folder /home/clearreports/.i-net software/reporting_User_Default
May 31 02:17:16 EMS3 java[89451]: Possible redirection of stdout and stderr to a file cannot be detected. Add the following command line parame
May 31 02:17:17 EMS3 java[89478]: Setting current configuration to: User/Default
May 31 02:17:17 EMS3 java[89478]: Initializing persistence in folder /home/clearreports/.i-net software/reporting_User_Default
[emsadmuser@EMS3 bin]$
```

Figure 6: Restarting i-net server.

10. Go to a browser (preferably Chrome) and open the URL: `http://<IP Address of the Server>:9000`.

The following screen will open.

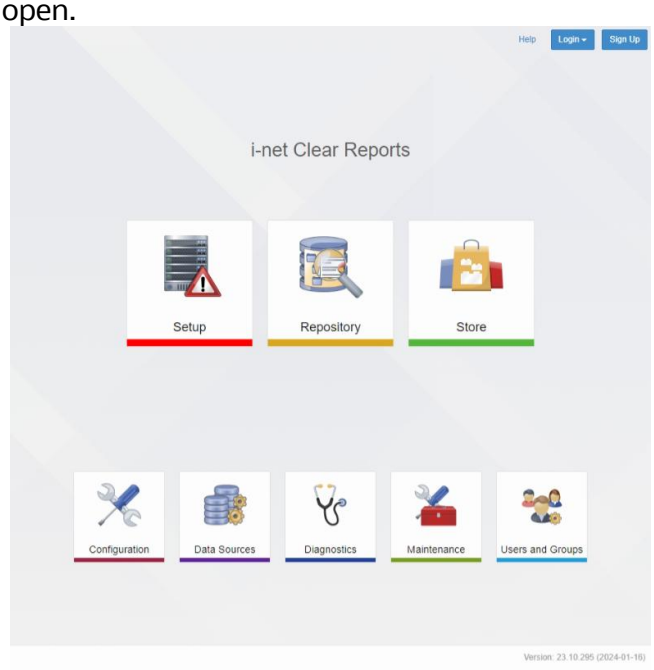


Figure 7: i-net Clear Reports home page

11. Click the **Setup** option on the i-net Clear Reports home page. It will open the i-net Clear Reports Setup window as shown below:

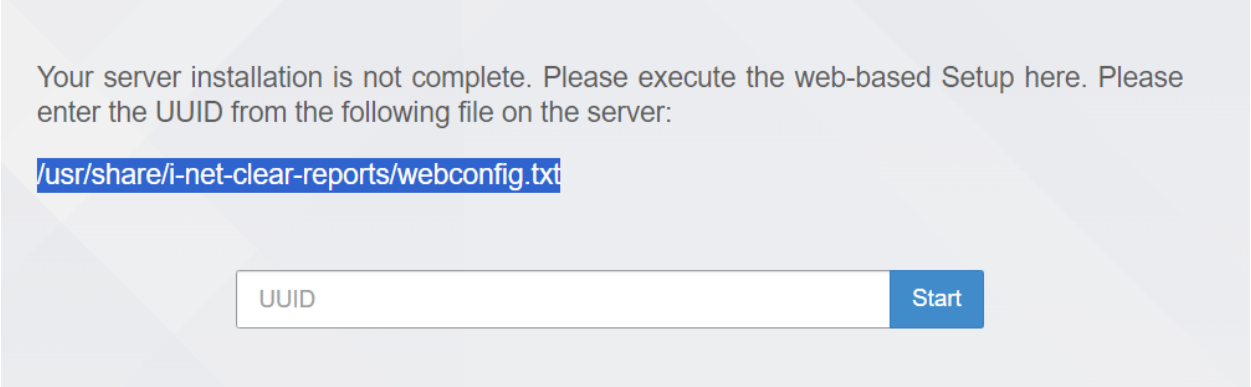


Figure 8: i-net Clear Reports Setup window

12. Log in with the non-root user and go to i-net installation directory. Run the following commands to view the contents of `webconfig.txt` file. Get UUID form `webconfig.txt`. Copy the UUID value. After copying the UUID, paste the same UUID in text box at the i-net Clear Reports Setup window in the browser.

```
[emsadmuser@EMS3 bin]$ cat /usr/share/i-net-clear-reports/webconfig.txt
PROTOCOL http
ADDRESS localhost
PORT 9000
URL http://localhost:9000
UUID a0ec7aa0-5555-44da-95bd-63b4ea2732f0
[emsadmuser@EMS3 bin]$
```

13. Click **Start** as shown in the following screenshot after pasting the UUID.

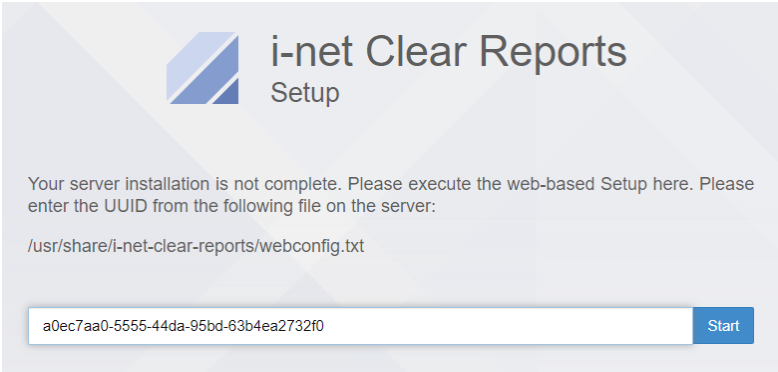


Figure 9: Pasting the UUID in the UUID text box

14. On clicking **Start** in the previous step, it will continue with the Setup and ask for the **Product License**, **Permission Settings**, and **Webserver Settings** as shown below:

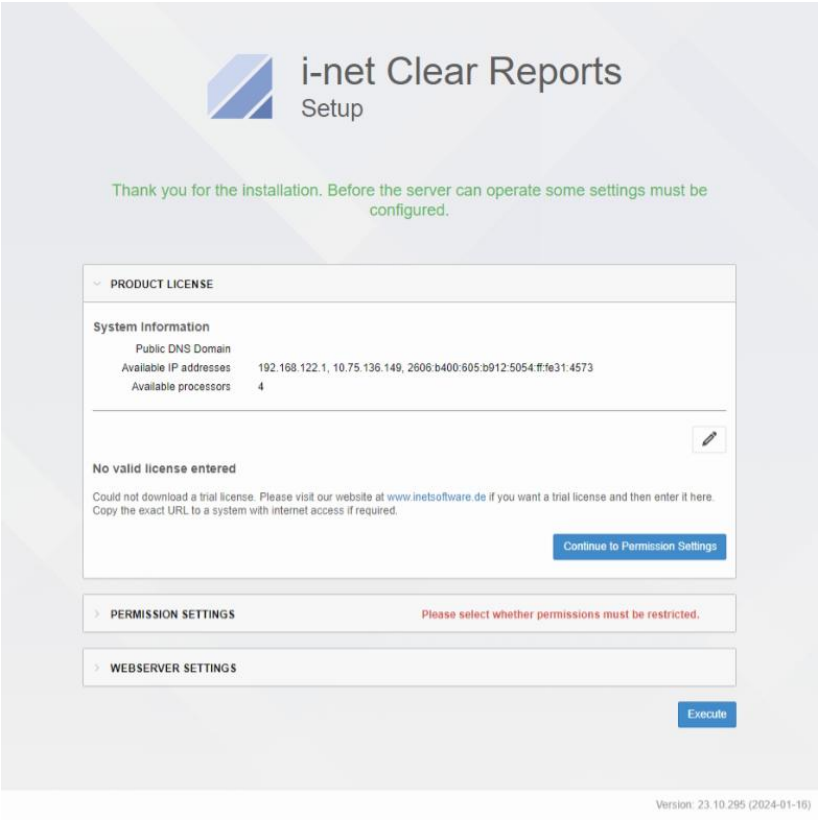


Figure 10: Product License and Webserver Settings

15. Enter the i-net Clear Reports 23.x Product License, by clicking **Edit**:

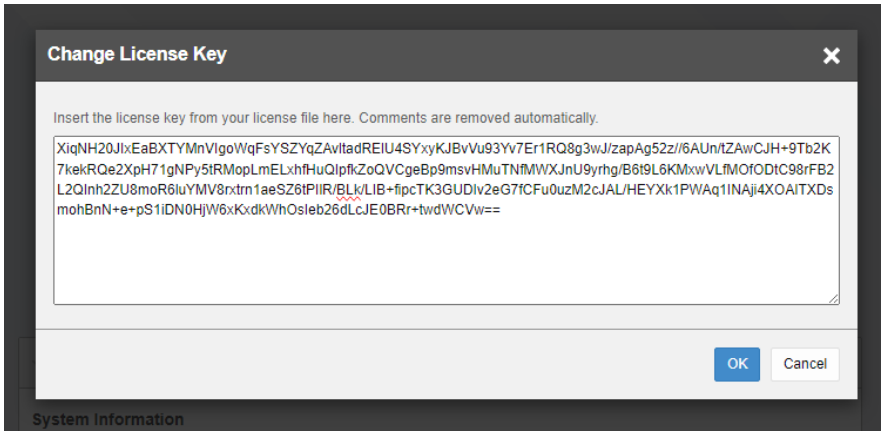


Figure 11: Entering the i-net Clear Report License

Click **OK** after entering the License.

16. Click **Continue to Permission Settings**.
17. Click **restrict radio** and enter a Master password (using this password master user will have unrestricted access):

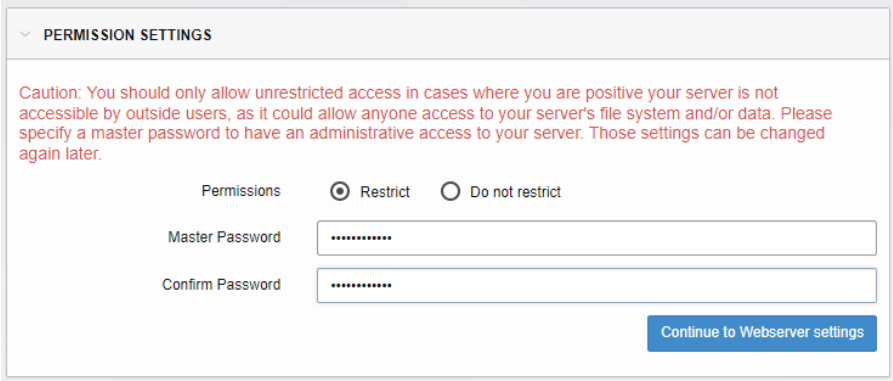


Figure 12: Click on the Restrict Button. Create Master Password

18. Click **Continue to Webserver Settings**.
19. Open **Webserver Settings** and change the port from 80 to 9000 and update the Base URL with http://<ip_of_the_EMS_server>:9000, as shown below:

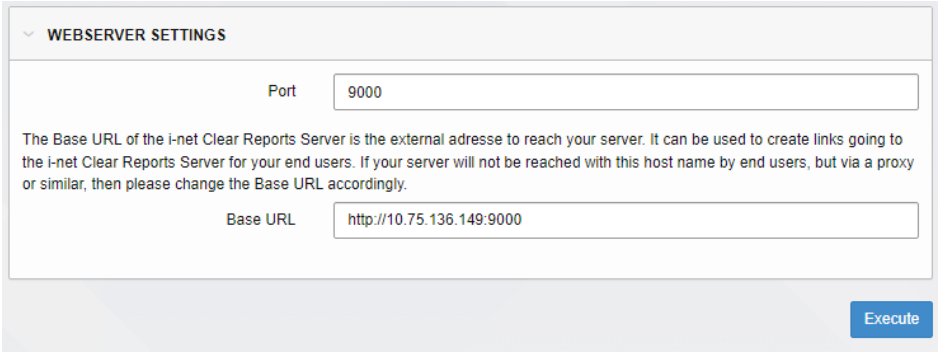


Figure 13: Changing port from 80 to 9000

Click the “Execute” button as shown in above screenshot, after changing the Port and Base URL.

20. After clicking **Execute** in the previous step, the i-net Clear Reports installation will be completed as shown below:

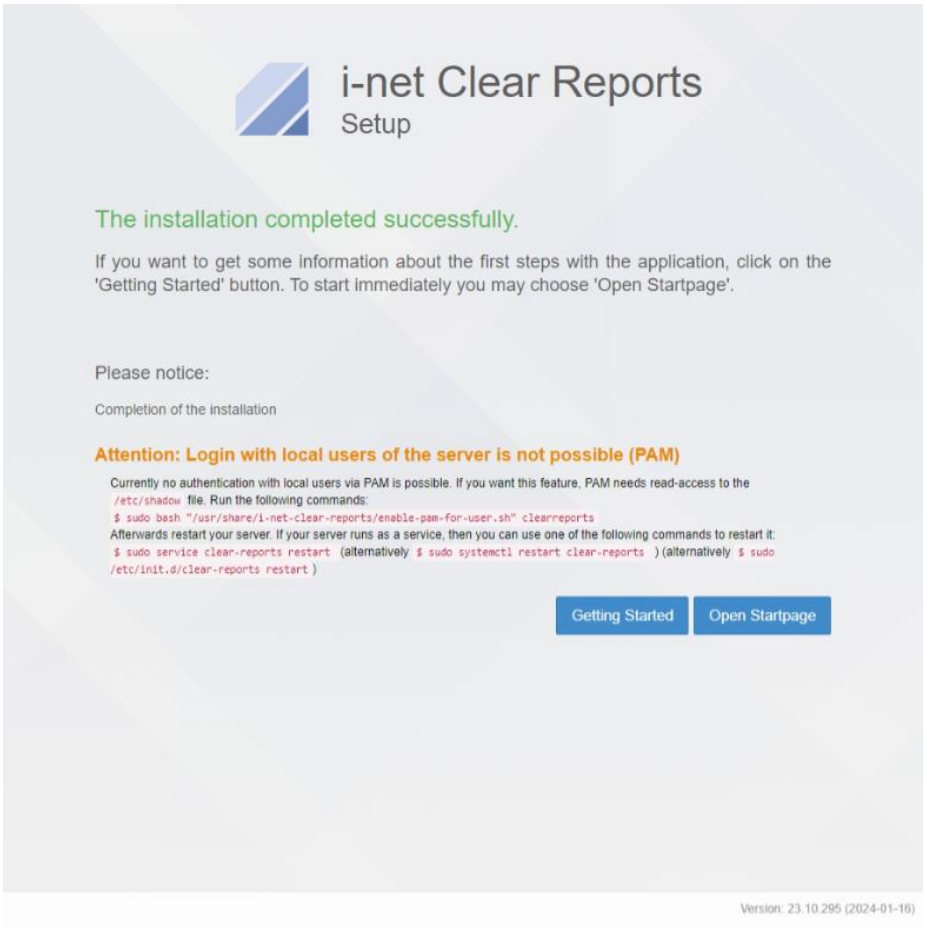


Figure 14: i-net Clear Reports installation completed

3.3 Configuration of i-net Clear Reports

I. Configuration for clear-reports-server-25.4.260.rpm

1. After the successful installation of i-net Clear Reports. Assuming the admin username is emsadmuser, run the following command. UserID of adminuser name is different. Replace emsadmuser with the admin username in the following commands.

   a. Run below commands on the EMS server CLI using the root user:

   # sh /usr/share/i-net-clear-reports/enable-pam-for-user.sh clearreports
   # su - emsadmuser
   # cd /Tekelec/WebNMS/bin/
   # sh inetService.sh restart
   # sh inetService.sh status

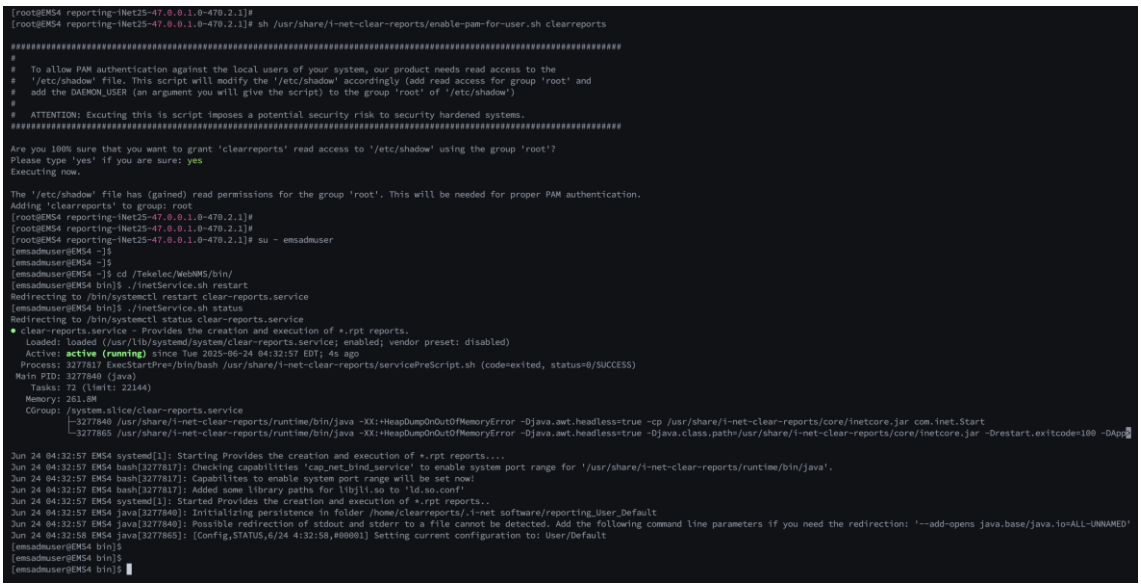


Figure 15: Give permission to Clear Reports user

   b. Click **Open Startpage** to open the i-net Clear Reports Startpage.

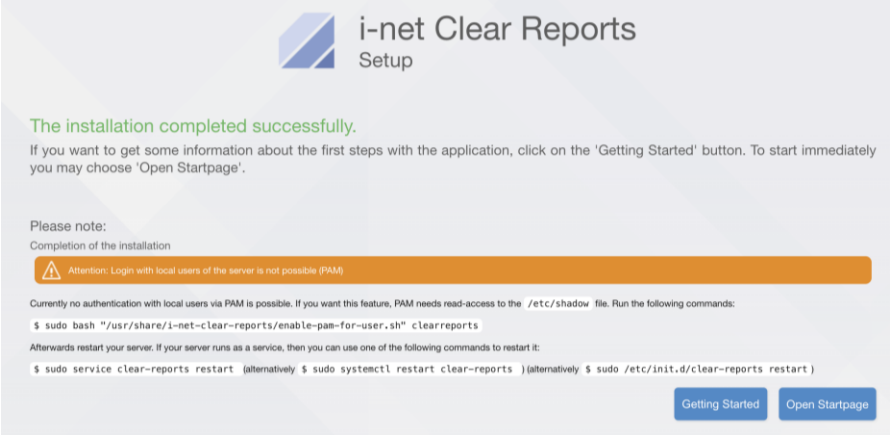


Figure 16: Click on the “Open Startpage” button

On clicking **Open Startpage** in the previous step, the following window will appear:

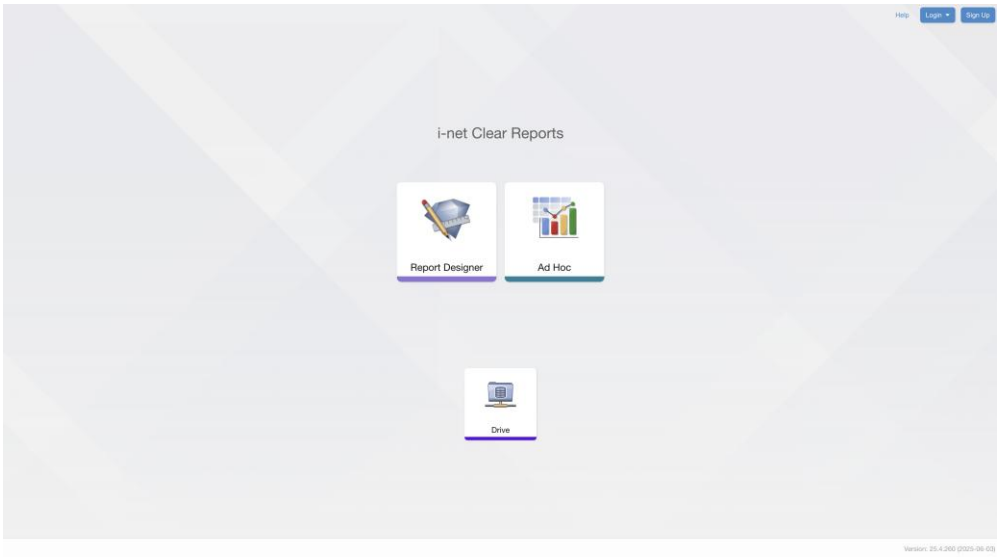


Figure 17: i-net Clear Reports Startpage

2. Click **Login** and then enter the non root user username/password as displayed in the following screenshot.

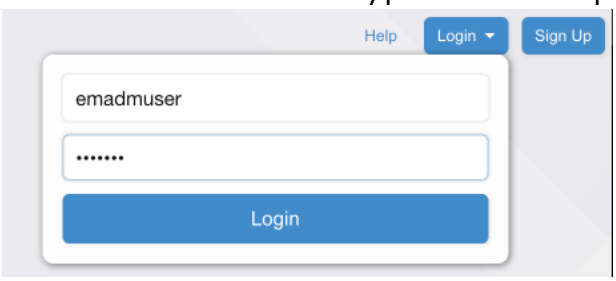


Figure 18: Click on Sign Up > Create a User

3. On Login, we get the following page.

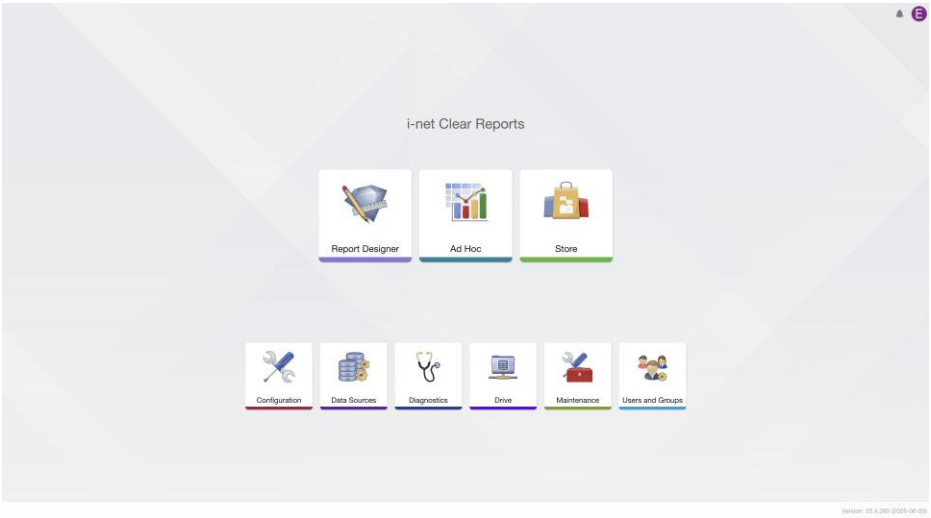


Figure 19: Enter NonRoot Username/Password

4. Click the **Data Sources** Card.

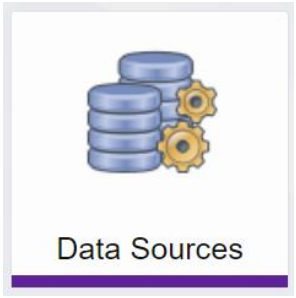


Figure 20: Data Sources Card

5. The following page will open. Click **Add Data Source** on the header and from the drop-down, select the **Create new Data Source** option.

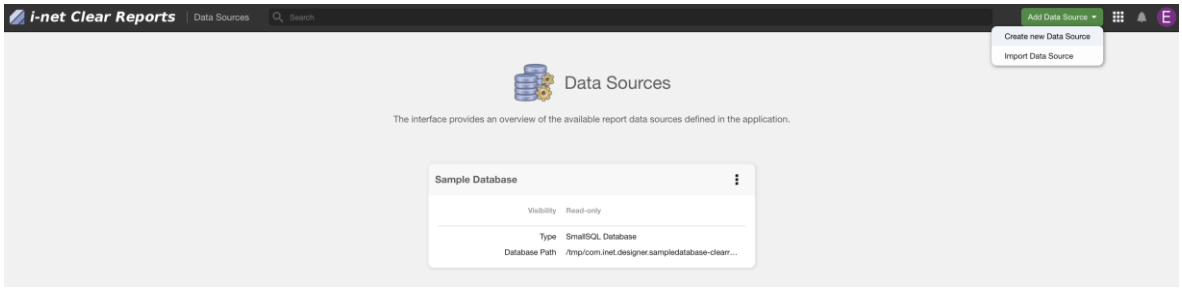


Figure 21: Create new Data Source option

6. The following pop-up will appear. Enter the following details:

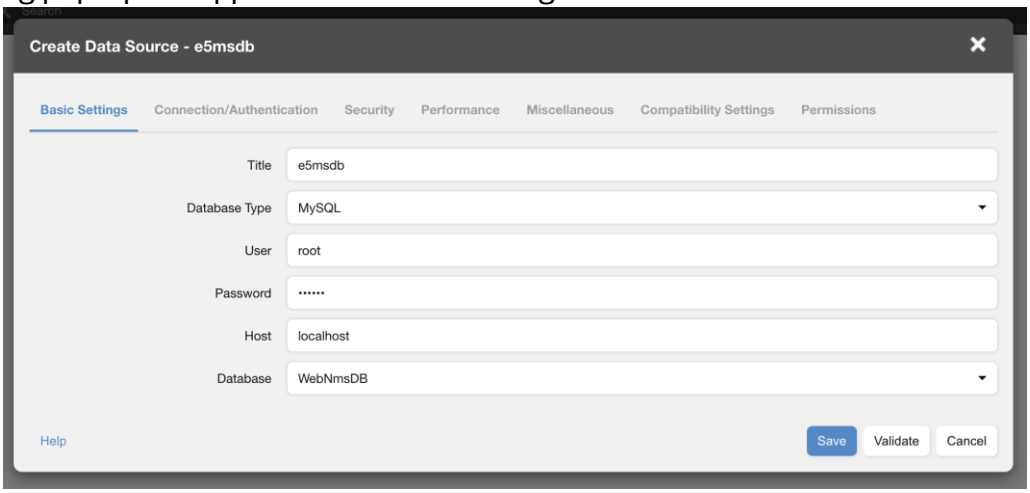


Figure 22: Create New Database details

   a. Click **Validate**.
   b. Click **Save**.

The following screen will appear on the Data Sources page.

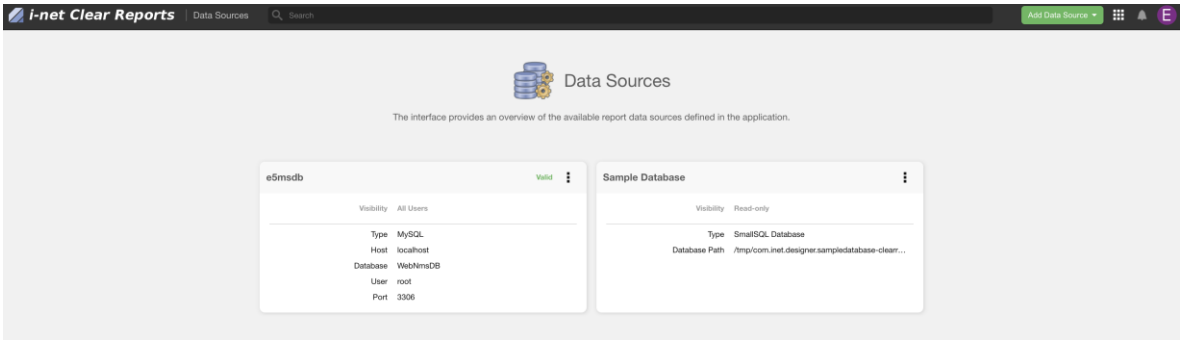


Figure 23: New Data Sources added

7. Click **Card Browser** on the header.

Figure 24: Card browser on the header

8. Click the **Configuration Card** as shown below.

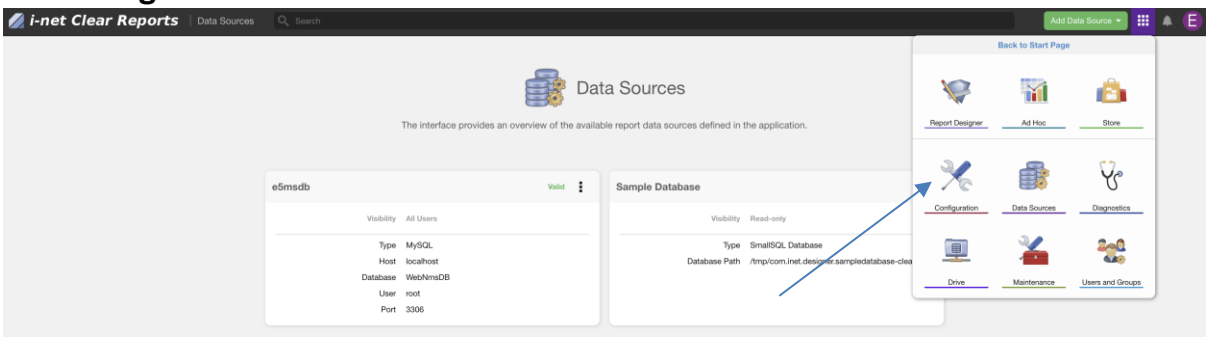


Figure 25: Configuration Card

- On getting the below popup, click “Close welcome dialog”

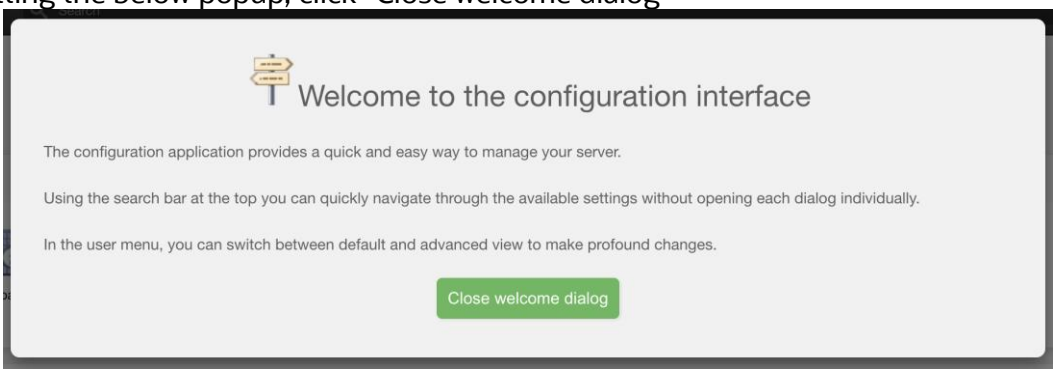


Figure 26: Welcome to Configuration Popup

9. In the following page, click **User(“E”)** on the right corner on the header and select the **Switch to Advanced View** option.

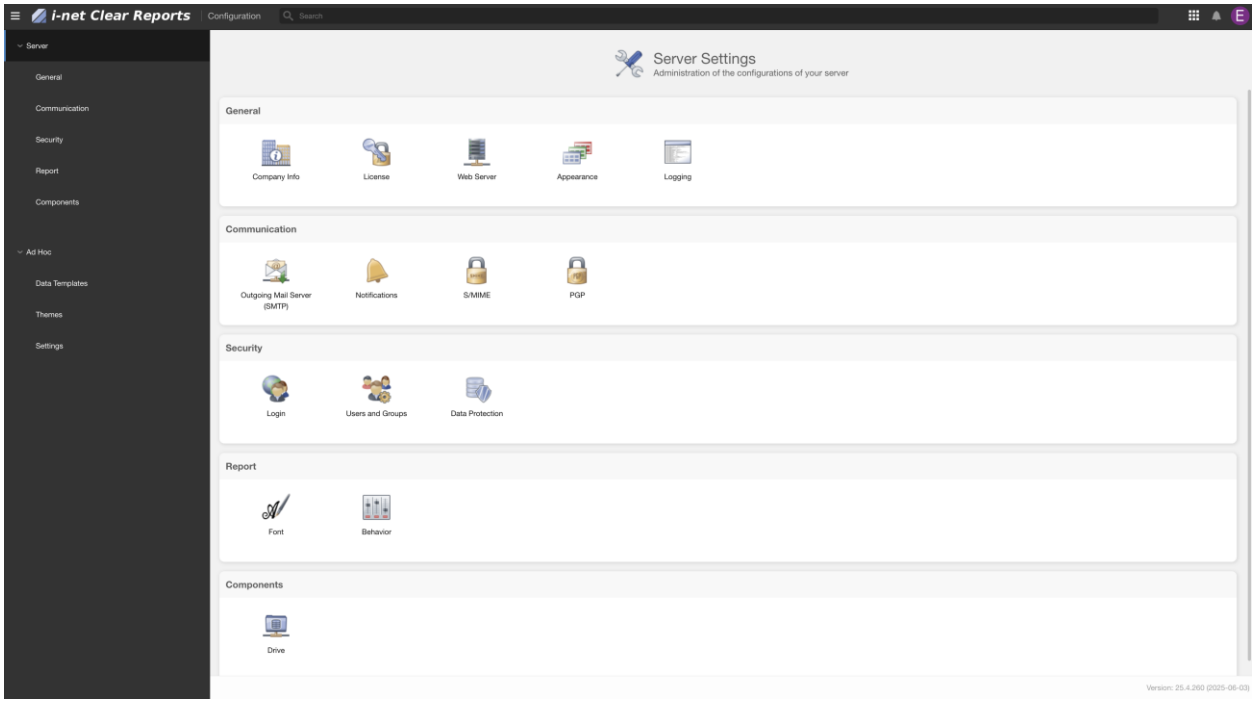


Figure 27: Switch to Advanced View

The Advanced View of Configuration Page will be as follows:

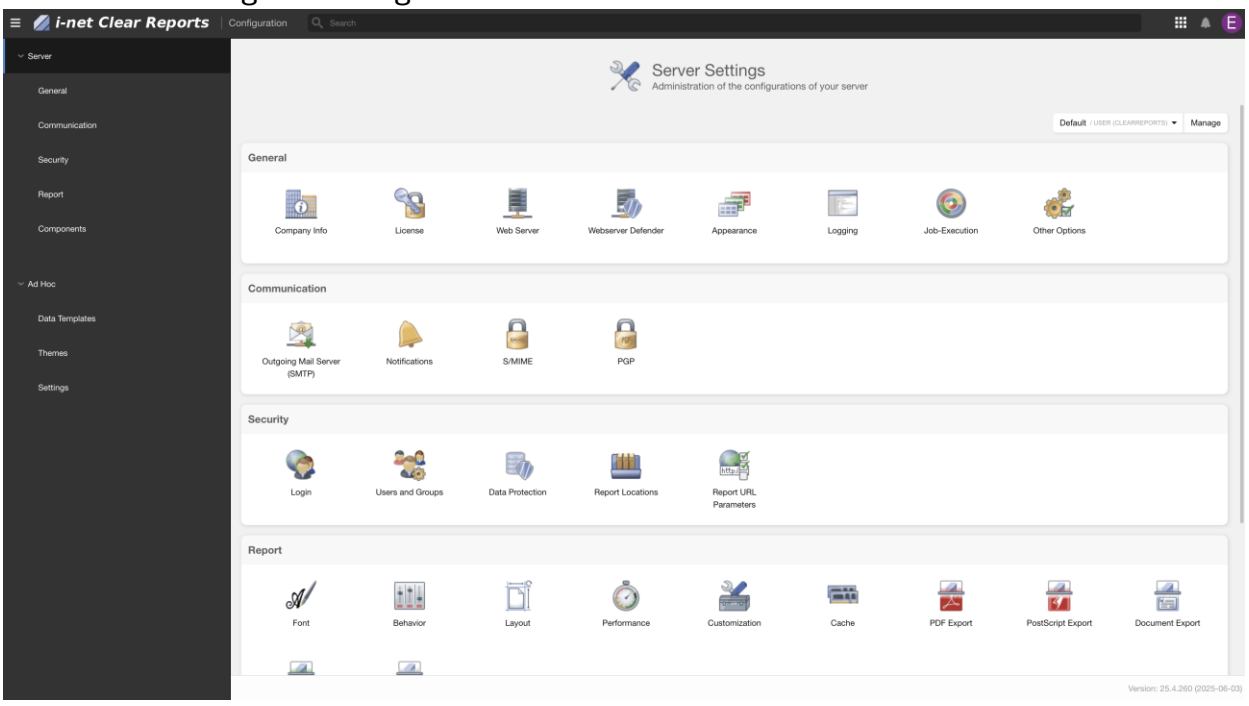


Figure 28: Advanced View of Configuration page

10. Open the Home page of inetClearReports again. i.e http://<IP of the EMS Server>:9000. Click on the Drive Option. The following page will open.

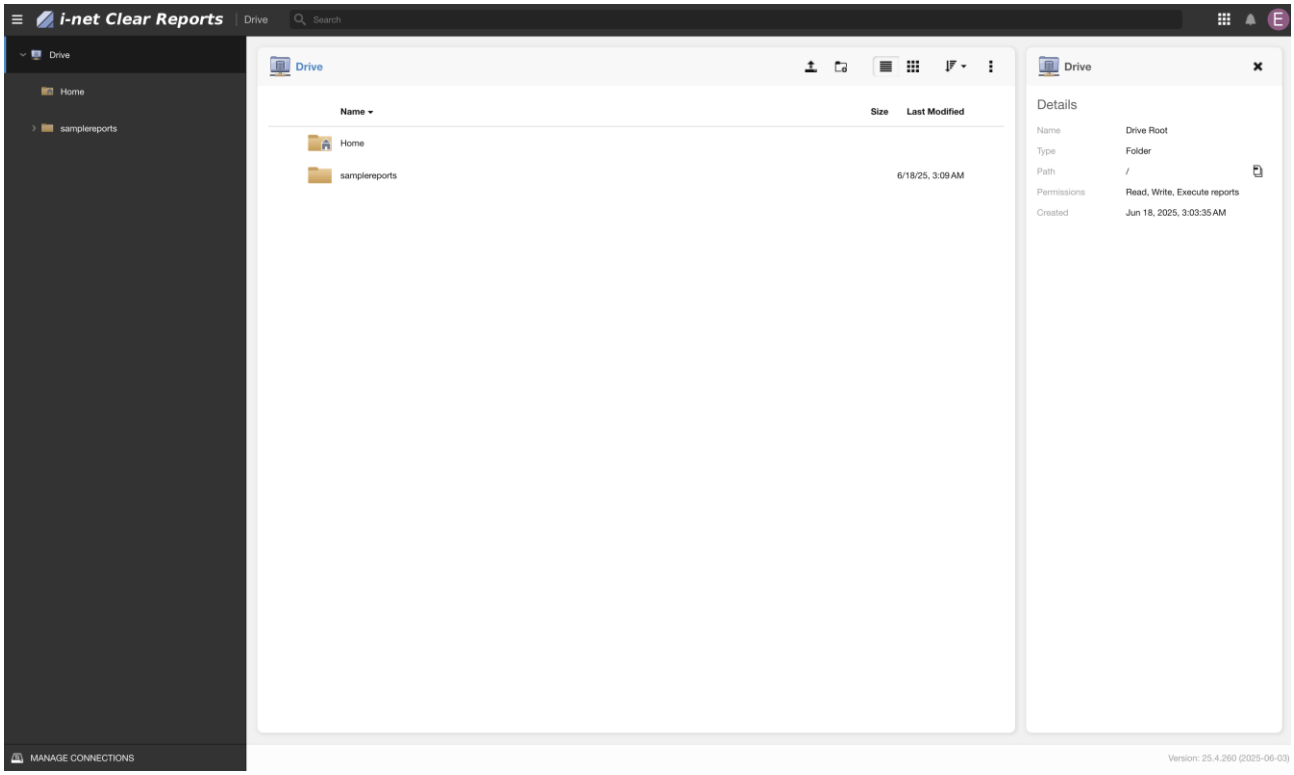


Figure 29: Drive option

11. Click on MANAGE CONNECTIONS ("**Manage Connections**" Button at the bottom left of the screen). The following pop-up will appear. Click **"New connection"** New connection and select the **"Server file system"** option.

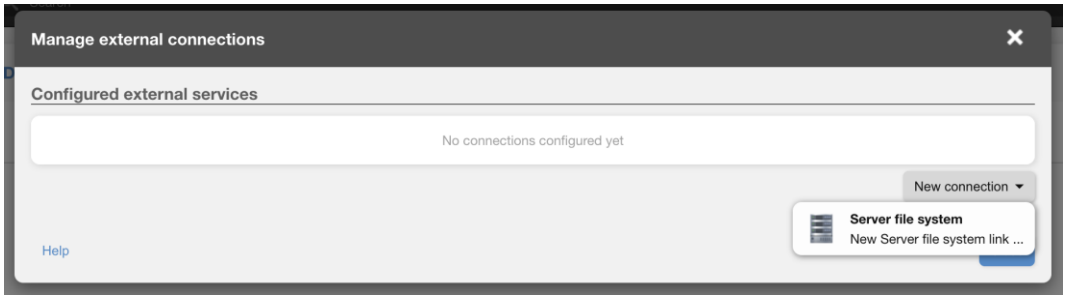


Figure 30: Add drive from file system

12. The following popup will appear.

Figure 31: New Connection popup

13. Run the following command from the EMS server CLI from the root user. Assuming the admin username is emsadmuser, run the below command. UserID of adminuser name is different. Replace emsadmuser with the admin username in the following commands.

    Usermod -a -G emsadm clearreports
    su – emsadmuser
    /Tekelec/WebNMS/bin/inetService.sh restart

    Output:
    [root@EMS4 ~]# usermod -a -G emsadm clearreports
    [root@EMS4 ~]# su - emsadmuser
    [emsadmuser@EMS4 ~]$
    [emsadmuser@EMS4 ~]$ /Tekelec/WebNMS/bin/inetService.sh restart
    Redirecting to /bin/systemctl restart clear-reports.service
    [emsadmuser@EMS4 ~]$

14. Click the **Folder** icon on the Connection Popup  .
15. In the Selected Path field, enter `/Tekelec/WebNMS/reportingStudio/` as displayed below:

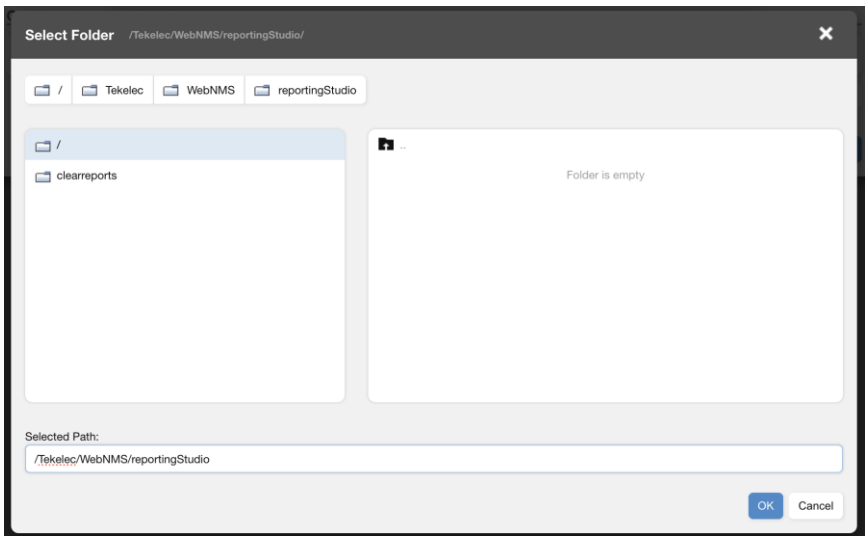


Figure 32: Select Folder for add repository

Click **OK**.

16. Fill in the name of the connection as “reportingStudioDrive”. The popup will appear like the following. Click **OK**.

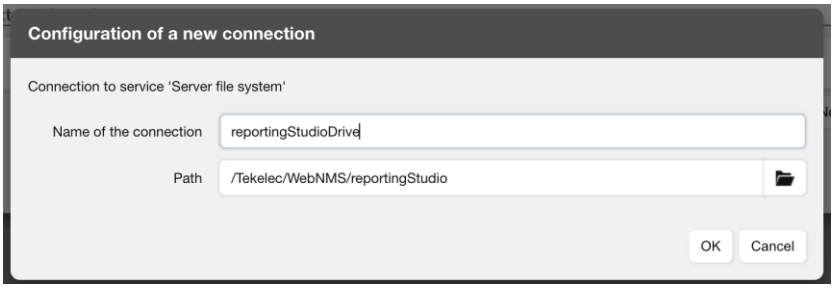


Figure 33: Add drive from file system

17. The **Manage external connections** pop-up will appear. Click on **Close.**
    Make sure that the Drive Page looks like below image.. It must have the newly created "reportingStudioDrive" section in the left panel and on Clicking it it will show as the image below.

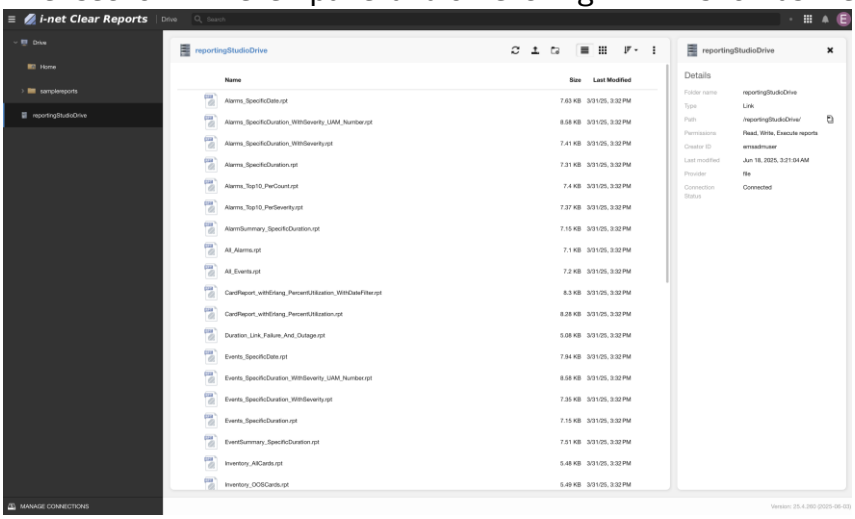


Figure 34: Add Drive

18. Open the "samplereports" section as seen in the left bar. Click on the three dots on the right in the file browser and click on "Create Link".

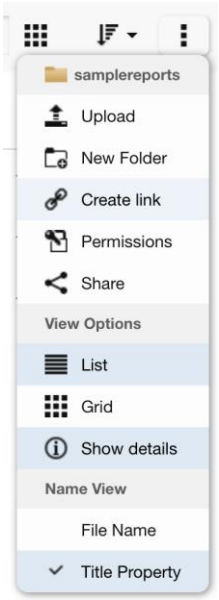


Figure: Create Link

19. The Create Link pop-up will open. Select the “reportingStudioDrive” that was created in step 17 and then add the name of the link as you like. Here we will name it “reportingStudioDriveLink”.

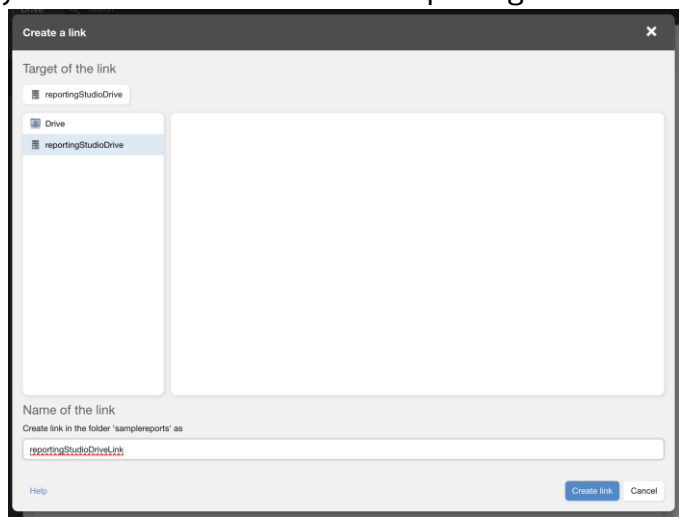
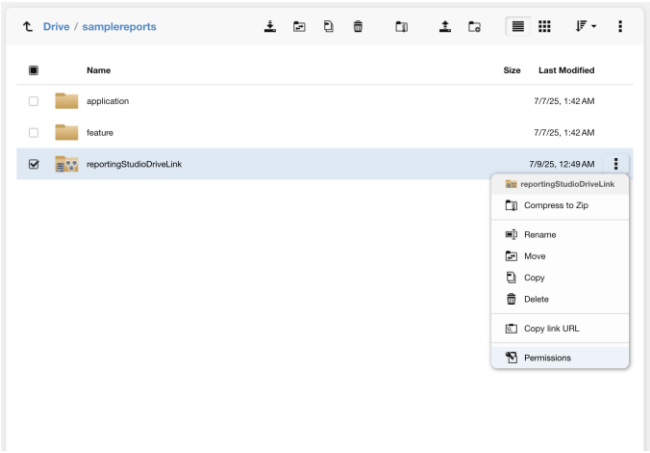
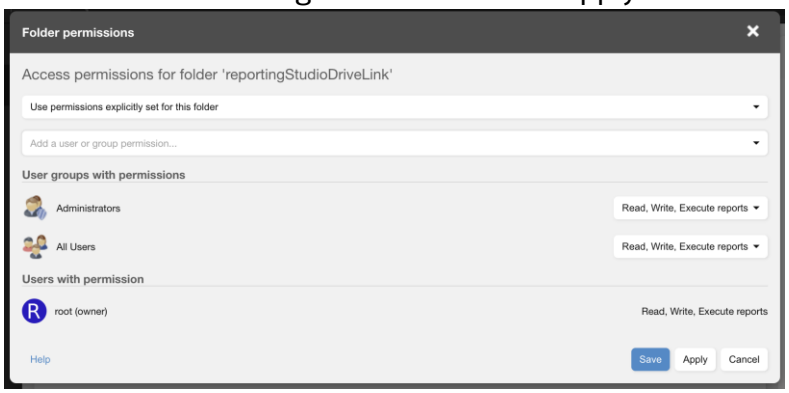


Figure: Create a link popup

20. Click the Create Link button to create the link.
21. Click the Checkbox beside the “reportingStudioDriveLink”, then click the three dots on the right. Click the permissions option.



22. Set the permissions as shown in the following screenshot. Click “Apply” and “Save”.



23. Go to the Home Page (http://<IP address of EMS Server>:9000). Click the **Configuration** card. On the **Advanced Configuration** page, under the **Report Section,** click **Customization** card.

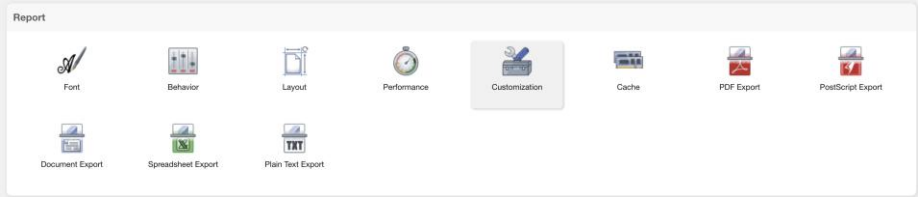


Figure 35: Report Section

24. The following pop-up will appear. Click **Add a Servlet Filter**. Enter `com.tekelec.e5ms.filter.E5msFilter` in the **Servlet Filter** field. Click the ✓ icon.

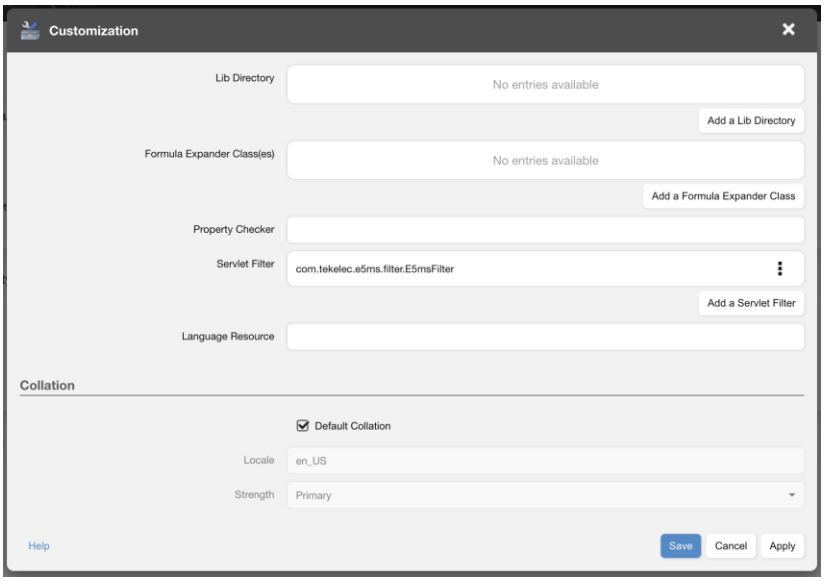


Figure 36: Customization Pop Up

Click **Apply** and then **Save**.

25. Click the **Card Drawer** button on the top right of the header and click the **Users and Groups** card.

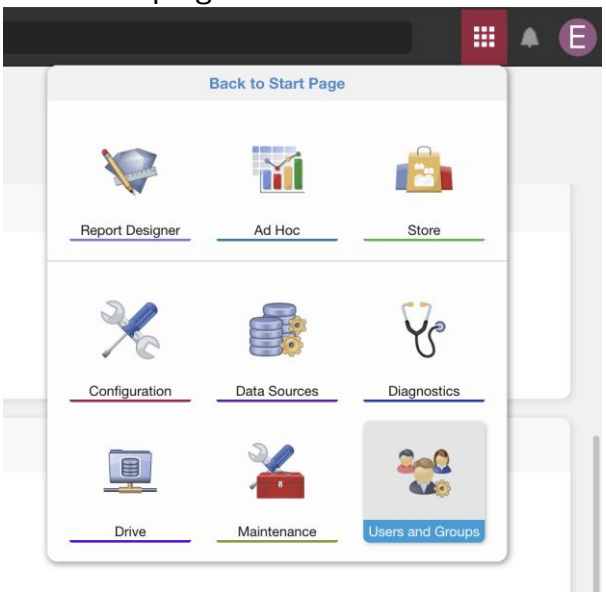


Figure 37: Users and Group card

The following screen will appear.

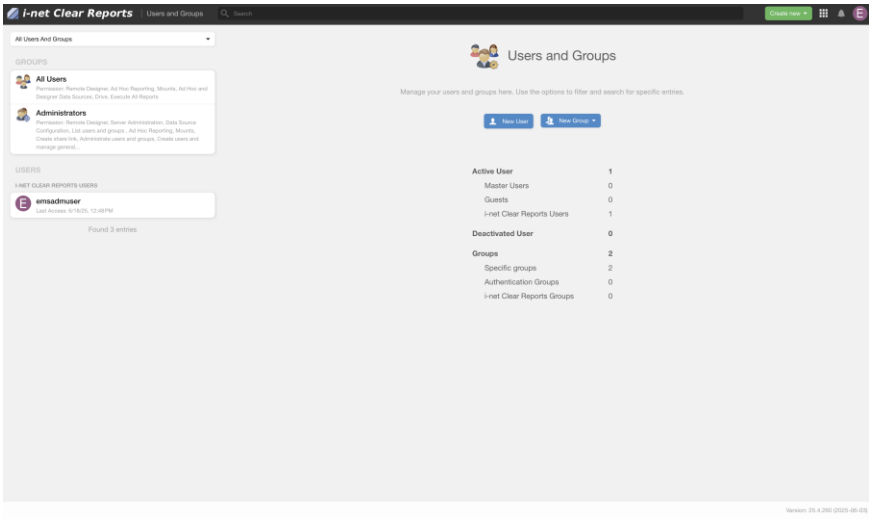


Figure 38: Users and Group Card

26. Click **New User** and navigate to the **Logins** tab.

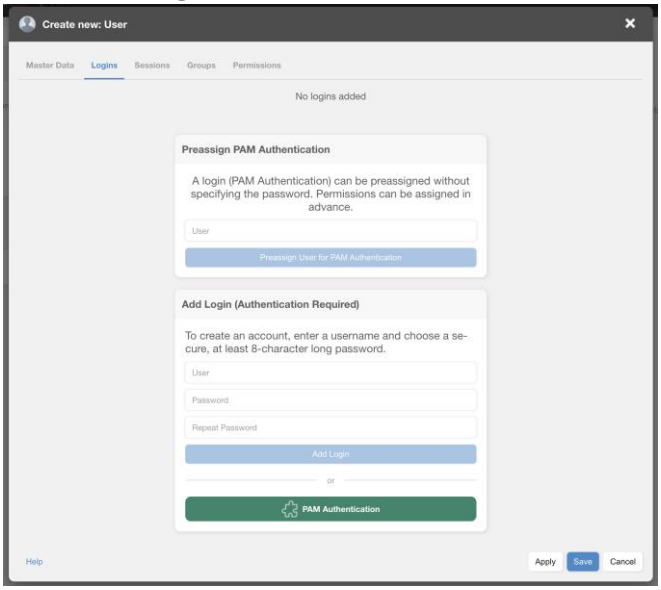


Figure 39: Create New User Pop-up

a. Enter “root” in the User field under Preassign PAM Authentication.
b. Click **Preassign User for PAM Authentication**.

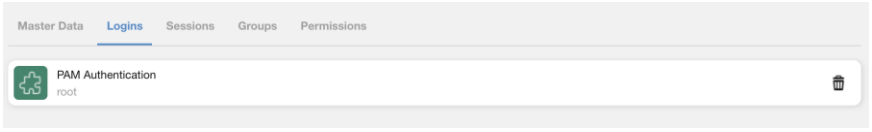


Figure 40: PAM authentication root setup

27. Click the **Permissions** tab and assign all the permissions as displayed below. Click **Apply** and then **Save**.

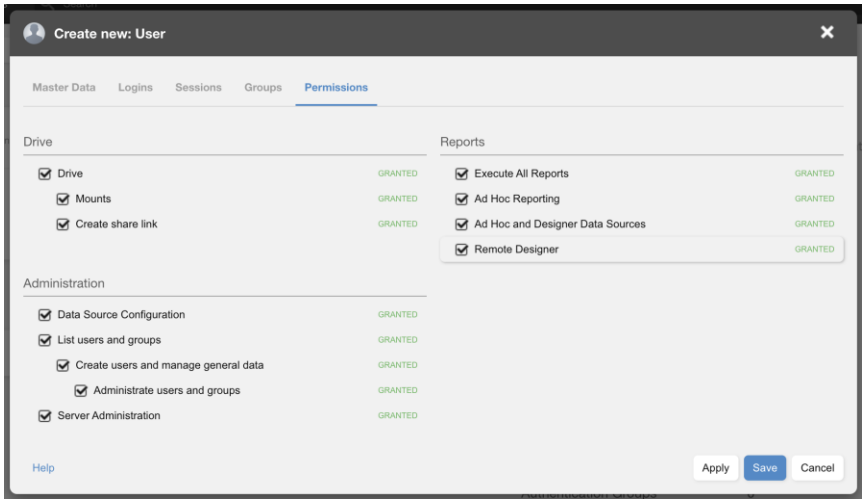


Figure 41: Permission of the root user

In this step if the user created and the permission is not present as shown in the below screenshot then please logout and restart the browser. Login using the same non-root user that was used in step 2 and continue the process by repeating from step 20.

28. Verify the Permissions as follows:

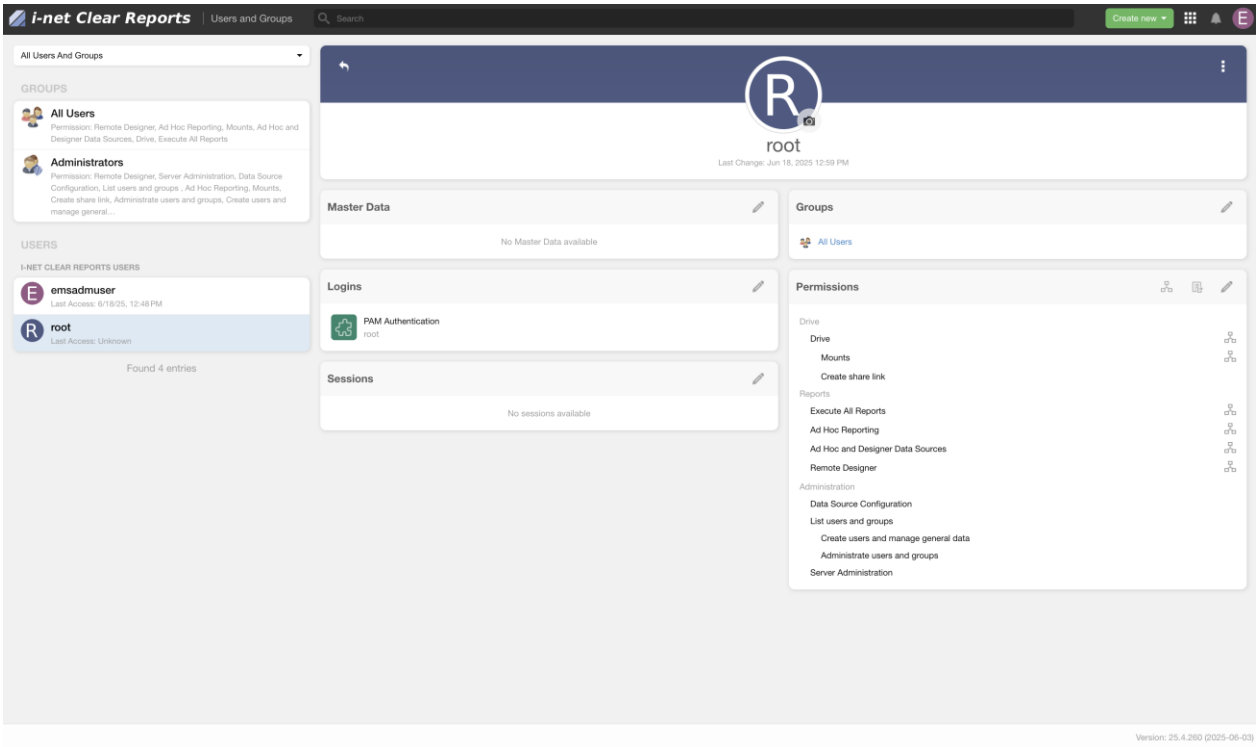


Figure 42: Verifying permissions

29. Click **Cards Browser**. Select the **Store** card.

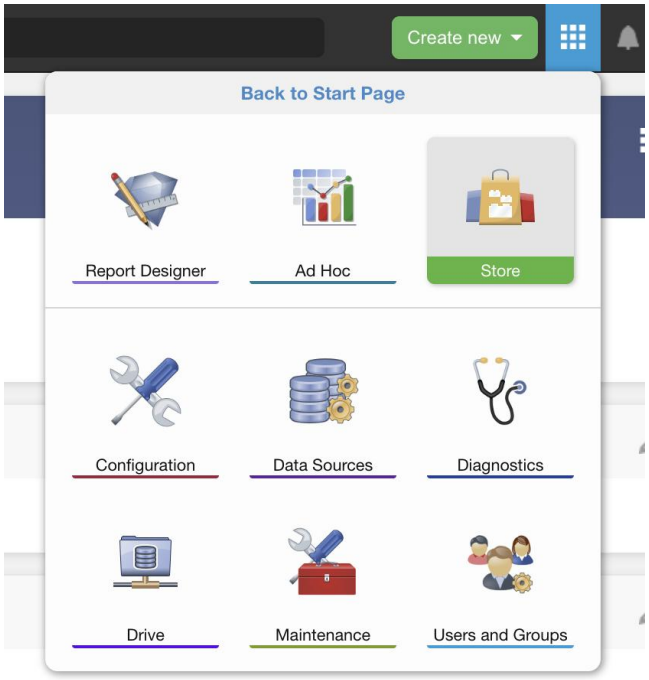


Figure 43: Store Card

30. The following page will appear. Select the **Authentication** tab.

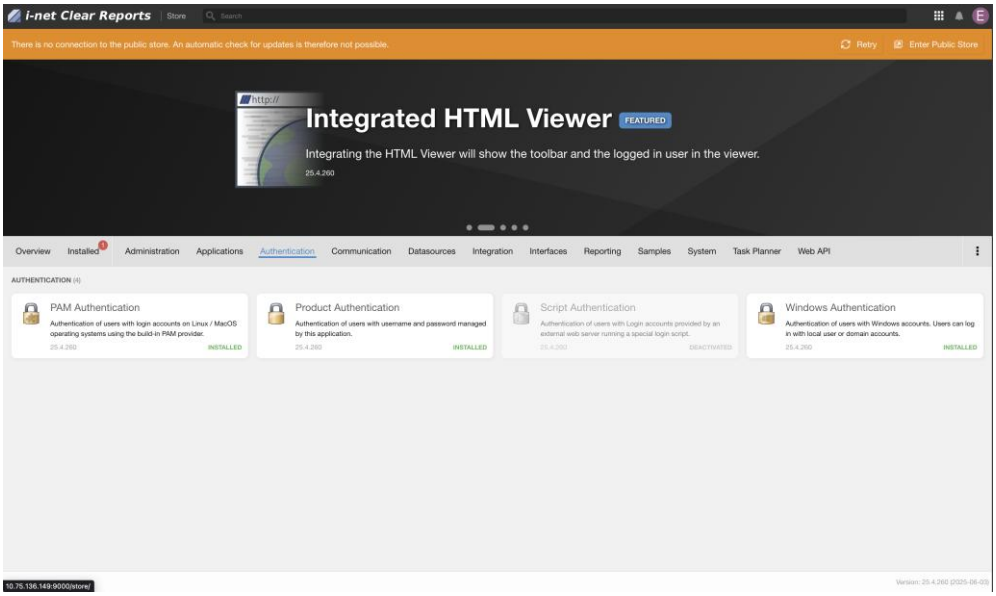


Figure 44: Authentication tab on Store Page

31. Click the grayed-out **Script Authentication** card.

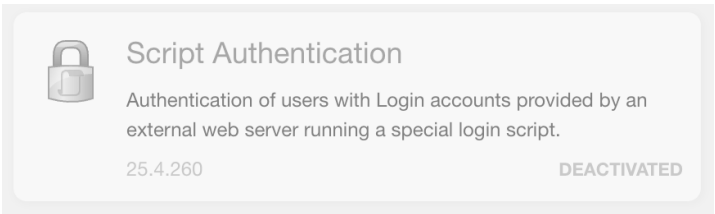


Figure 45: Disabled Script Authentication

32. Click **Activate**.

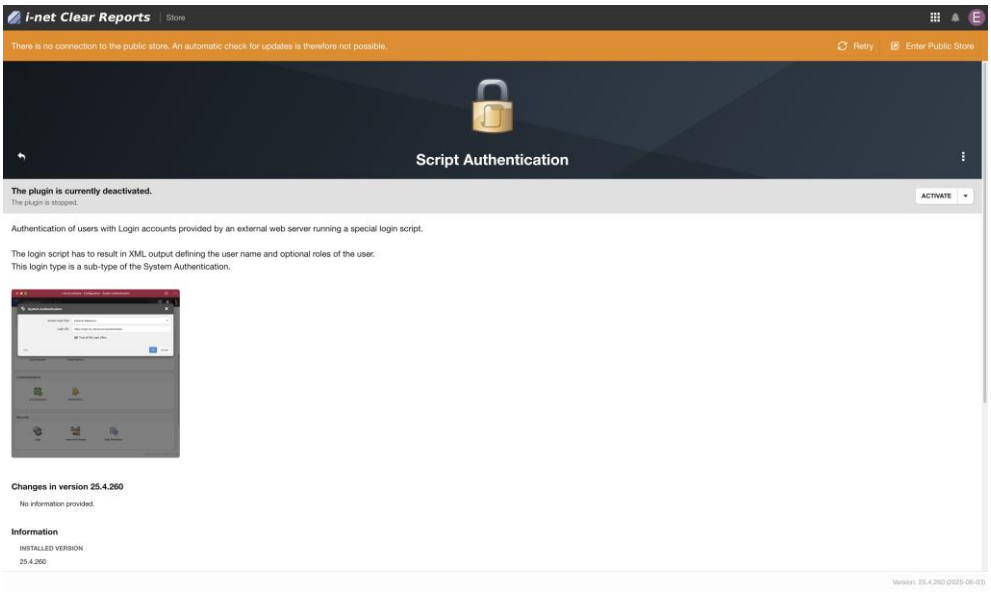


Figure 46: Script Authentication Page

33. After script authentication, the following page will be updated to provide the restart option, click on it as follows:

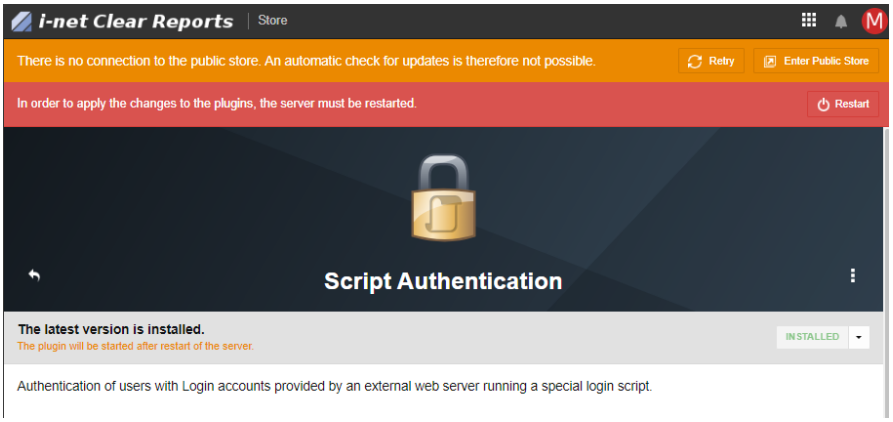


Figure 47: Restart option

34. If the browser asks to re-login as shown below, then close the browser tab and log in as non-root user again.

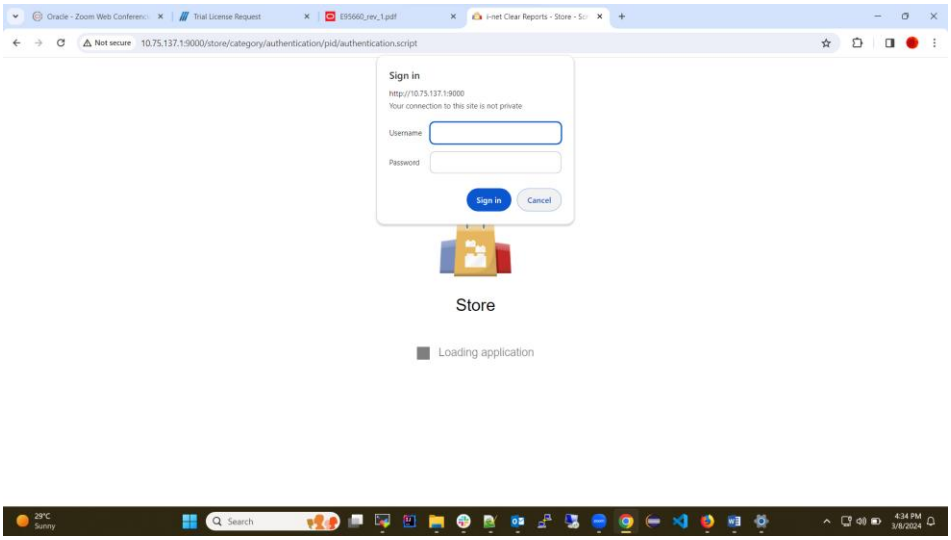


Figure 48: Re-login

a. Type the URL `http://<IP address of the EMS Server>:9000/`
b. Log in as non root user with your password.

35. Click **Card Browser** and click the **Configuration** card.

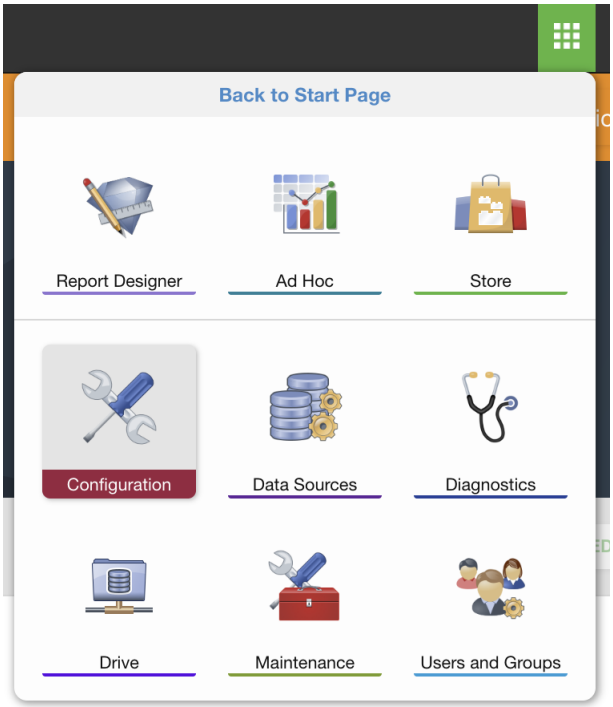
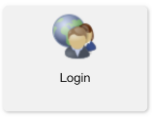


Figure 49: Configuration Card

36. Under the **Security** section, click **login** 

. The following pop-up will appear.

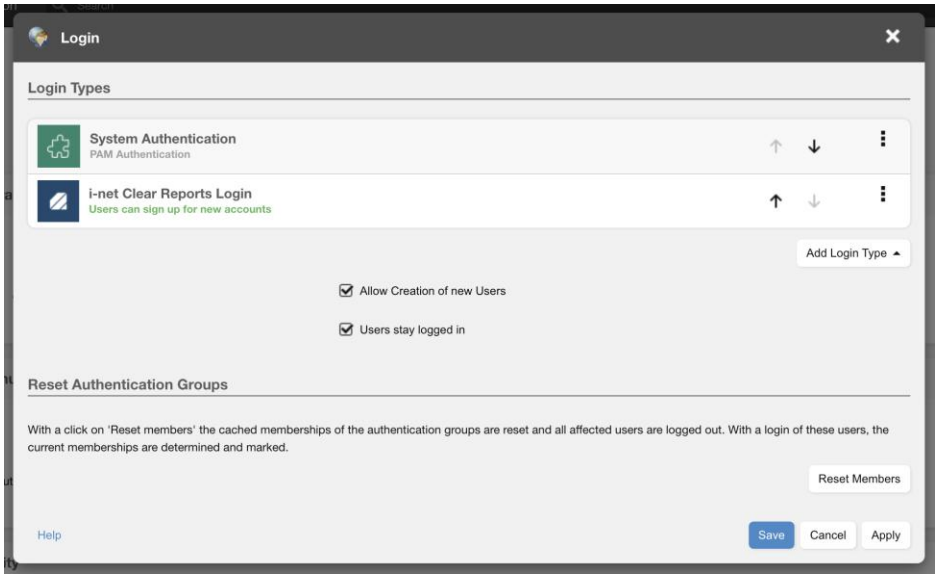


Figure 50: Login pop-up

37. Click the **Three Dot** menu beside the System Authentication option and select **Edit**.

Figure 51: Edit System Authentication

The following screen will appear.

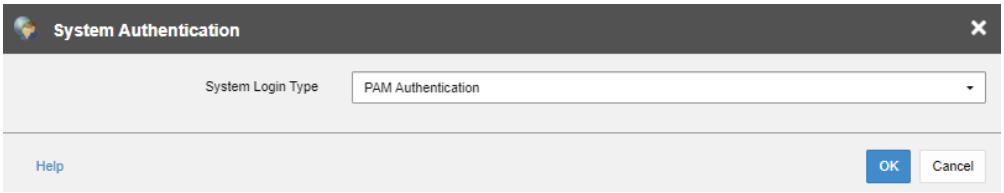


Figure 52: System Authentication

1. Click on the Drop Down and select the “Internal Webserver” option.
   Click on the “OK” button.

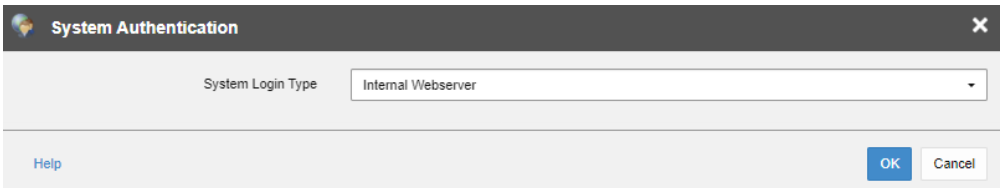


Figure 53: System Authentication

38. The following screen will appear. Click **Apply**. Click **Save**.

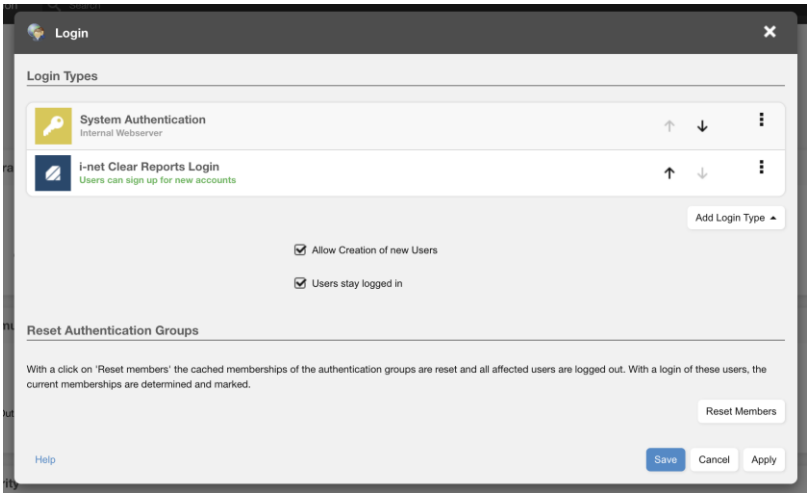


Figure 54: Login pop-up

39. From the **Advanced Configuration** View, under the **General Section**, click the **Web Server** card.

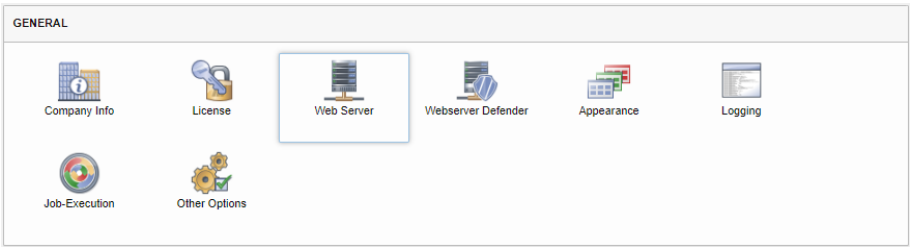


Figure 55: Web Server card

The following pop-up will appear:

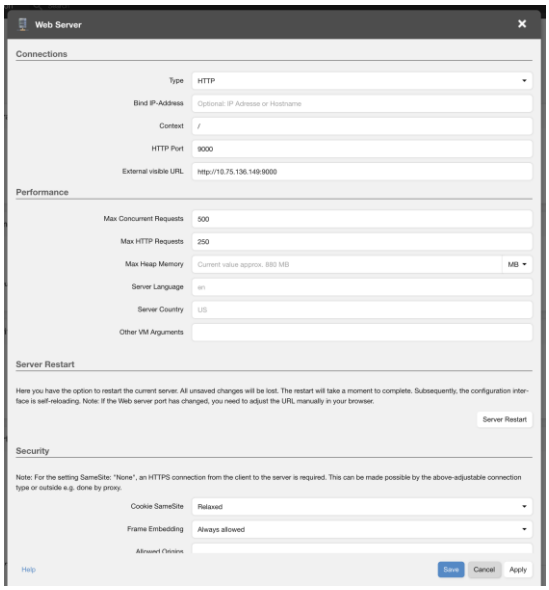


Figure 56: Web Server pop-up

40. In the **Type** field, select the **HTTPS** option from the drop-down.

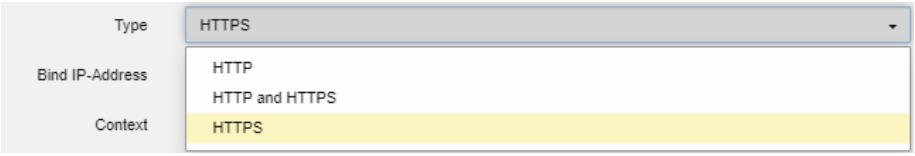


Figure 57: Select HTTPS

41. Update the PORT section as follows:

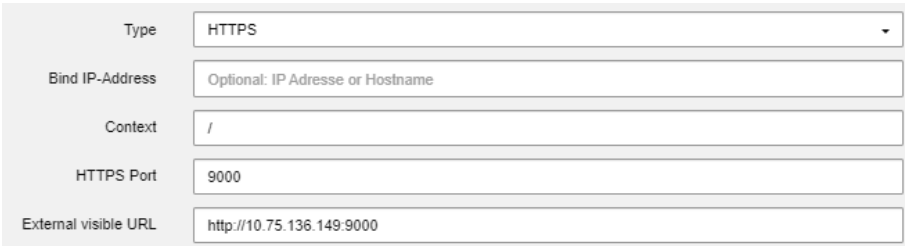


Figure 58: Updating the Web Server pop-up

42. Select the **Create self signed HTTPS certificate** option.

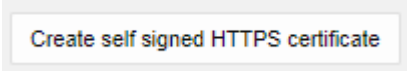


Figure 59: Self Signed Certificate

43. Fill the certificate form as follows:

Organization: <Use Organization Name>
Location: <use Organization location>
Country Code: <use Organization country>
FQDN: <use EMS server IP>

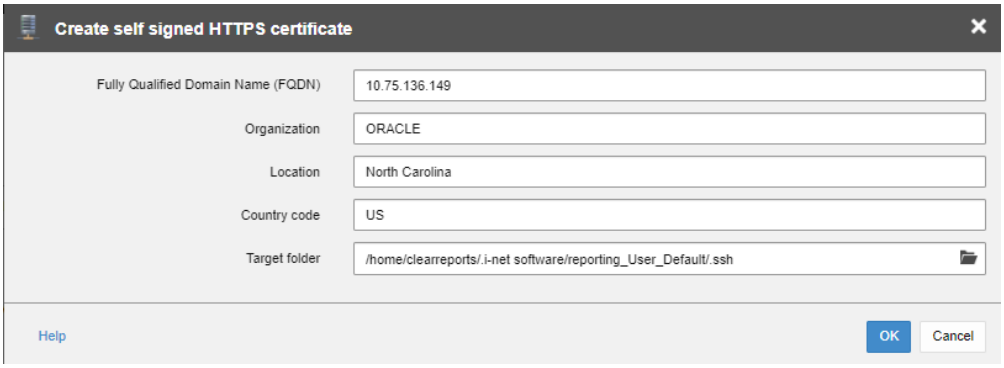


Figure 60: Self Signed Certificate Form Details

Click **OK**.

44. The Web Server form will be as follows.

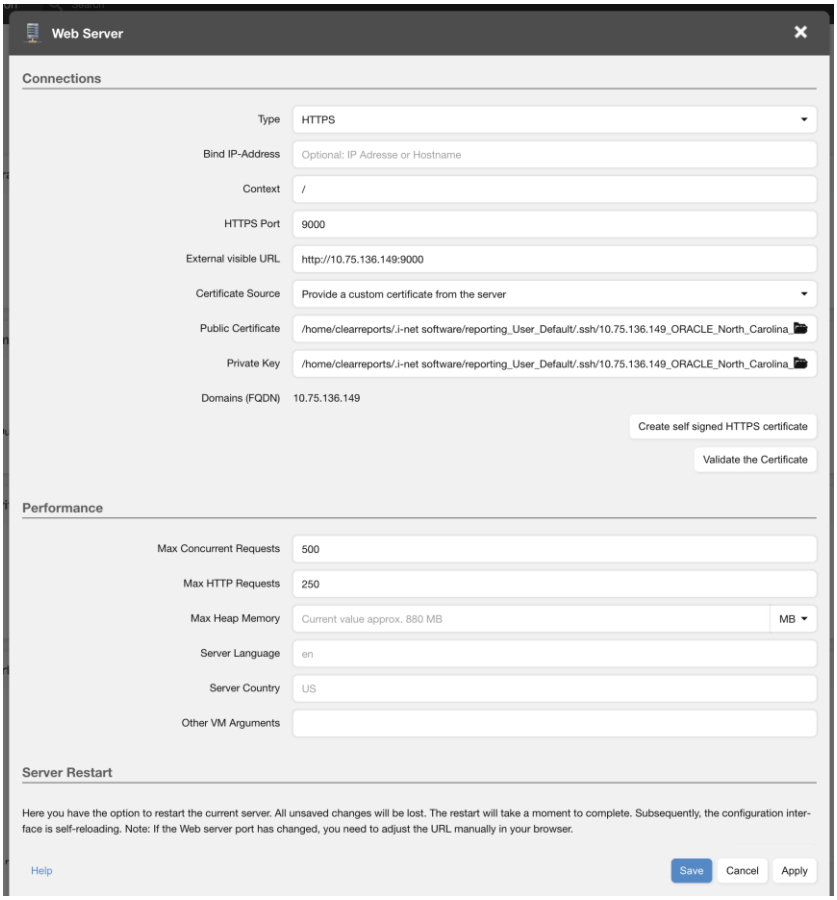


Figure 61: Filled up Web Server Form

45. Click **Apply**, and then **Restart Now**.
46. At this point, the UI will freeze while loading.
47. Change the URL by adding https to it, instead of http. The page will load (If it if already logged out then ignore the step 43).
48. Logout of the Reporting Studio GUI from the top right User icon.
49. Open the EMS GUI.
50. Launch Reporting Studio by selecting **Tools**, and then **Reporting Studio**.

Figure 63: EMS GUI

51. The following page will load on the browser. Click **Internal Webserver**.

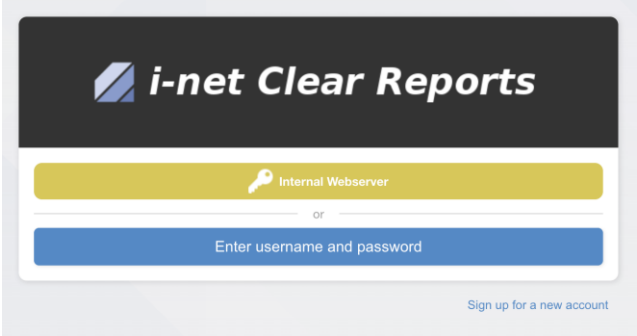


Figure 64: Open Reporting Studio from EMS GUI

The following page will load:

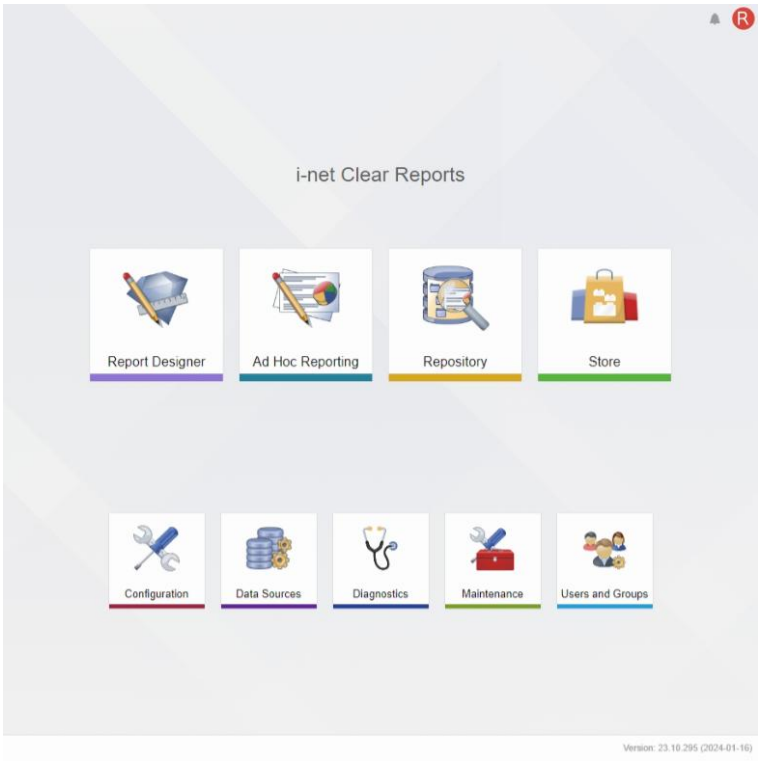
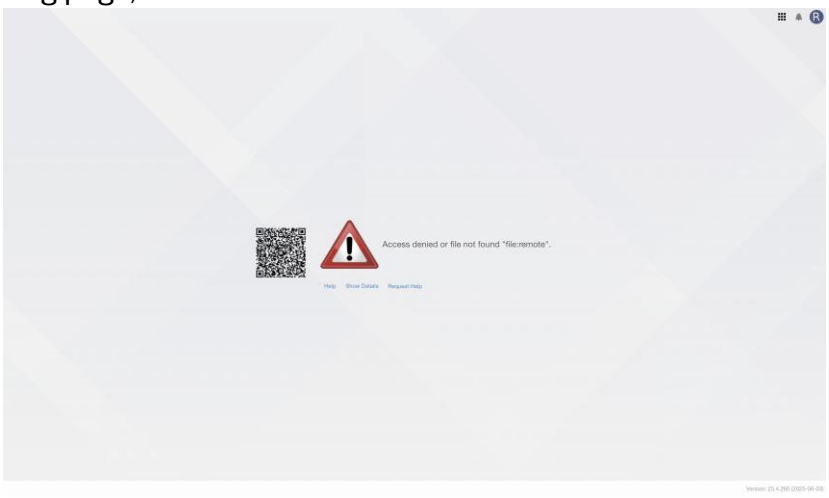


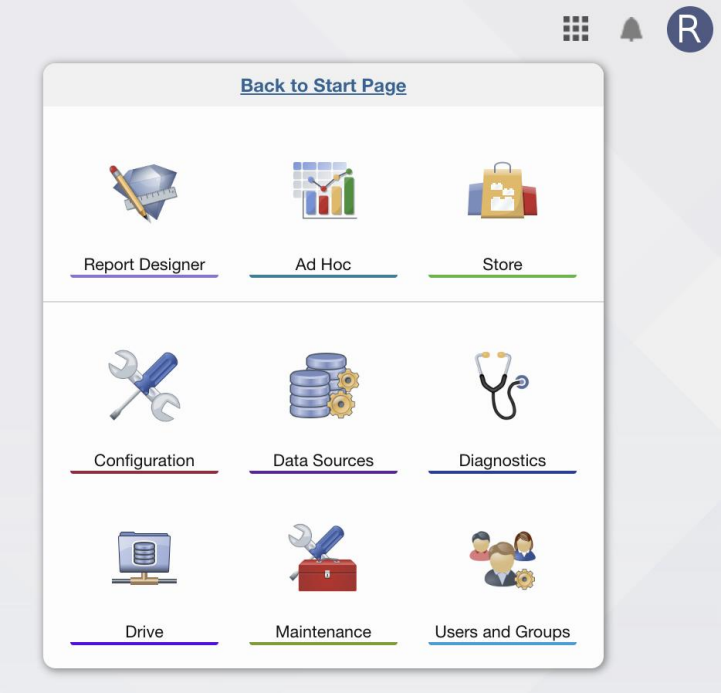
Figure 65: Configured Reporting Studio

Reporting Studio is now completely installed and configured.

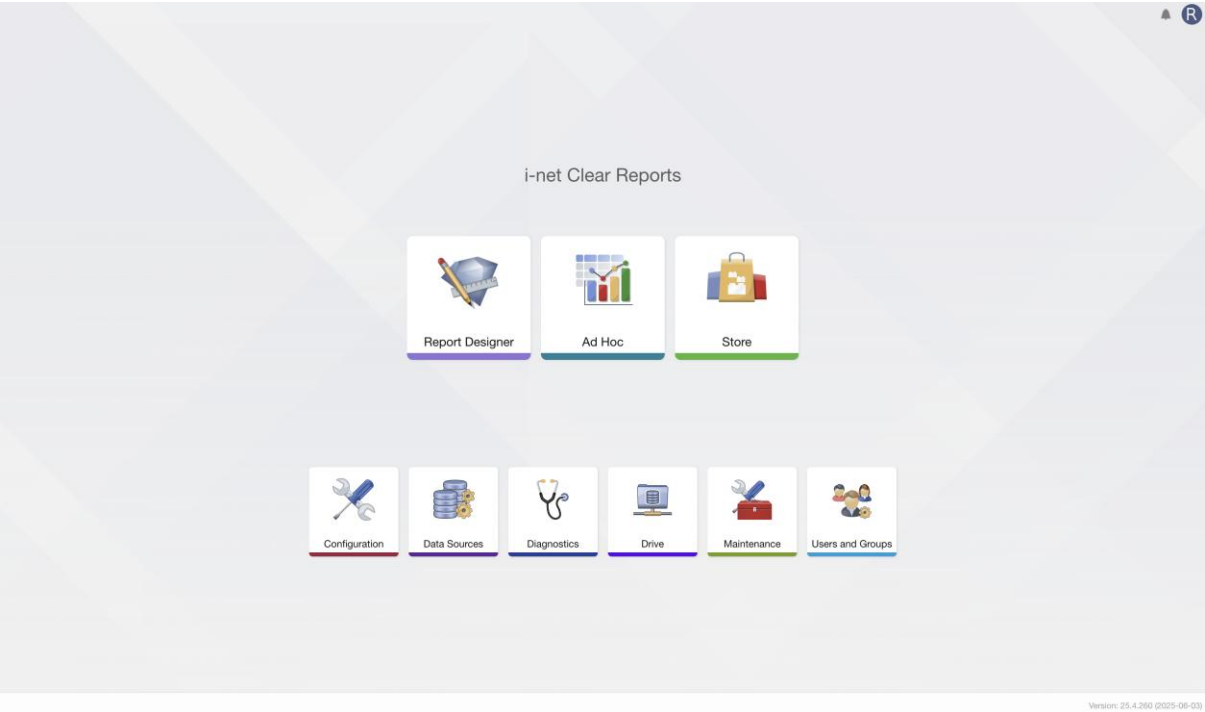
If you get the following page,



Click on "**Back to Start Page**" from the Card Options Button



After that you should see the following start page



After logging in again, open Drive from the Start Page. In the Drive page, if you are unable to see the reportingStudioDrive that was created in Step 16, then follow step 10-22. This will solve the issue.

II. Configuration for clear-reports-server-23.10.422.rpm

1. After the successful installation of i-net Clear Reports. Assuming the admin username is emsadmuser, run the following command. If the User ID of adminuser name is different, replace emsadmuser with the admin username in the following commands.

   a. Run below commands on the EMS server CLI using the root user:

   # sh /usr/share/i-net-clear-reports/enable-pam-for-user.sh clearreports
   # su - emsadmuser
   # cd /Tekelec/WebNMS/bin/
   # sh inetService.sh restart
   # sh inetService.sh status

```
[root@EMS3 reporting-studio]# sh /usr/share/i-net-clear-reports/enable-pam-for-user.sh clearreports

#################################################################################################################
#
#   To allow PAM authentication against the local users of your system, our product needs read access to the
#   '/etc/shadow' file. This script will modify the '/etc/shadow' accordingly (add read access for group 'root' and
#   add the DAEMON_USER (an argument you will give the script) to the group 'root' of '/etc/shadow')
#
#   ATTENTION: Excuting this is script imposes a potential security risk to security hardened systems.
#################################################################################################################

Are you 100% sure that you want to grant 'clearreports' read access to '/etc/shadow' using the group 'root'?
Please type 'yes' if you are sure: yes
Executing now.

The '/etc/shadow' file has (gained) read permissions for the group 'root'. This will be needed for proper PAM authentication.
Adding 'clearreports' to group: root
[root@EMS3 reporting-studio]# su - emsadmuser
[emsadmuser@EMS3 ~]$ cd /Tekelec/WebNMS/bin/
[emsadmuser@EMS3 bin]$ sh inetService.sh restart
Redirecting to /bin/systemctl restart clear-reports.service
[emsadmuser@EMS3 bin]$ sh inetService.sh status
Redirecting to /bin/systemctl status clear-reports.service
● clear-reports.service - Provides the creation and execution of *.rpt reports.
   Loaded: loaded (/usr/lib/systemd/system/clear-reports.service; enabled; vendor preset: disabled)
   Active: active (running) since Fri 2024-05-31 02:23:57 EDT; 4s ago
  Process: 89849 ExecStartPre=/bin/bash /usr/share/i-net-clear-reports/servicePreScript.sh (code=exited, status=0/SUCCESS)
 Main PID: 89873 (java)
    Tasks: 80 (limit: 22144)
   Memory: 416.6M
   CGroup: /system.slice/clear-reports.service
           ├─89873 /usr/share/i-net-clear-reports/runtime/bin/java -XX:+HeapDumpOnOutOfMemoryError -Djava.awt.headless=true -cp /usr/share/i-ne
           └─89900 /usr/share/i-net-clear-reports/runtime/bin/java -XX:+HeapDumpOnOutOfMemoryError -Djava.awt.headless=true -Djava.class.path=/

May 31 02:23:57 EMS3 systemd[1]: Starting Provides the creation and execution of *.rpt reports....
May 31 02:23:57 EMS3 bash[89849]: Checking capabilities 'cap_net_bind_service' to enable system port range for '/usr/share/i-net-clear-reports/
May 31 02:23:57 EMS3 bash[89849]: Capabilites to enable system port range will be set now!
May 31 02:23:57 EMS3 bash[89849]: Added some library paths for libjli.so to 'ld.so.conf'
May 31 02:23:57 EMS3 systemd[1]: Started Provides the creation and execution of *.rpt reports..
May 31 02:23:58 EMS3 java[89873]: Initializing persistence in folder /home/clearreports/.i-net software/reporting_User_Default
May 31 02:23:58 EMS3 java[89873]: Possible redirection of stdout and stderr to a file cannot be detected. Add the following command line parame
[emsadmuser@EMS3 bin]$
```

Figure 15: Give permission to Clear Reports user

   b. Click **Open Startpage** to open the i-net Clear Reports Startpage.

Figure 16: Click on the “Open Startpage” button

On clicking **Open Startpage** in the previous step, the following window will appear:

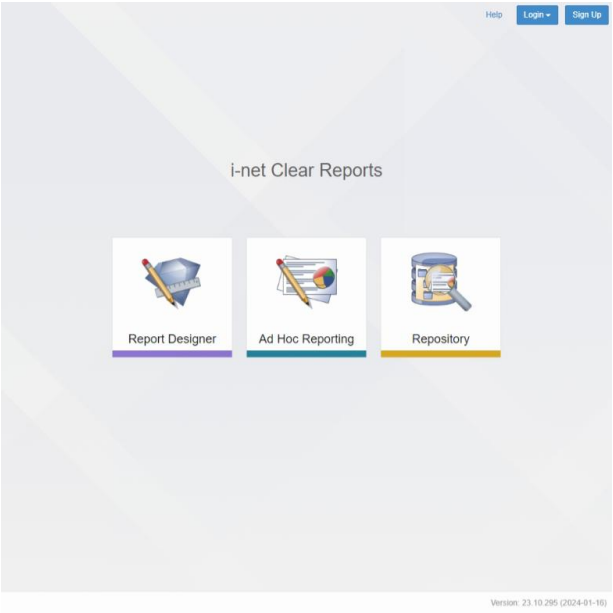


Figure 17: i-net Clear Reports Startpage

2. Click **Login** and then click **Master Password** as displayed in the following screenshot.

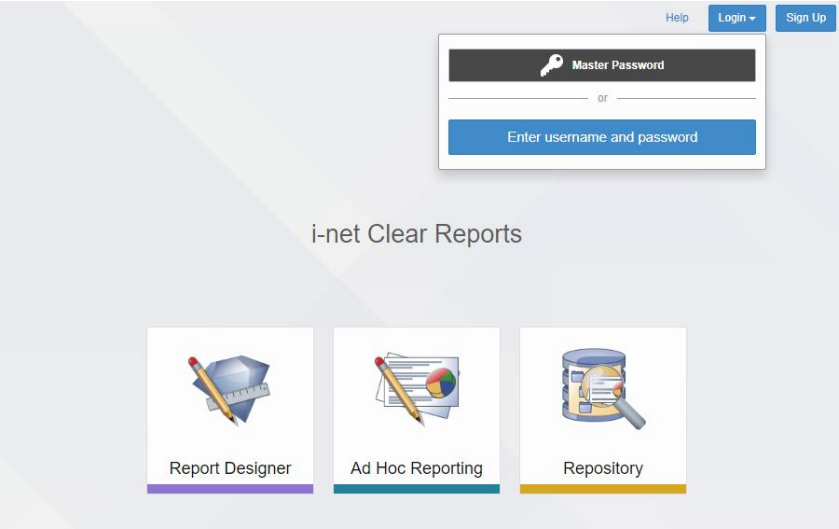


Figure 18: Click on Login > Master Password

3. On clicking **Master Password**, the following screen will open. Enter the password created in step 17 of Section 2.2 and click **Login**.

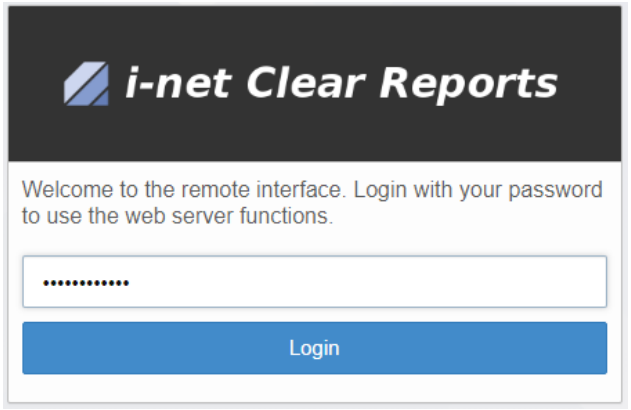


Figure 19: Enter Master Password

On logging in, the following screen will appear:

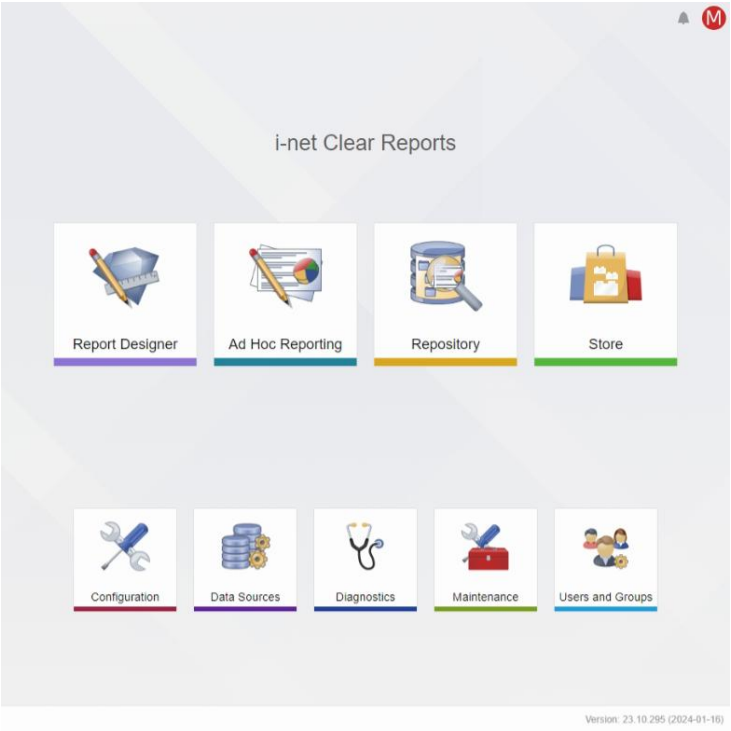


Figure 20: Landing Page of Clear Reports

4. Click the **Data Sources** Card.

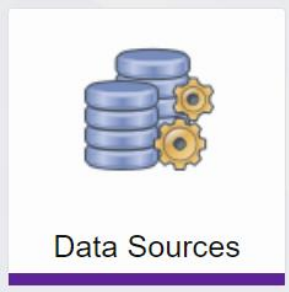


Figure 21: Data Sources Card

5. The following page will open. Click **Add Data Source** on the header and from the drop-down, select the **Create new Data Source** option.

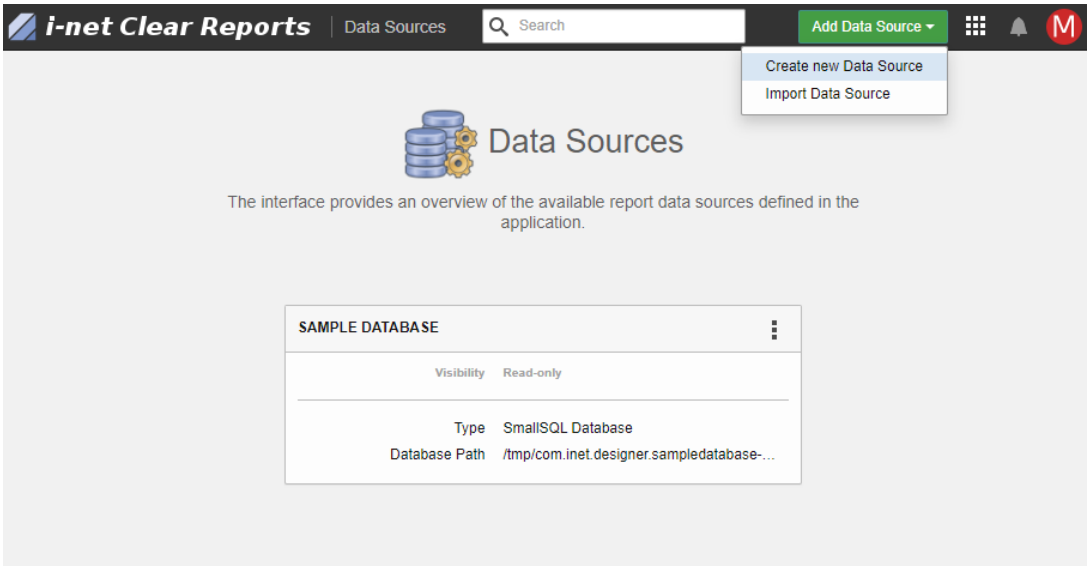


Figure 22: Create new Data Source option

6. The following pop-up will appear. Enter the following details:

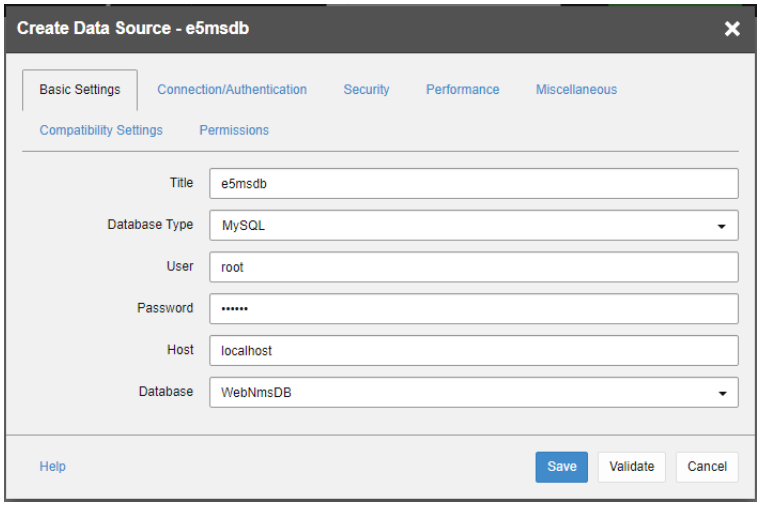


Figure 23: Create New Database details

c. Click **Validate**.
d. Click **Save**.

The following screen will appear on the Data Sources page.

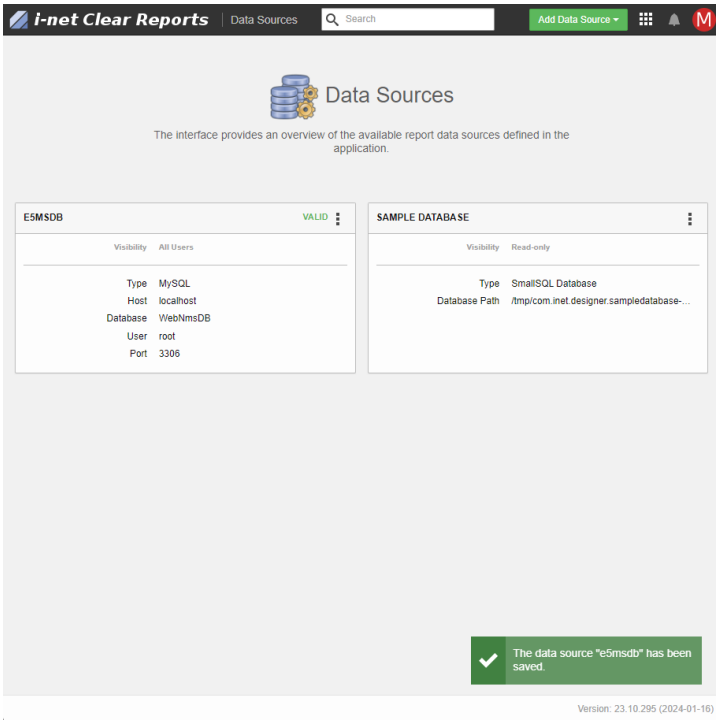


Figure 24: New Data Sources added

7. Click **Card Browser** on the header.

Figure 25: Card browser

8. Click the **Configuration Card** as shown below.

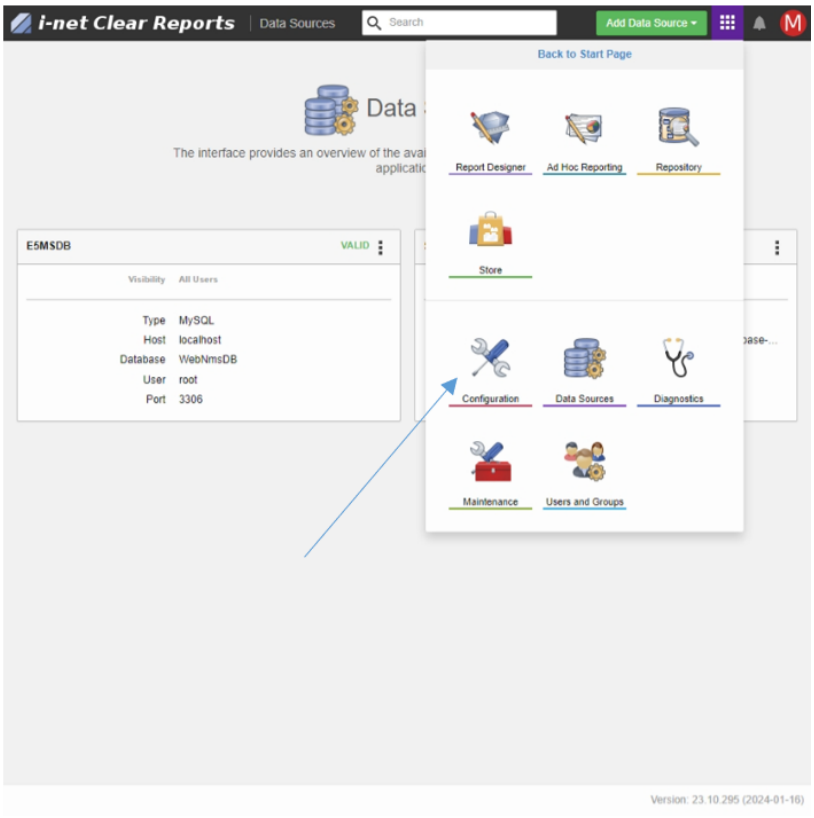


Figure 26: Configuration Card

9. In the following page, click **User("M")** on the right corner on the header and select the **Switch to Advanced View** option.

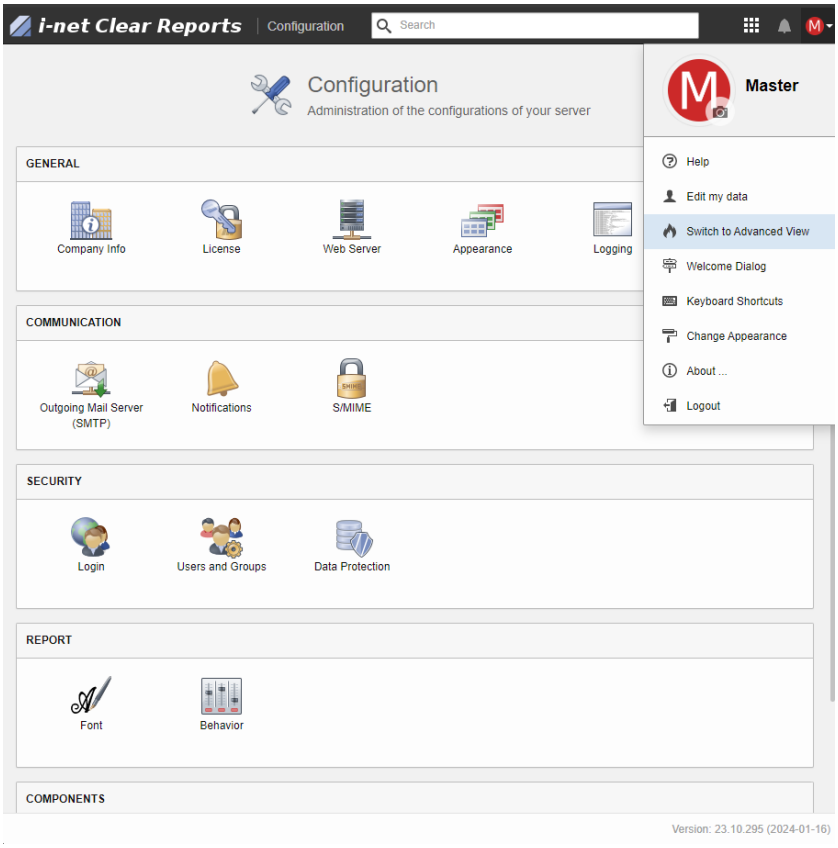


Figure 27: Switch to Advanced View

The Advanced View of Configuration Page will be as follows:

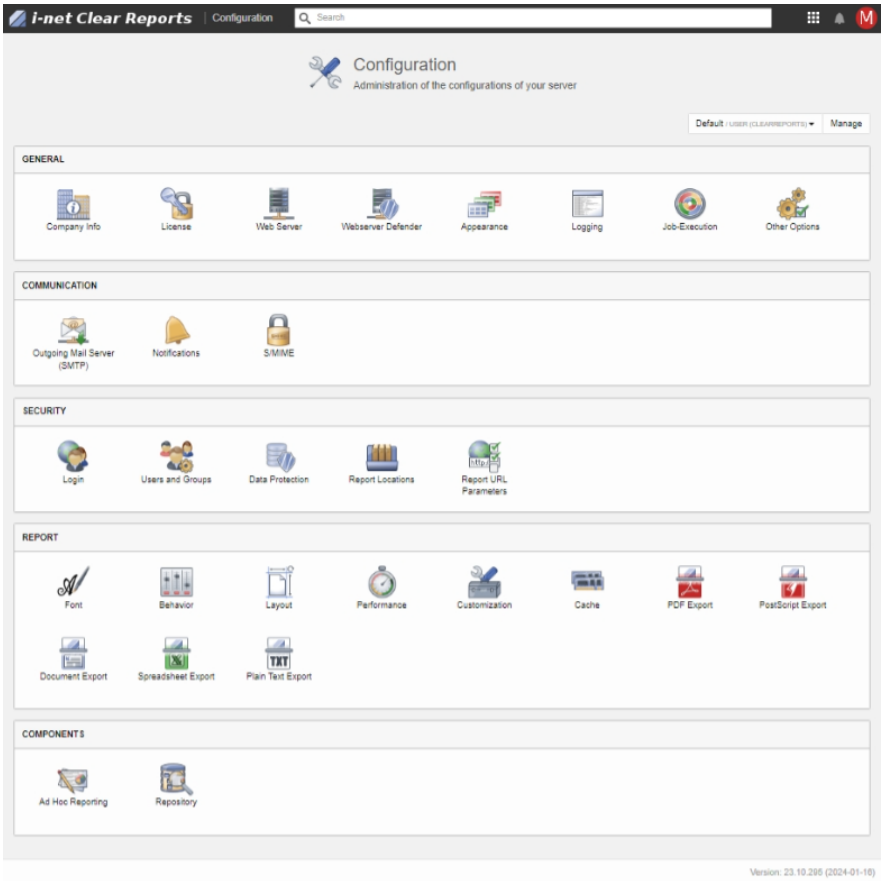


Figure 28: Advanced View of Configuration page

10. Under the **Components** section, select **Repository**.

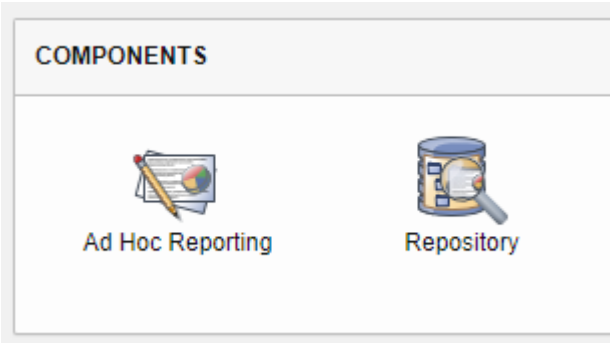


Figure 29: Repository option

11. The following pop-up will appear. Click **Add repository** and select the **from file system** option.

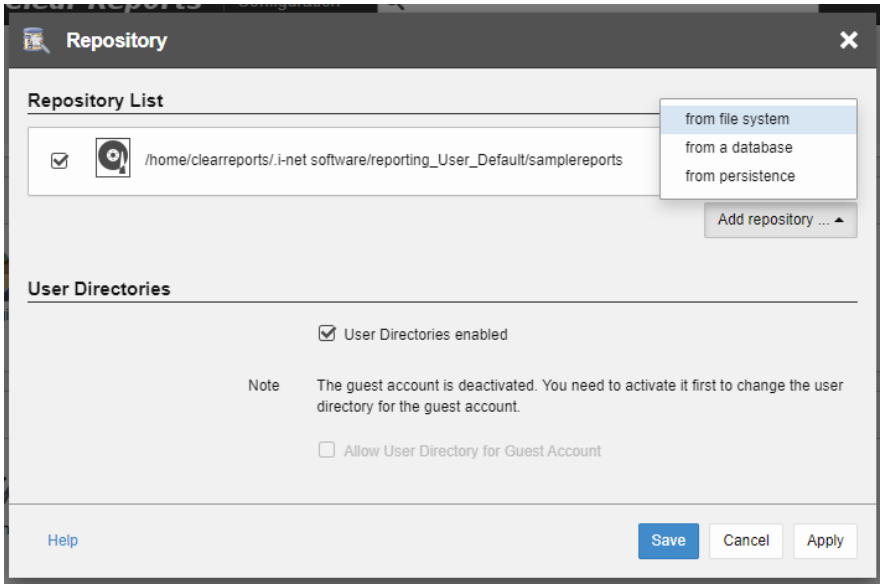


Figure 30: Add repository from file system

12. The following screen will appear.

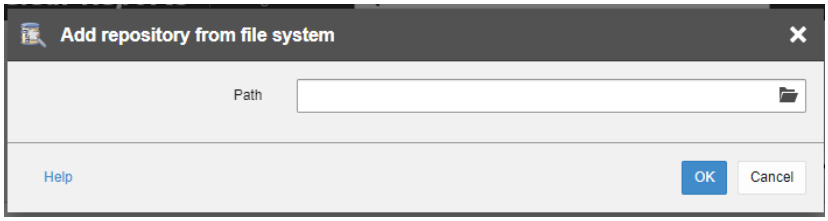


Figure 31: Add repository

13. Run the following command from the EMS server CLI from the root user. Assuming the admin username is emsadmuser, run the below command. If the User ID of adminuser name is different, replace emsadmuser with the admin username in the following commands.

    usermod -a -G emsadm clearreports
    su – emsadmuser
    /Tekelec/WebNMS/bin/inetService.sh restart

    Output:
    [root@EMS4 ~]# usermod -a -G emsadm clearreports
    [root@EMS4 ~]# su - emsadmuser
    [emsadmuser@EMS4 ~]$
    [emsadmuser@EMS4 ~]$ /Tekelec/WebNMS/bin/inetService.sh restart
    Redirecting to /bin/systemctl restart clear-reports.service
    [emsadmuser@EMS4 ~]$

14. Click the **Folder** icon on the screen as shown in step 16.
15. In the Selected Path field, enter `/Tekelec/WebNMS/reportingStudio/` as displayed below:

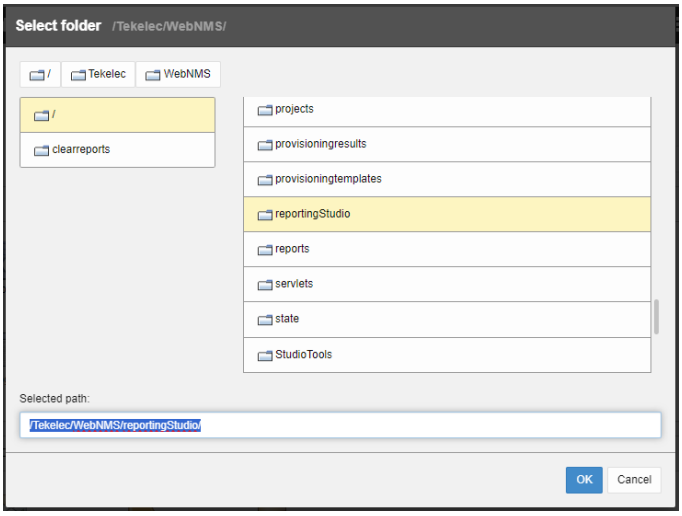


Figure 32: Select Folder for add repository

Click **OK**.

16. The following screen will appear. Click **OK**.

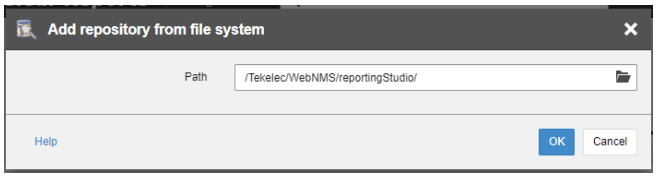


Figure 33: Add repository from file system

17. The **Add Repository** pop-up will appear. Click the checkbox beside the `/Tekelec/WebNMS/reportingStudio` option.

Click **Apply**, and then **Save**.

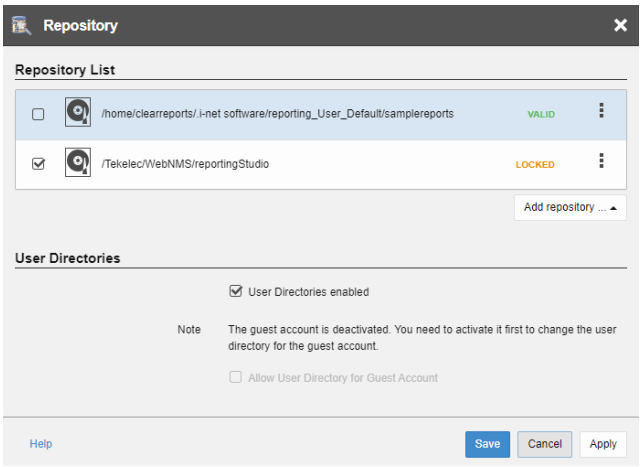


Figure 34: Add repository

18. On the **Advanced Configuration** page, under the **Report Section,** click **Customization** card.

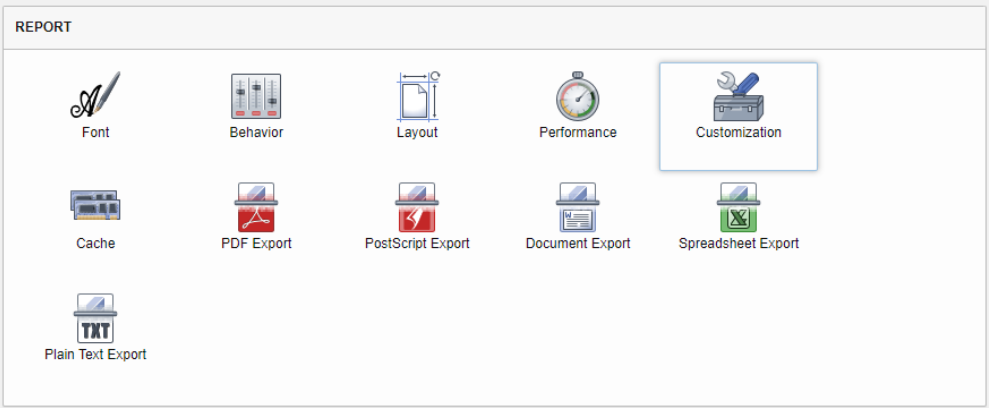


Figure 35: Report Section

19. The following pop-up will appear. Click **Add a Servlet Filter**. Enter `com.tekelec.e5ms.filter.E5msFilter` in the **Servlet Filter** field. Click the ✓ icon.

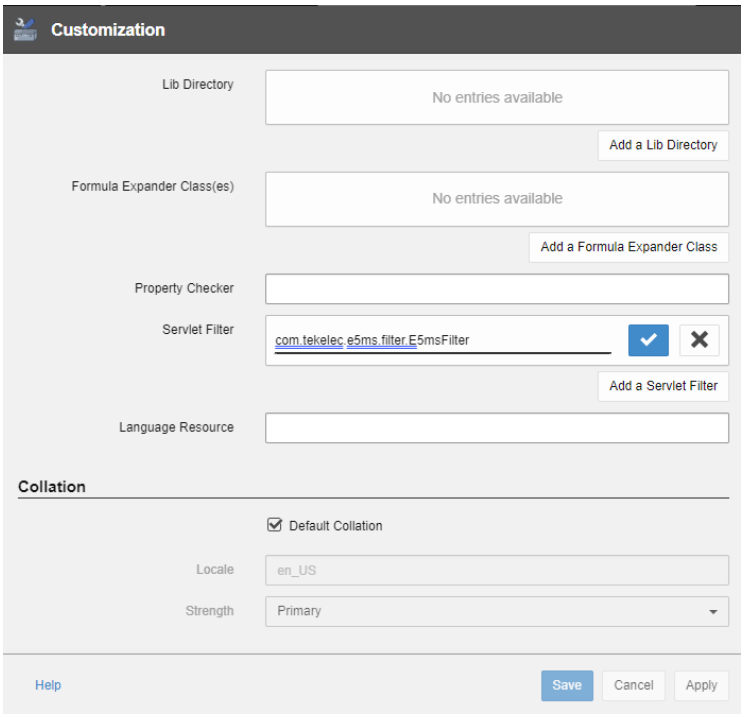


Figure 36: Customization Pop Up

Click **Apply** and then **Save**.

20. Click the **Card Drawer** button on the top right of the header and click the **Users and Groups** card.

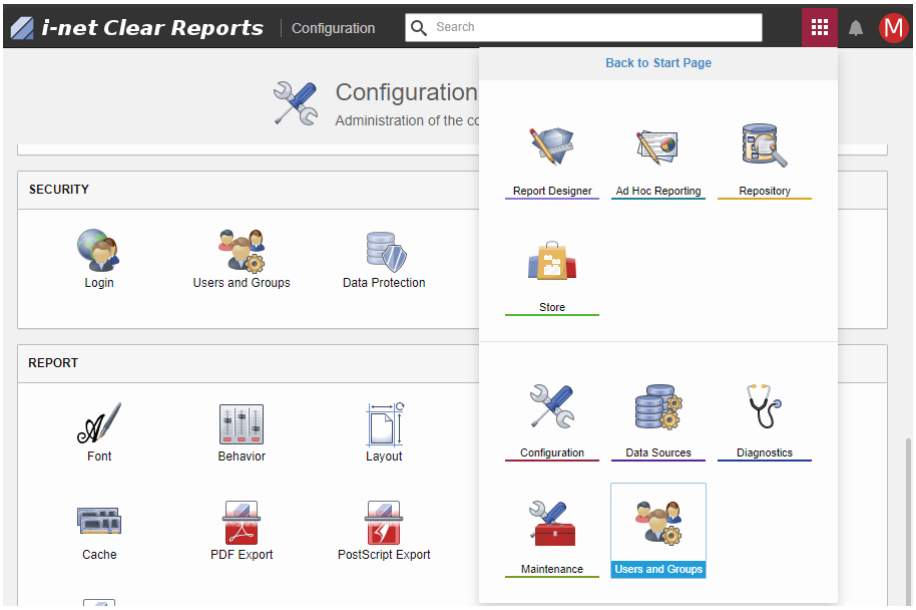


Figure 37: Users and Group card

The following screen will appear.

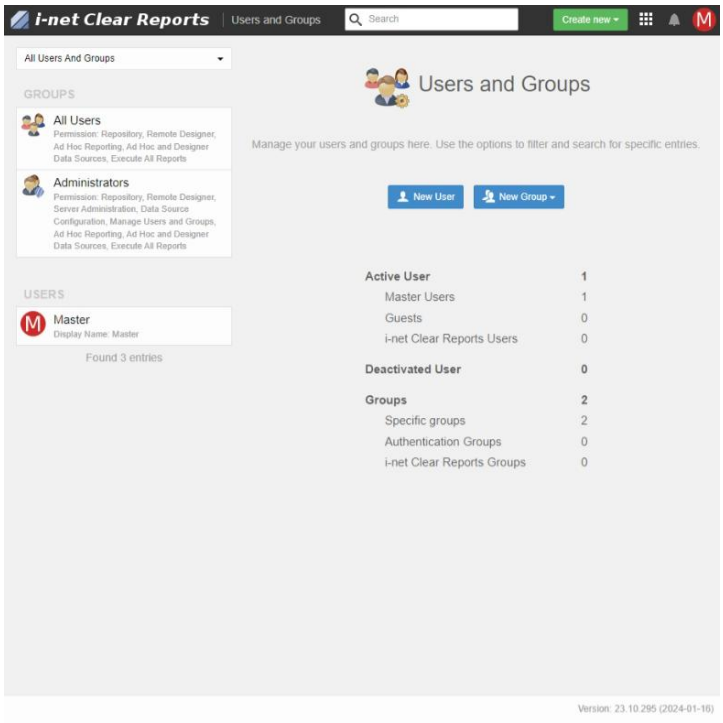


Figure 38: Users and Group Card

21. Click **New User** and navigate to the **Logins** tab.

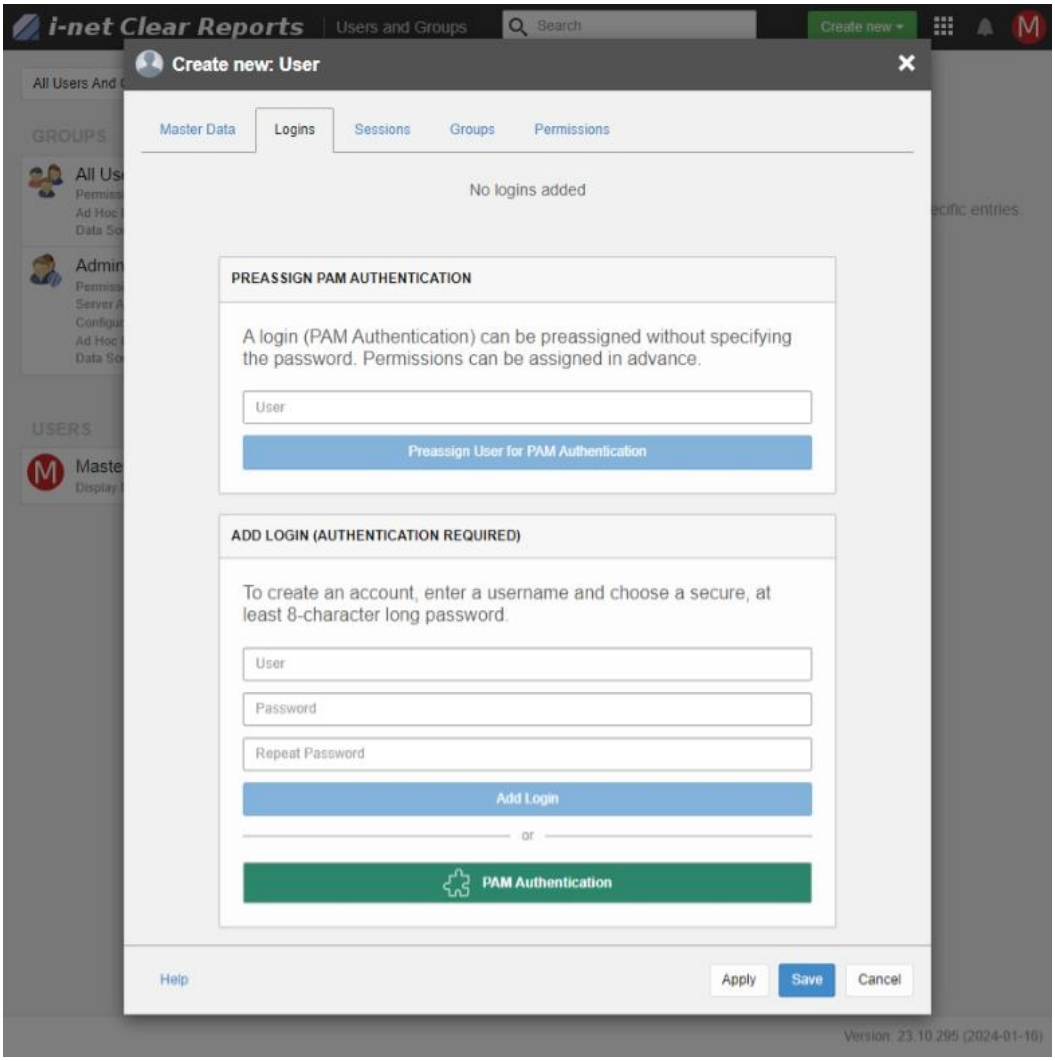


Figure 39: Create New User Pop-up

c. Enter “root” in the User field under Preassign PAM Authentication.
d. Click **Preassign User for PAM Authentication**.

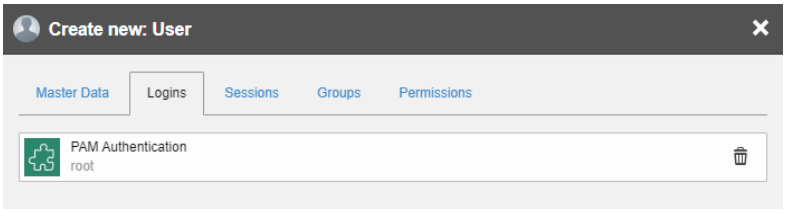


Figure 40: PAM authentication root setup

22. Click the **Permissions** tab and assign all the permissions as displayed below. Click **Apply** and then **Save**.

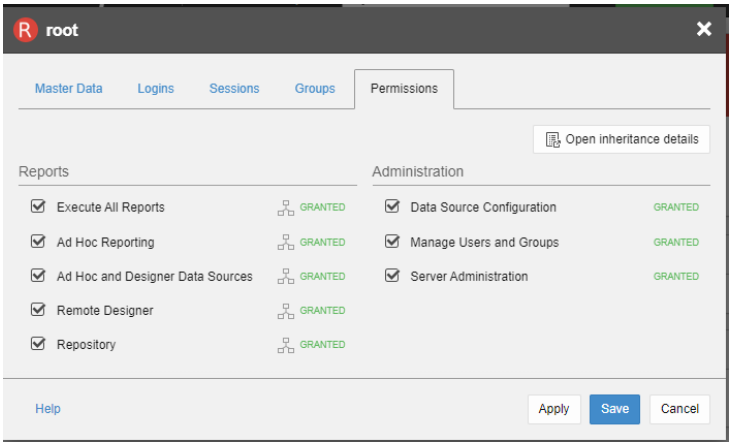


Figure 41: Permission of the root user

23. Verify the Permissions as follows:

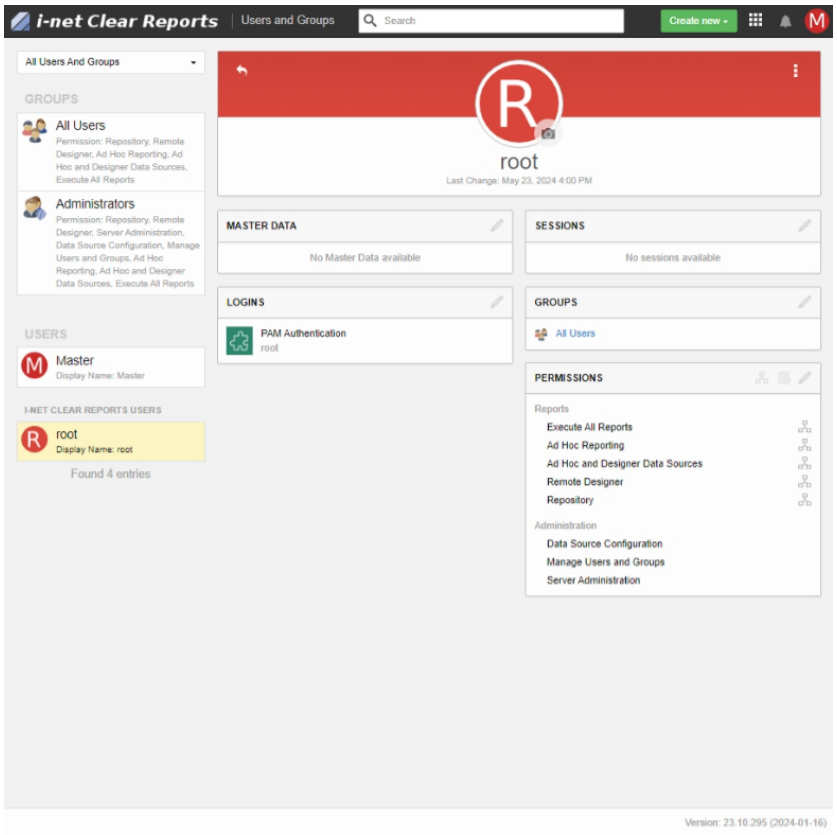


Figure 42: Verifying permissions

24. Click **Cards Browser**. Select the **Store** card.

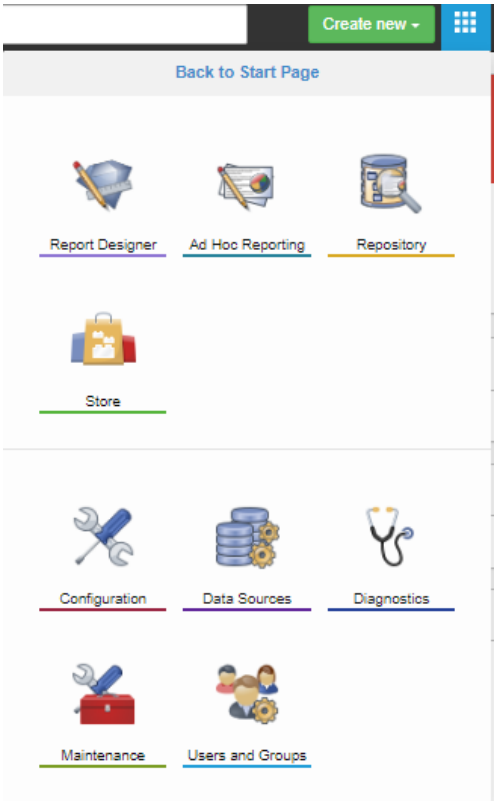


Figure 43: Store Card

25. The following page will appear. Select the **Authentication** tab.

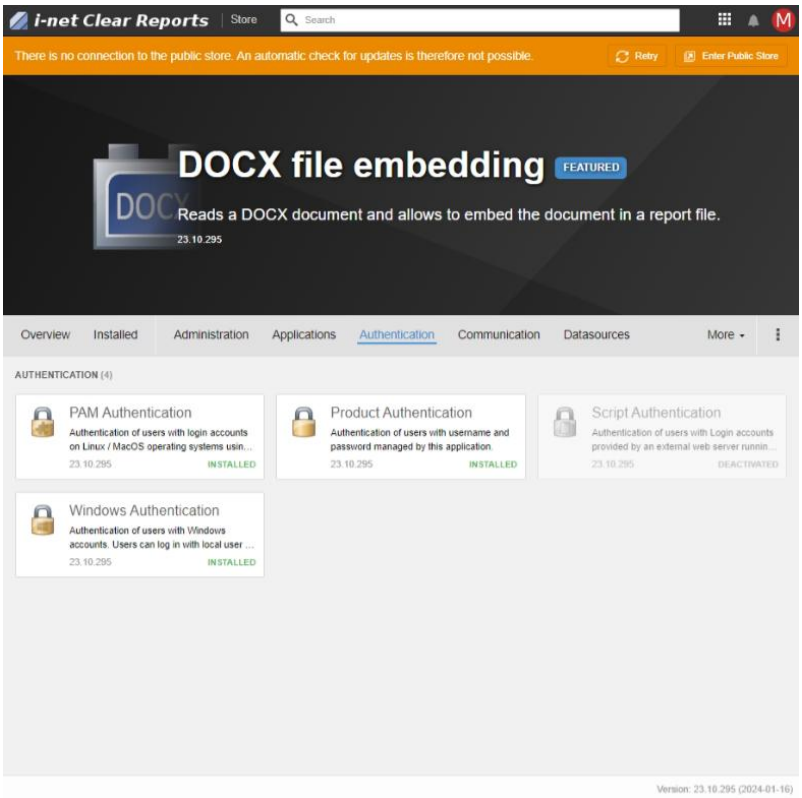


Figure 44: Authentication tab on Store Page

26. Click the grayed-out **Script Authentication** card.

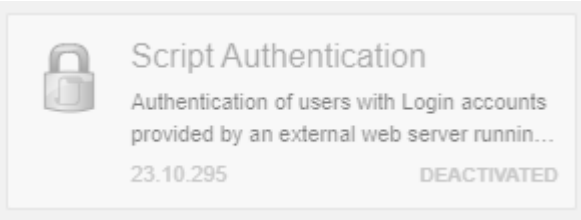


Figure 45: Disabled Script Authentication

27. Click **Activate**.

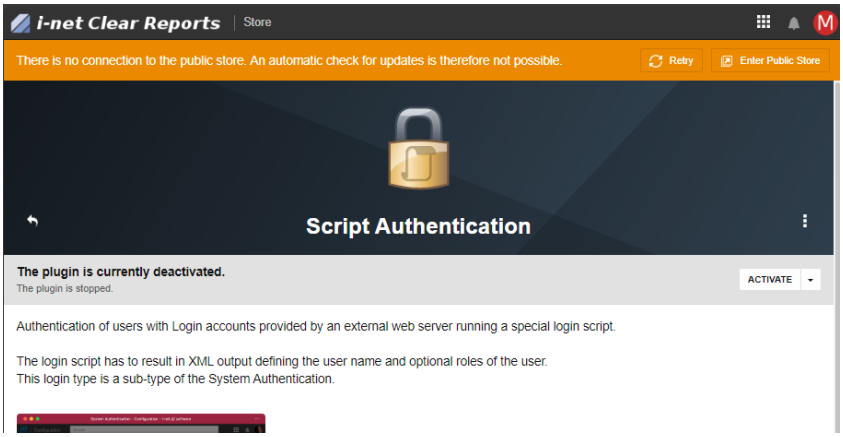


Figure 46: Script Authentication Page

28. After script authentication, the following page will be updated to provide the restart option as follows:

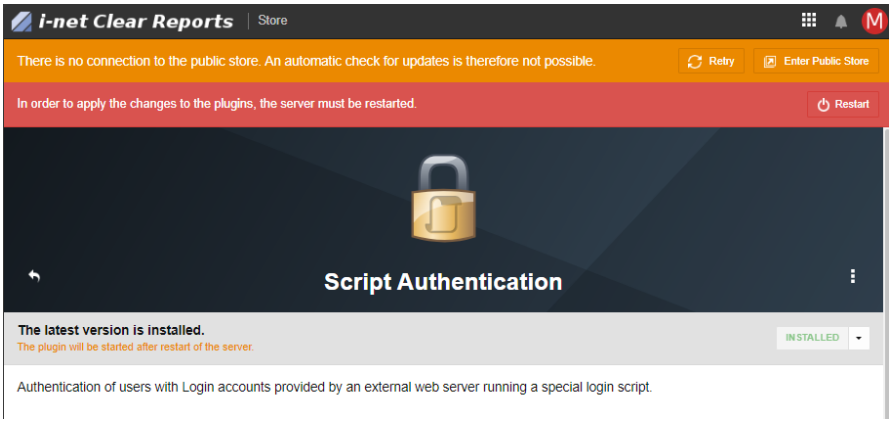


Figure 47: Restart option

29. If the browser asks to log in again as shown below, then close the browser tab and log in as master again.

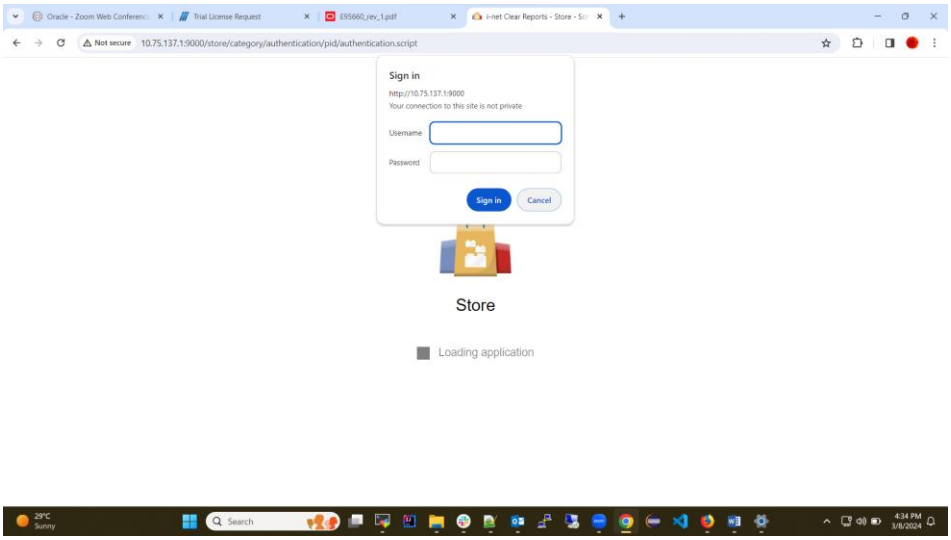


Figure 48: Re-login

a. Type the URL `http://<IP address of the EMS Server>:9000/`
b. Log in as master with your master password.

30. Click **Card Browser** and click the **Configuration** card.

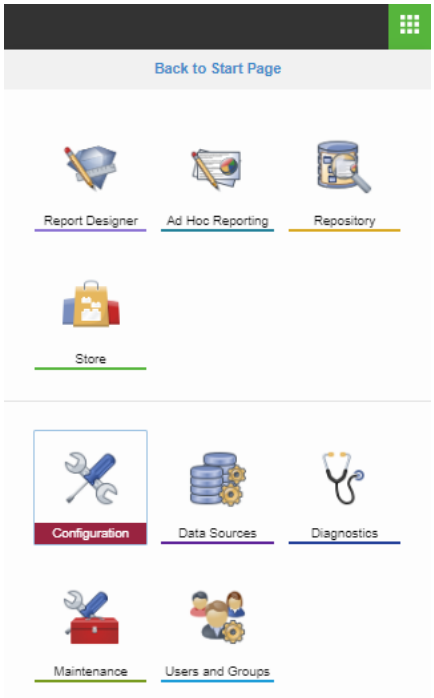


Figure 49: Configuration Card

31. Under the **Security** section, click **login**. The following pop-up will appear.

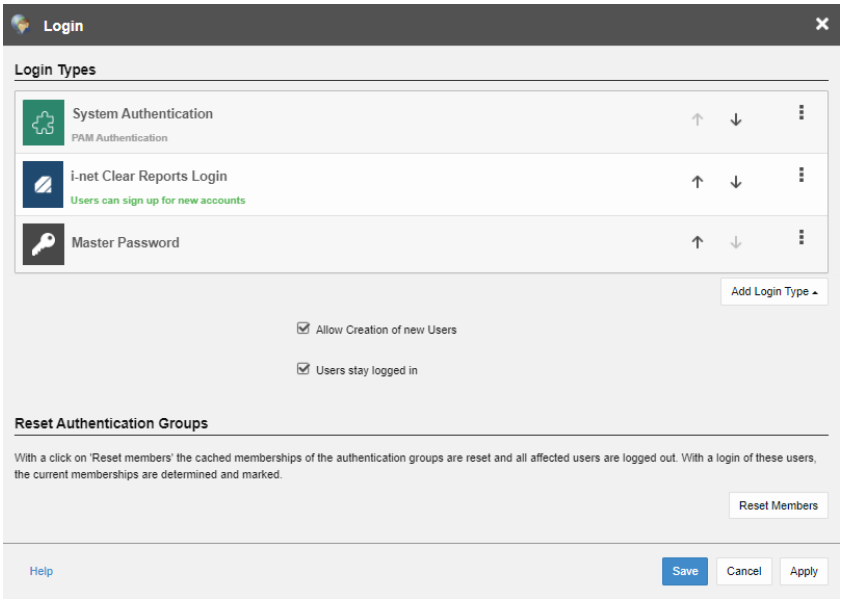


Figure 50: Login pop-up

32. Click the **Three Dot** menu beside the System Authentication option and select **Edit**.

Figure 51: Edit System Authentication

The following screen will appear.

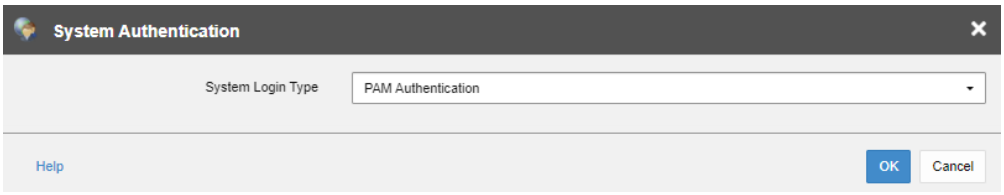


Figure 52: System Authentication

2. Click on the Drop Down and select the “Internal Webserver” option.
   Click on the “OK” button.

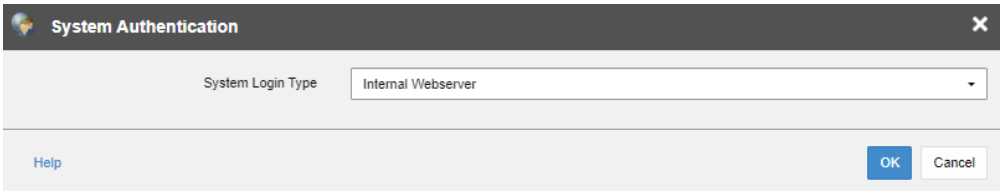


Figure 53: System Authentication

33. The following screen will appear. Click **Apply**. Click **Save**.

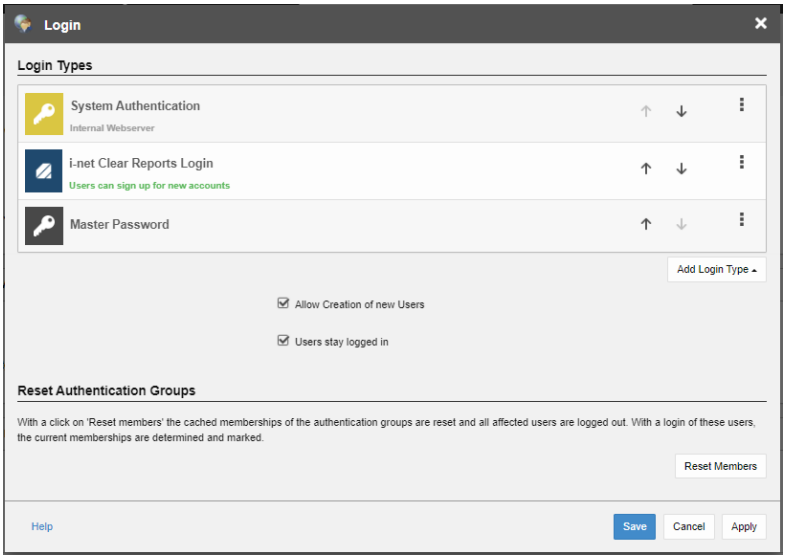


Figure 54: Login pop-up

34. From the **Advanced Configuration** View, under the **General Section**, click the **Web Server** card.

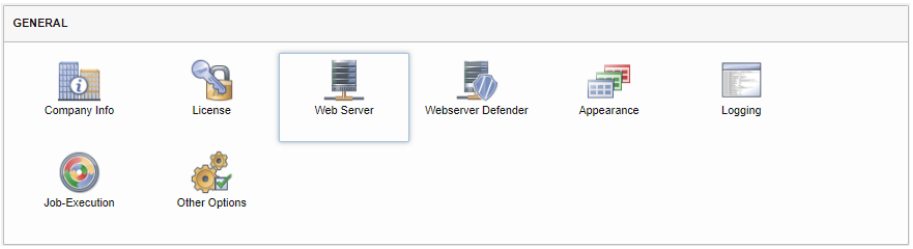


Figure 55: Web Server card

The following pop-up will appear.

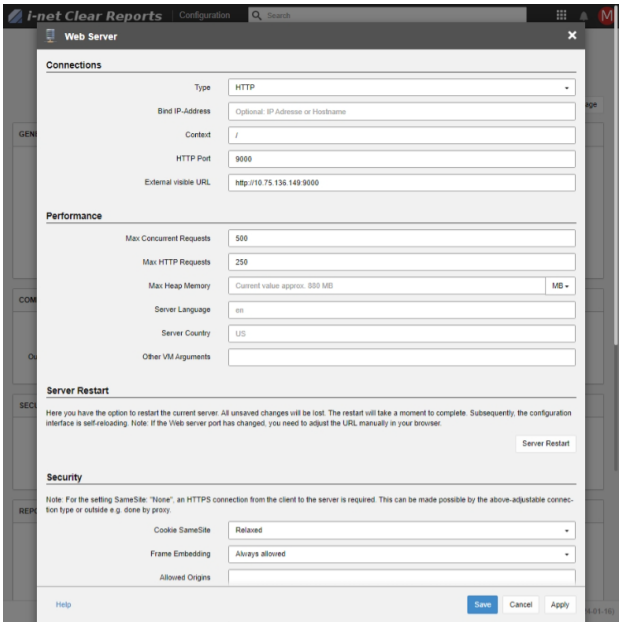


Figure 56: Web Server pop-up

35. In the **Type** field, select the **HTTPS** option from the drop-down.

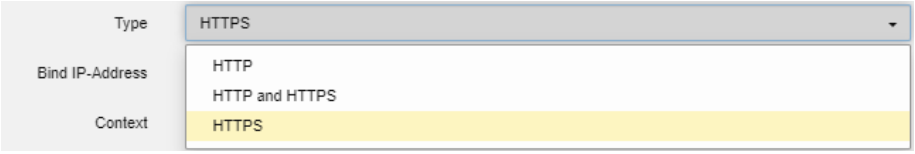


Figure 57: Select HTTPS

36. Update the PORT section as follows:

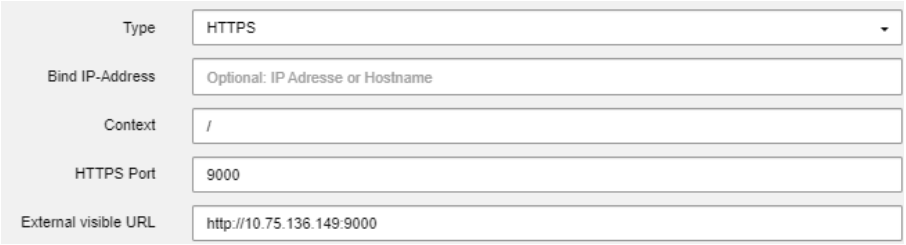


Figure 58: Updating the Web Server pop-up

37. Select the **Create self signed HTTPS certificate** option.

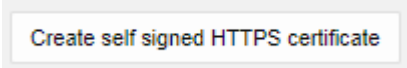


Figure 59: Self Signed Certificate

38. Fill the certificate form as follows:

Organization: <Use Organization Name>
Location: <use Organization location>
Country Code: <use Organization country>
FQDN: <use EMS server IP>

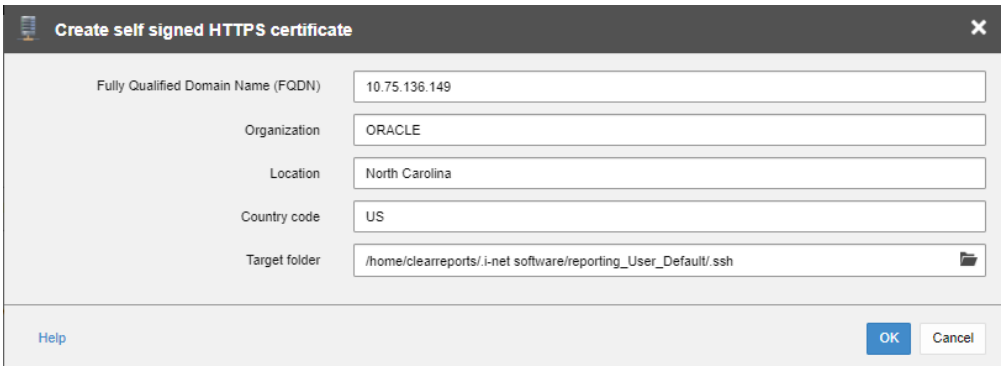


Figure 60: Self Signed Certificate Form Details

Click **OK**.

39. The Web Server form will be as follows.

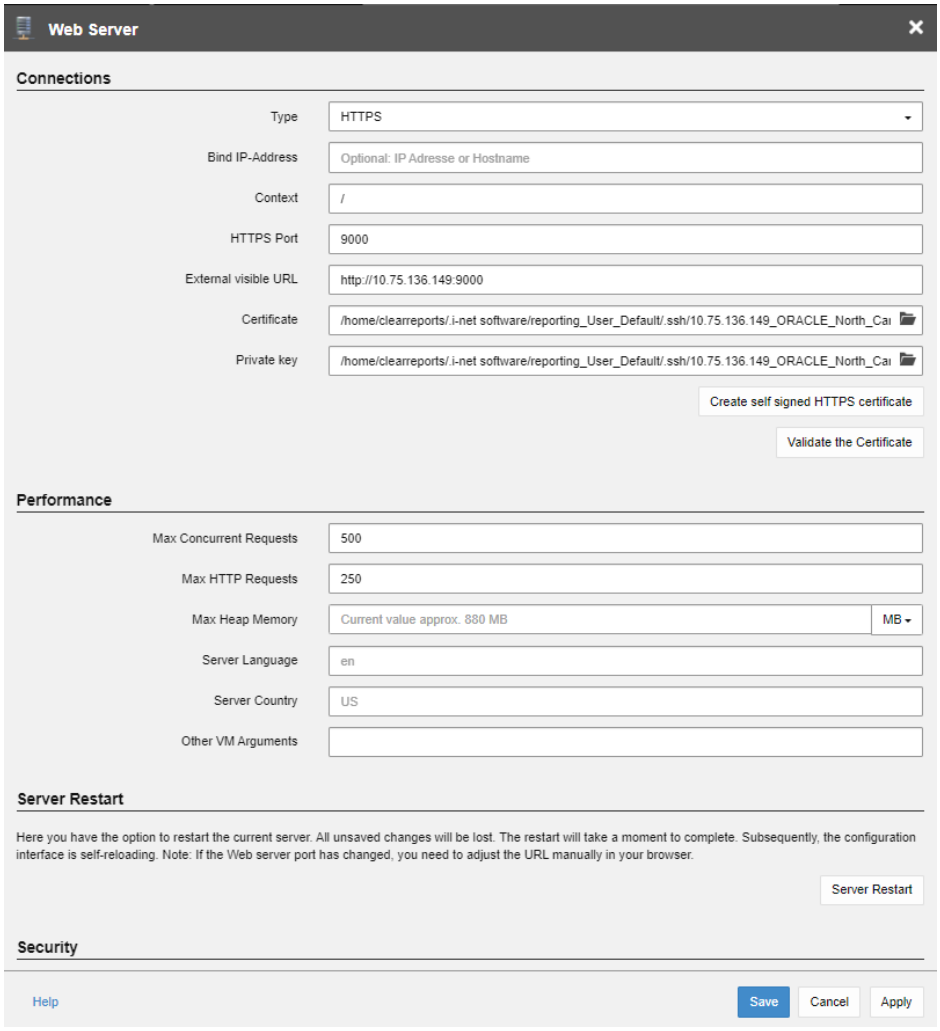


Figure 61: Filled up Web Server Form

40. Click **Apply**, and then **Restart Now**.
41. At this point, the UI will freeze while loading.
42. Change the URL by adding https to it, instead of http. The page will load.
43. Click **Save**.
44. Click **User("M")** and then click **Logout** (Logout from Master).

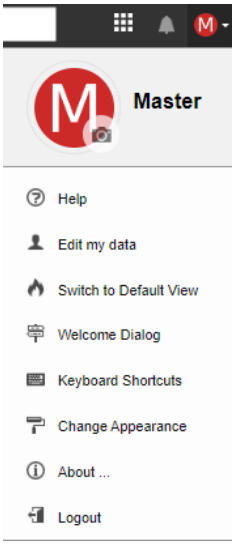


Figure 62: Logout from Master

45. Open the EMS GUI.
46. Launch Reporting Studio by selecting **Tools**, and then **Reporting Studio**.

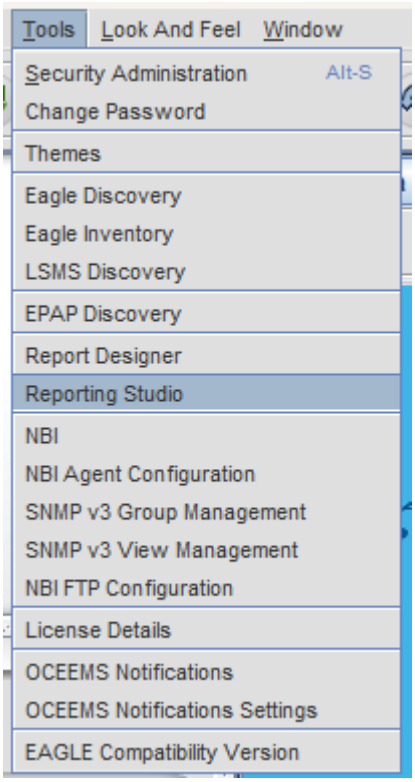


Figure 63: EMS GUI

47. The following page will load on the browser. Click **Internal Webserver**.

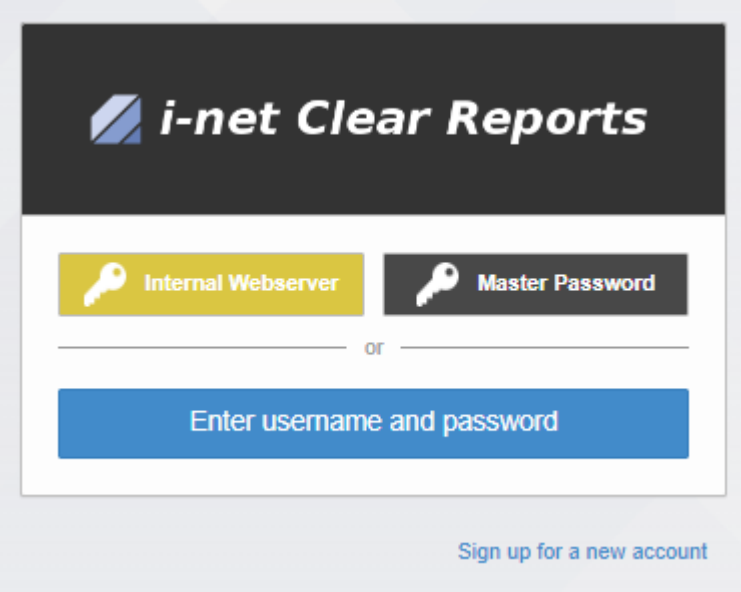


Figure 64: Open Reporting Studio from EMS GUI

The following page will load.

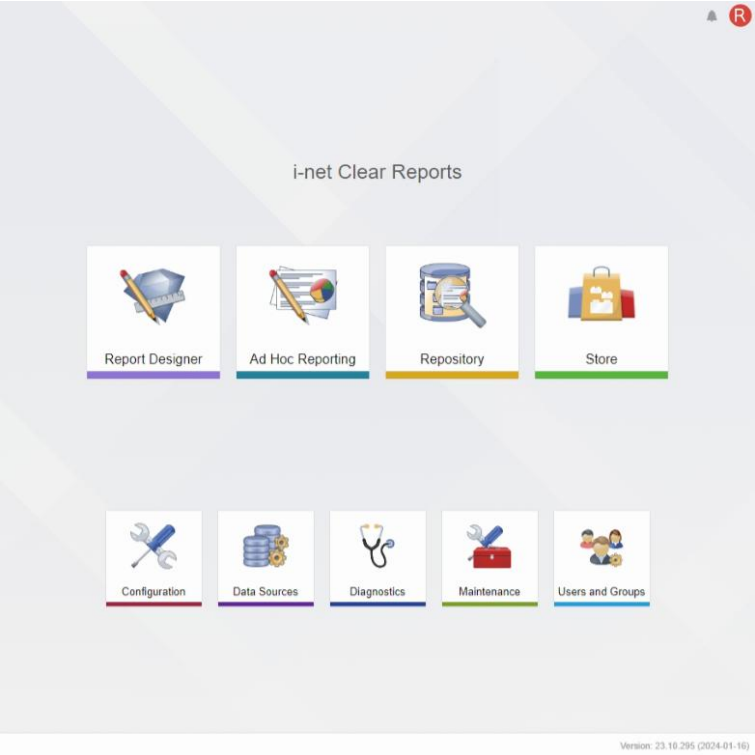


Figure 65: Configured Reporting Studio

Reporting Studio is now completely installed and configured.

4.0 CHECKING IF I-NET IS INSTALLED OR NOT

Run the following command with 'root' user to check whether i-net is installed or not:

In case of clear-reports-server-25.4.260-1.x86_64

```
[emsadmuser@EMS4 ~]$ rpm -qa | grep -i clear
clear-reports-server-25.4.260-1.x86_64
[emsadmuser@EMS4 ~]$
```

In case of clear-reports-server-23.10.422-1.x86_64

```
[root@EMS3 reporting-studio]# rpm -qa | grep -i clear
clear-reports-server-23.10.422-1.x86_64
[root@EMS3 reporting-studio]#
```

If the output is like "clear-reports-server-23.10.422-1.x86_64" or "clear-reports-server-25.4.260-1.x86_64", then it is installed as shown below:

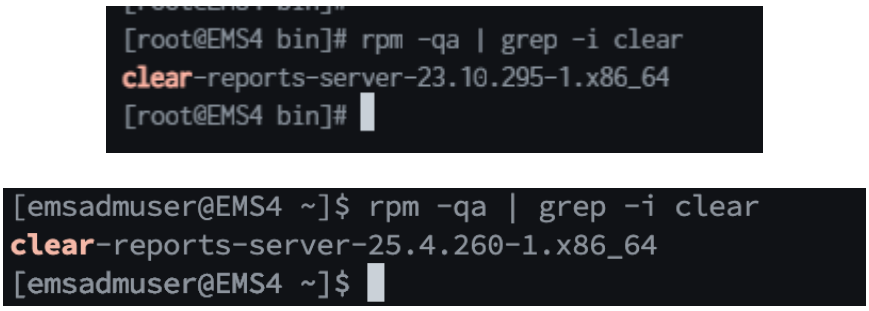


Figure 66: Checking if i-net is installed or not

If the output is blank, then it is not installed.

5.0 STARTING THE I-NET SERVICE

1. **Give Permission to the NON-Root User (this needs to be run only once):** Run the following commands from the root user to make sure that the non-root user has the permission to restart/start/stop/status clear-reports-service. Assuming the admin username is emsadmuser, run the below command. UserID of adminuser name is different, replace emsadmuser with the admin username in the below commands.

   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports restart' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports start' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports stop' | sudo tee -a /etc/sudoers
   # echo 'emsadmuser ALL=(root) NOPASSWD: /sbin/service clear-reports status' | sudo tee -a /etc/sudoers

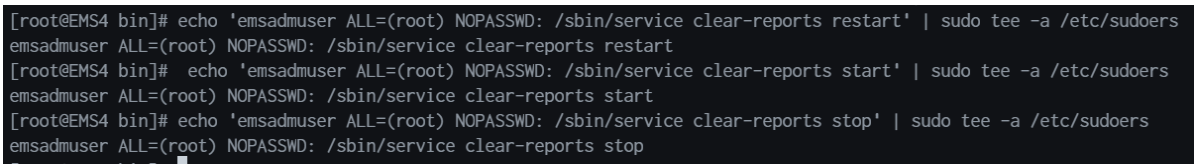


Figure 54: Giving permission to non-root user to start/stop/restart clear-reports-server

2. Move to the directory "/Tekelec/WebNMS/bin" and run the script "inetService.sh start" with the non-root user, to start the i-net service.

   # cd /Tekelec/WebNMS/bin
   # sh inetService.sh start

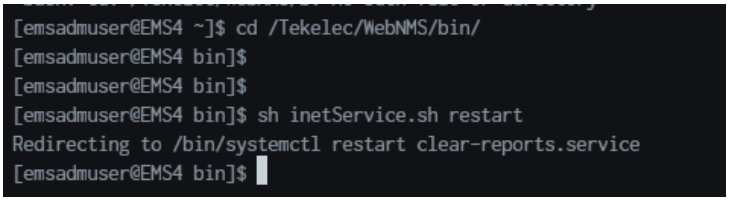


Figure 55: Starting the i-net Service with root user

6.0 UNINSTALLING I-NET

Run the following commands using the root user in the EMS Server CLI.

- **rm -rf /tmp/clear-reports-$currentInetUser.out**
- **rpm -ev clear-reports-server**
- **rm -rf /usr/share/i-net-clear-reports/**

Remove the configuration if it is required. If the configurations are not removed, it will be restored on re-installing i-net Clear Reports.

To remove the configuration, follow the following steps:

Run the following commands with root user:

 # rm -rf /home/clearreports/.java/.userPrefs/com/inet/report/config/cc/Default/
 # rm -rf /home/clearreports/.java/.userPrefs/com/inet/report/config/datasource/e5msdb/
 # rm -rf /home/clearreports/.i-net\ software/reporting_User_Default/AllUsers/*

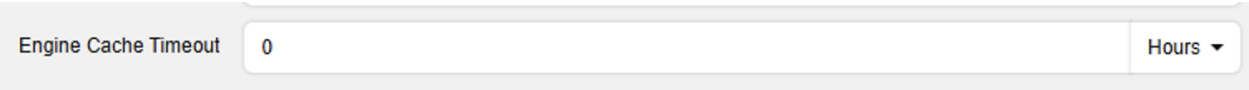
7.0 APPENDIX A: Report Data Rendering and Generation

When to use:

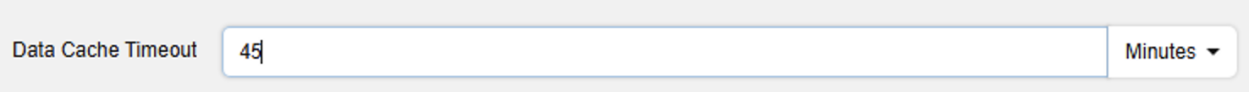
- When there is heavy data processing and rendering required for any report
- When time taken to generate report is more than 10 min.

Procedure:

1. Launch Reporting Studio from Ems GUI
2. Open Configuration section and Switch to Advance View.
    a. Use section - 3.3 of Reporting Studio Installation document -> Step - 7, 8 and 9 to go to Configuration Section.
3. Goto Report -> Cache
4. Change Engine Cache Timeout: 0



5. Change Data Cache Timeout: 45 Min



6. Save and Apply
7. Restart i-net Service.

8.0 APPENDIX B: MY ORACLE SUPPORT

 **CAUTION: Use only the guide downloaded from the Oracle Technology Network (OTN)** (http://www.oracle.com/technetwork/indexes/documentation/oracle-comms-tekelec-2136003.html).

Before upgrading your system, access the **My Oracle Support** web portal (https://support.oracle.com) and review any Knowledge Alerts that may be related to the System Health Check or the Upgrade.

Web portal (preferred option): My Oracle Support (MOS) (https://support.oracle.com)

Phone: Contact your local Oracle Global Customer Support Center (http://www.oracle.com/support/contact.html)

Make the following selections on the Support telephone menu:

1. Select '**2**' for New Service Request
2. Select '**3**' for Hardware, Networking and Solaris Operating System Support
3. Select '**1**' for Technical Issues and when talking to the agent, please indicate that you are an existing Tekelec customer