Canaan Mine Master User Manual

V1.0.1

Canaan Creative Co. Ltd.

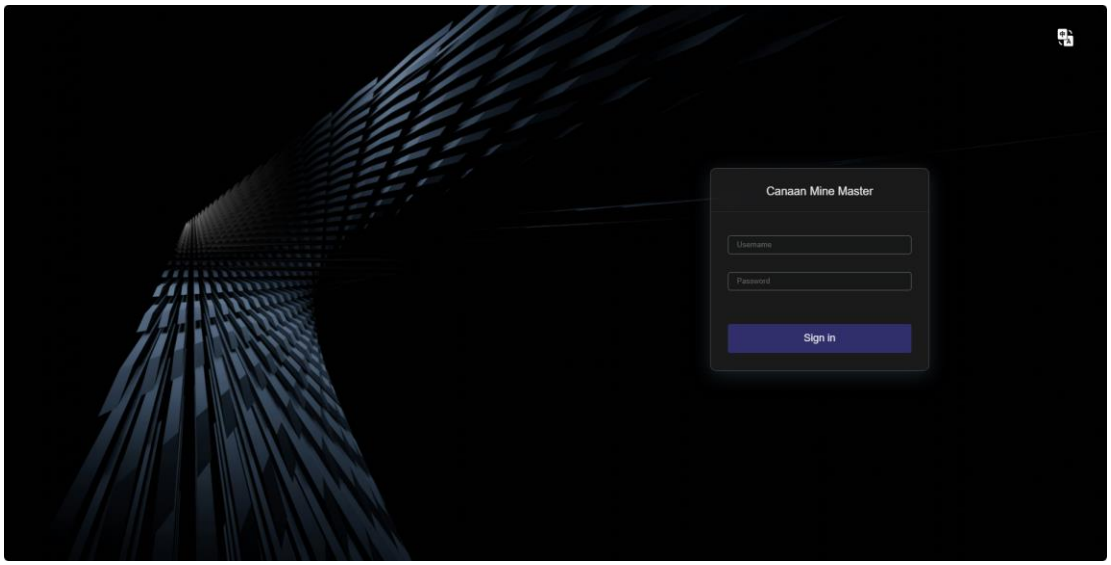
1. Menu

For initial system startup management upon first login, please refer to the "Canaan Mine Master Getting Started Guide". “Canaan Mine Master User Manual”provides guidance for users who need to use the system again after completing the Getting Started process.

1.Login

1.1. Login

Open a browser, enter the default address http://localhost:8855 to access the login page.
Note: If the startup configuration has been modified (e.g., server port), the web login address will also change.



On the login page, input the username and password, and then click “Sign In” to access the system. The default username and password are “admin”. If the user account has even been configured, when the username or password is not correct , the system will provide a prompt “The name or password error”.
After signing in the system, click the user icon in the upper right corner to change system password or log out. The modified password will take effect upon the next login.

1.2. Add and edit account（Super Admin Permission Only ）

When adding a new user, navigate to “User” under System Setting (Jump to “9.1 System setting” to learn more details). Adding a user needs you to specify some account information, including username, real name, password, and email. User accounts are enabled by default. The mining farm selection for a user is optional, but without choosing it, the user will have no access to all data. The system will push a prompt to notify users.
Users can edit user accounts according to their needs, including changing passwords.
User accounts can also be directly disabled or deleted from the “User” Management list.

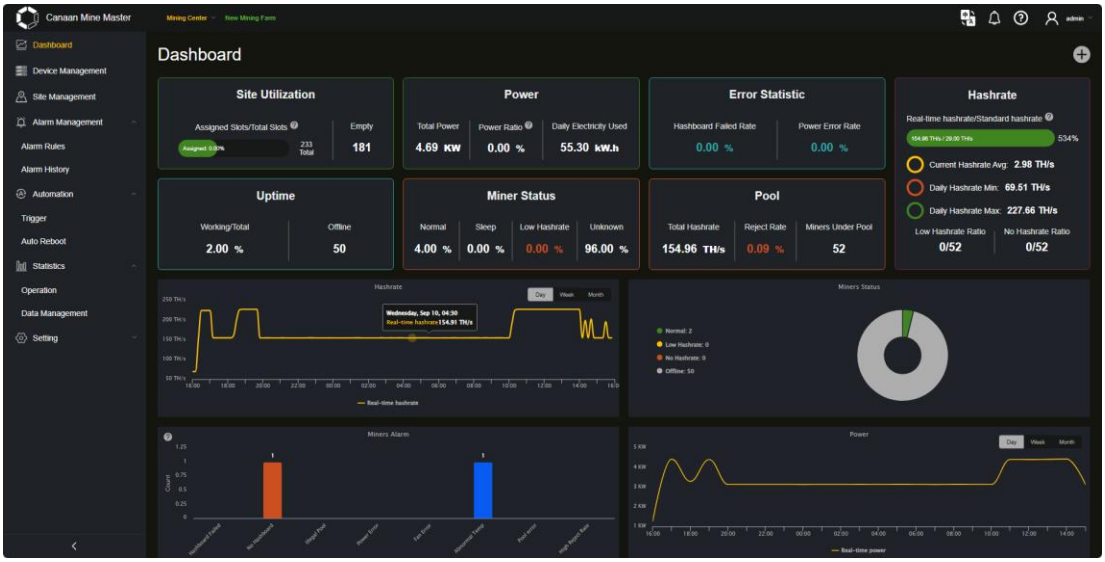
Note: The person who do initial system login via default username and password will be the initial super-admin to be shown in the user list. There will be only one initial super-admin in the system.

2. Dashboard

After the login, the dashboard is displayed by default. The dashboard consists of three parts: Key Data Overview, Data Charts , and Real-time Alarm.

The function cards in the Key Data Overview Section all support flexible customization, including “add card”、”delete card” and “change layout”.
Add Card：Click the “+” at the upper right corner of the page, and select the desired function card from the dropdown list to display in the corresponding section.
Delete：Hover the mouse over the designated function card to show the “delete” function;
Change layout: Hold and drag the function card to change its display position.

Note: Function cards can only be repositioned within the Key Data Overview section.



2.1. key Data Overview

The overview displays summarized data for all miners and mining farms under the current account's permissions, including hashrate, miner status, power consumption, mining pools, site utilization, uptime, and error statistics. Part of the function cards requires recording designated data metrics ahead of time , and the system offers the relevant explanation on those function cards.

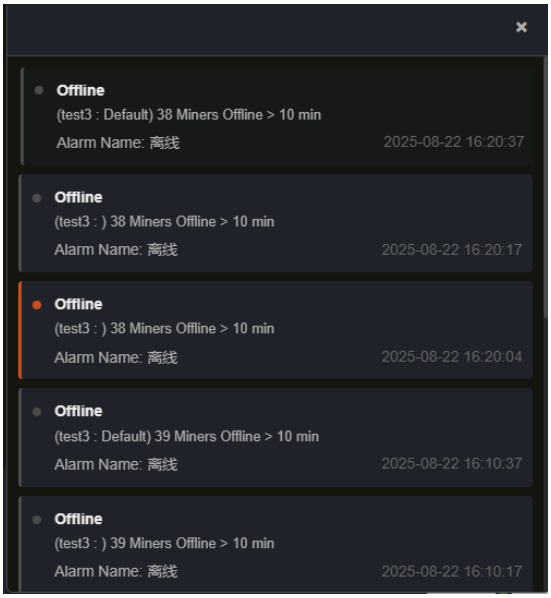
Interpretation of part of the key data:：
Current Average Hashrate: The average hashrate of devices within the current hour.
Hashboard Failure Rate: Number of devices with hash board failures / Total number of devices.
Device Power Error Rate: Number of devices with power Error / Total number of devices.

2.2. Data Chart Display

The part includes miner model and status distribution charts; Charts showing the change of miner hashrate, average ambient temperature, and total power consumption over time (Daily/Weekly/Monthly); Miner alert statistics bar charts. Clicking on some data charts can directly link to the filtered device list in the Device Management page, facilitating users to view more detailed device information.

2.3. Real-time Alarm

Aggregates all alarms triggered based on set alarm rules. When an alarm returns to normal, it will no longer be displayed in the real-time alarm list and users can search for the alarm record on the Alarm History page. Simultaneously, when an alarm occurs, the alarm bell icon in the upper right corner will also display all active alarm items. Each alarm item consists of its location, number of affected devices, alarm info and the alarm rule name.



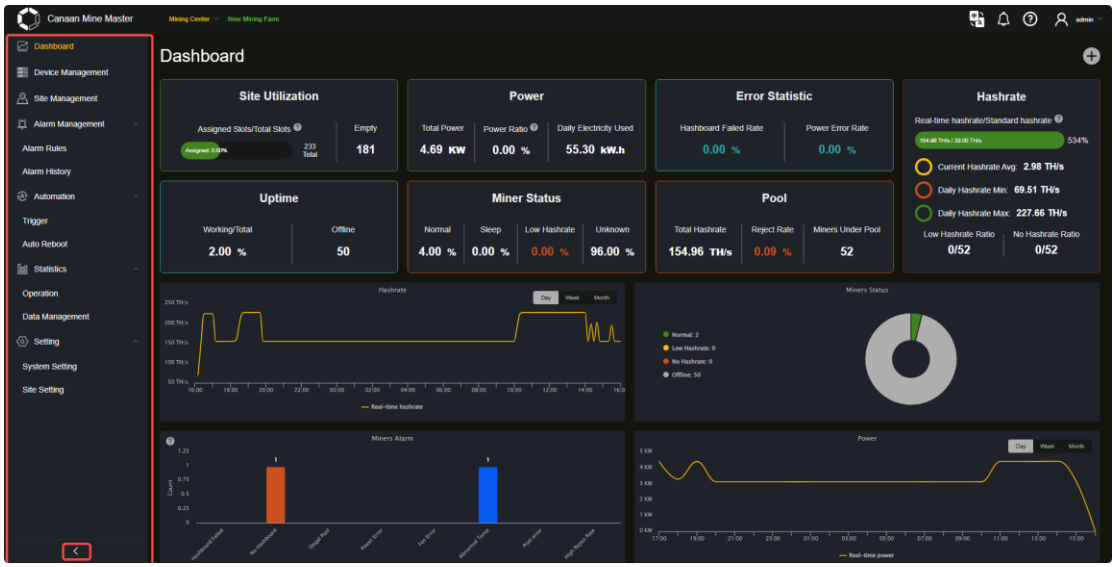
Clicking on the alarm type in the real-time alarm list can directly link to the filtered device list in the Device Management page, facilitating users to view more detailed device information.

3. Navigation Menu

Click the navigation menu in the upper left corner to switch observation perspectives between the overall Mining Center and individual mining farms.

New mining farm can be created directly from “New Mining Farm”.

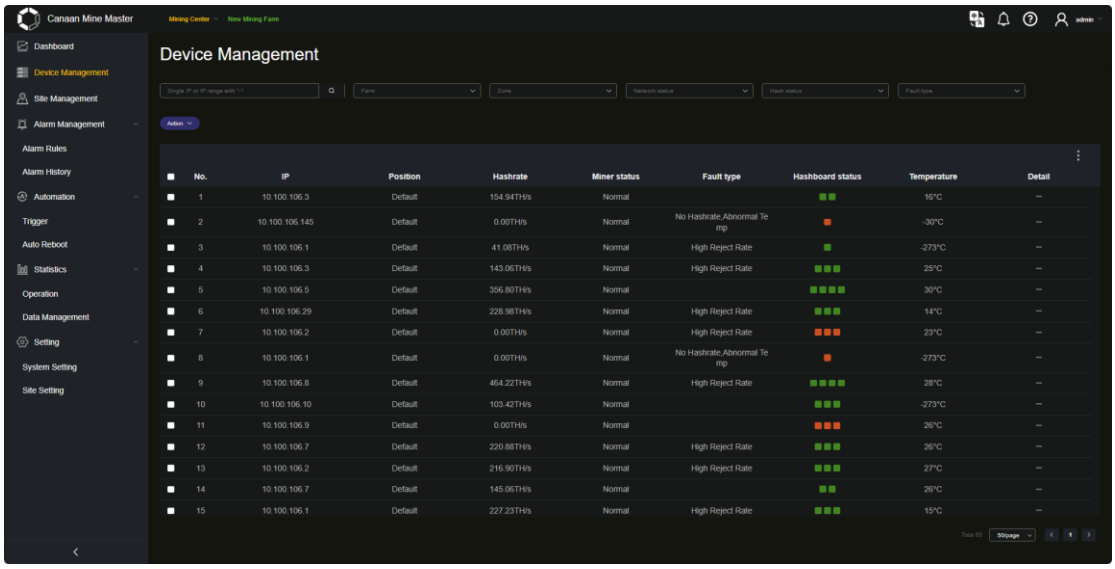
The navigation bar on the left is expanded by default. Click the arrow icon in the lower left corner to collapse it. When collapsed, the navigation bar only displays directory icons, and the main area on the right expands accordingly.



4. Device Management

4.1. Device List and Bulk operations

The device management lists detailed information of all miners system has scanned and supports bulk operations on miners



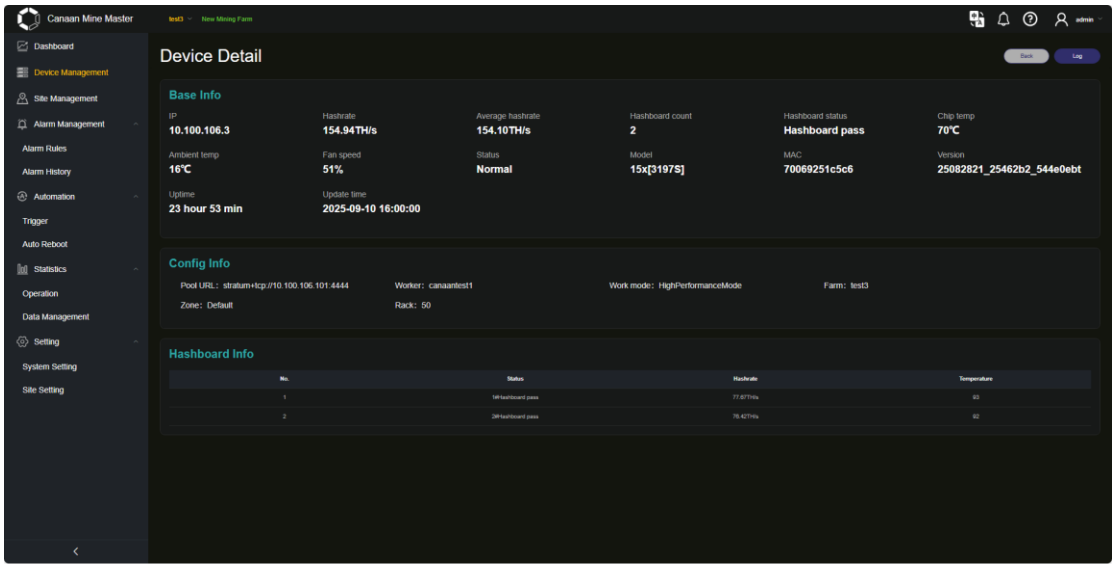
The device list supports searching and filtering devices based on individual miner IP or IP ranges, and also supports filtering miners by mining farm, zone, miner network status, hash status, and fault types.

The list currently displays the following information dimensions by default: IP Address, Device Physical Position, Miner Status, Fault Type, Real-time Hashrate, Hashboard Status, Ambient Temperature, and allows viewing details for each device. By customizing info columns, additional information dimensions can be added such as MAC Address, Fan Speed, Uptime, Mining Pool , Firmware Version, Miner (Worker), Chip Temperature, and Work Mode .

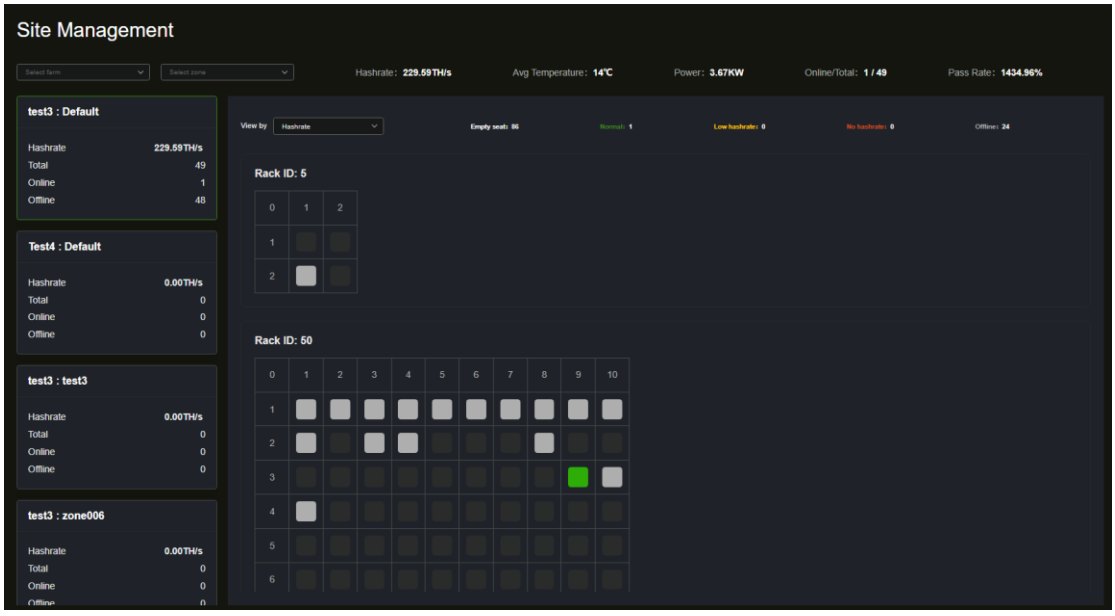
Bulk Operations: Select one or multiple miners, and click the "Actions" button to perform operations such as Turn On Light, Turn Off Light, Sleep, Wake Up, Reboot, Firmware Upgrade, Change Mining Pool, Change Work Mode.

4.2. Detailed Information

Access the device details page via "View Details" in the device list.
This page consists of three parts: Basic Information, Configuration Information, and Hashboard Details.
Basic Information shows IP Address, Real-time Hashrate, Average Hashrate, Number of Hashboards, Hashboard Status, Chip Temperature, Ambient Temperature, Fan Speed, Miner Status, Miner Model, MAC, Firmware Version, Uptime, Last Update Time.
Configuration Information shows the configured Mining Pool, Worker, Device Work Mode, and the info of Mining Farm , Zone, and Rack the device belongs to.
Hashboard Information shows the status, real-time hashrate, and real-time temperature of each hash board in the device.
Click the "Log" button in the upper right corner to view and export real-time logs of the device.



5. Site Management



Site management visualization shows site operation status under corresponding mining farms and zones.

5.1. Site Management Page Structure

The left side of the page is the zone list. If no site filter is applied on this page, the site selected in the upper-left navigation menu takes effect. The zone list on the left displays all zones that are filtered by the mining farms and zone filters applied on this page. Accordingly, overall operation metrics of the selected zones varies , including total Hashrate, real-time average temperature, real-time total power consumption, online miners / total miners, as well as hashrate pass rate. The right side provides an operation overview of all slots within a zone, and by default, it shows the first zone under the selected mining farm. The right side also

shows relevant data metrics of the selected zone and uses different colors to stand for different slot status. Switching between different zones will accordingly switch the display of the slot operation on the right.

5.2. Page Data Display and Color interpretation

Zone cells display the zone name, zone real-time total hashrate, total number of miners , and number of online/offline miners.
The zone slot operation display can be switched by Temperature, Miner Status, and Hashrate. Switching to different display dimensions, the metrics above the relevant zone will change:
Hashrate dimension: Shows number of empty positions, qualified hashrate, low hashrate, zero hashrate, and offline devices.
Status dimension: Shows number of empty positions, normal operation, sleep, low hashrate, and offline devices.
Temperature dimension: Shows number of empty positions; normal temperature, low temperature, high temperature, and offline devices.

5.2.1 Filtered by Temperature

Green indicates normal range, i.e., the maximum miner temperature is < the maximum monitoring temperature threshold ,but ⩾ minimum monitoring temperature threshold.
Yellow indicates the maximum miner temperature is < the minimum monitoring temperature threshold.
Red indicates the maximum miner temperature is ⩾ the maximum monitoring temperature threshold.
Gray indicates the miner is offline without temperature data feedback.

5.2.2 Filtered by Hashrate

Green indicates the real-time hashrate ratio is ⩾the normal hashrate ratio.
Yellow indicates the real-time hashrate ratio is < the normal hashrate ratio, but not equal to 0 ; It's the state that device hashrate is unqualified.
Red indicates the real-time hashrate ratio is 0.
Gray indicates the miner is offline without hashrate data feedback.

5.2.3 Filtered by Miner Status

Green indicates the miner is running and mining.
Yellow indicates the miner is underperforming with low hashrate, where the real-time hashrate ratio is less than the normal hashrate ratio.
Red indicates the miner is sleeping.
Gray indicates the miner is offline without status data feedback.

5.3. Zone Slot Layout

If the slot positions have been configured with static IPs in the zone settings, the slot will be displayed based on the configured rows and columns of the racks, matching the actual physical layouts.

If static IPs have not been configured in the zone settings, the slot positions are displayed in the order of the miners' dynamic IPs.。

Hovering the cursor over the device on the right-side zone visualization will pop up the device's real-time information.

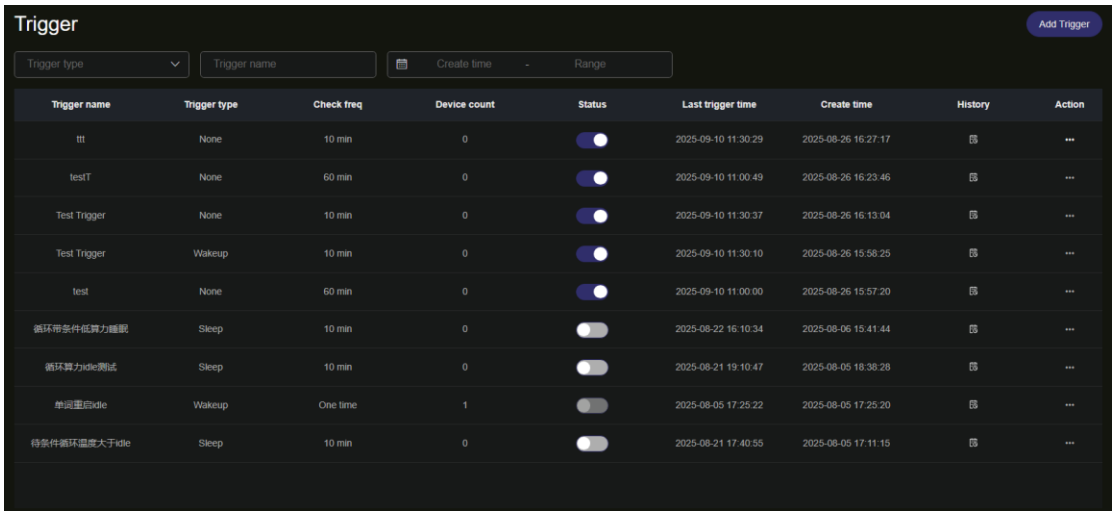
There is the entry for editing racks at the bottom of the right-side zone visualization section, facilitating users to add or remove racks for this zone, or to assign physical slots to unassigned devices.

6. Automation

The Automation page is designed for automated operation management of mining farms, aimed to maximize the liberation of manpower. Now the Automation consists of Trigger and Auto-reboot sections.

6.1. Trigger

The Trigger page lists the already-created trigger tasks within the site filtered by the navigation in the upper left corner.



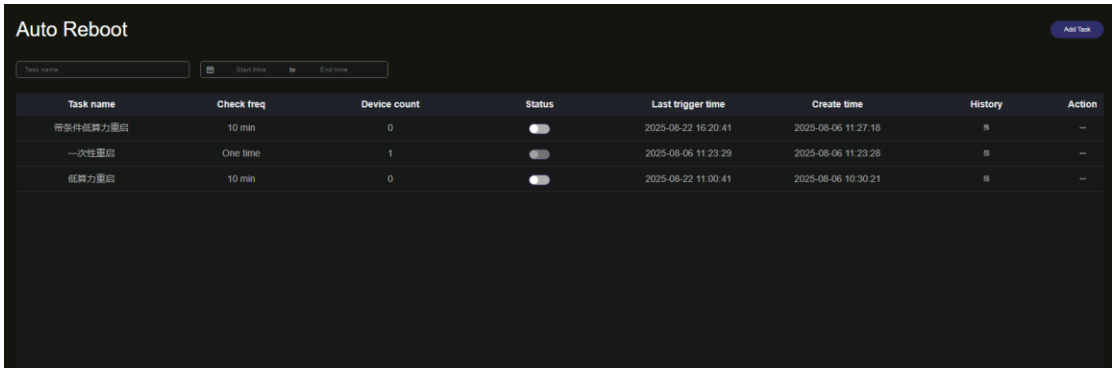
Users can filter the task list by trigger type, trigger name, and trigger creation time range. Users can switch the enable /disable status or delete the task; users can view all trigger history records under one trigger task and filter the trigger history by the device IP range and the last trigger time range.

Click "Add Trigger" on the right to create a new trigger task. The new trigger task can be assigned designated active times and trigger conditions. If the active time is not selected, the task starts executing immediately upon saved. Trigger conditions are based on hashrate or temperature , e.g., "Miner hashrate below 90 TH/s for 30 minutes" meets the trigger condition.

The Check Frequency defines how often the system should check the trigger condition and potentially activation; By default ,check frequency is 10 minutes.
The new trigger task needs to be assigned a specific mining farm.
The Action Execution section consists of the IP range of miners involved , the miner type, and the final execution action. The IP range can be set to "All" or "Custom". "All" means the task applies to the whole devices under the selected mining farm when creating the task; "Custom" means the task applies to the intersection of the selected mining farm and the custom miner IP range.
Trigger actions include Device Sleep, Wake up, and No Action. "No Action" means the task only leaves trigger history record when conditions are met.
Saved trigger tasks are enabled by default.

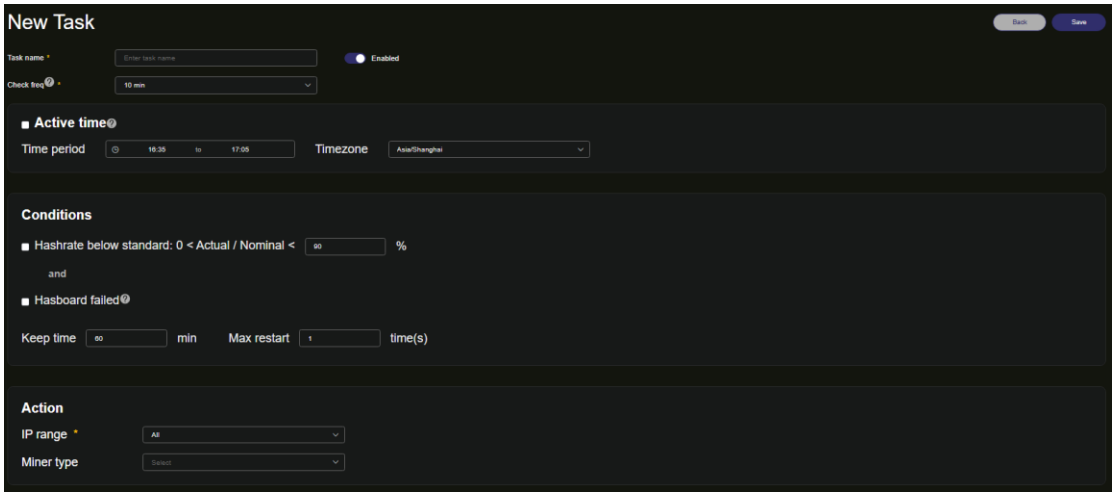
6.2. Auto-Reboot

The Auto-Reboot lists the already-created auto-reboot tasks within the site filtered by the navigation menu in the upper left corner.



Users can filter the list by auto-reboot task name and task creation time range. Users can change the task's enable/disable status or delete the task; users can view all trigger history records under the auto-reboot task and filter the trigger history by the device IP address range and the last trigger time range.

Click "Add Task" on the right to create a new auto-reboot task. The new auto-reboot task can be assigned designated active times and trigger conditions. If the active time is not selected, the task starts executing immediately upon saved. The trigger conditions for a new task can be based simultaneously on substandard hashrate (realtime hashrate / theoretical hashrate > 0 but < a defined standard value) and hashboard failure (used to help determine whether to reboot or not when lack of Hashboard causes obvious actual hashrate drop), It could also be based on either standalone one ; e.g., "Miner hashrate ratio below 90% AND hashboard failure for 30 minutes" meets the trigger condition, with a maximum reboot count of 1.



The Check Frequency defines how often the system should check the trigger condition and potentially activation; By default ,check frequency is 10 minutes.

The new trigger task needs to be assigned a specific mining farm.

The Action section includes the IP range of miners involved in the execution and the miner type; the IP range can be set to "All" or "Custom". Selecting "All" means the task applies to the entire mining farm selected when creating the task; selecting "Custom" means the task applies to the intersection of the selected mining farm and the custom miner IP range.

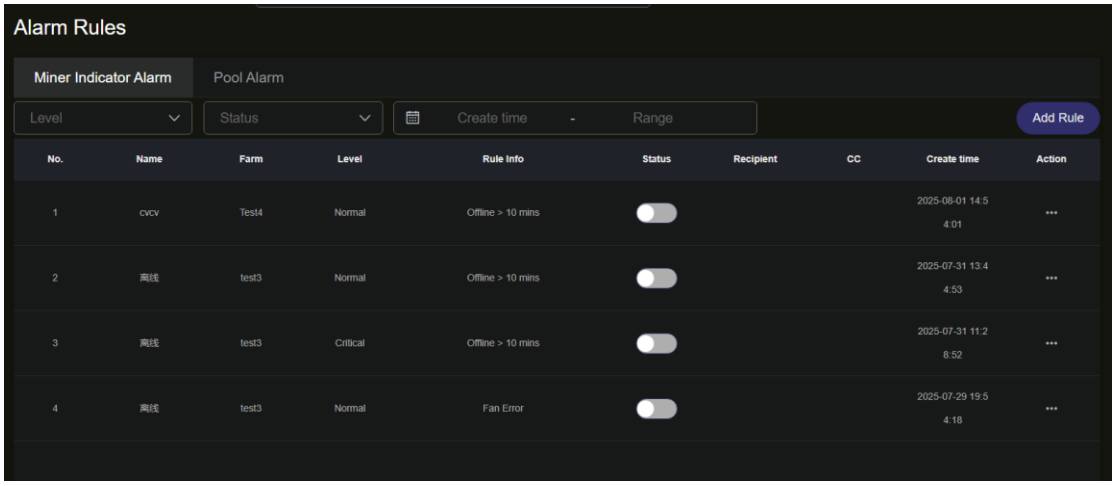
Saved trigger tasks are enabled by default.

7. Alarm Management

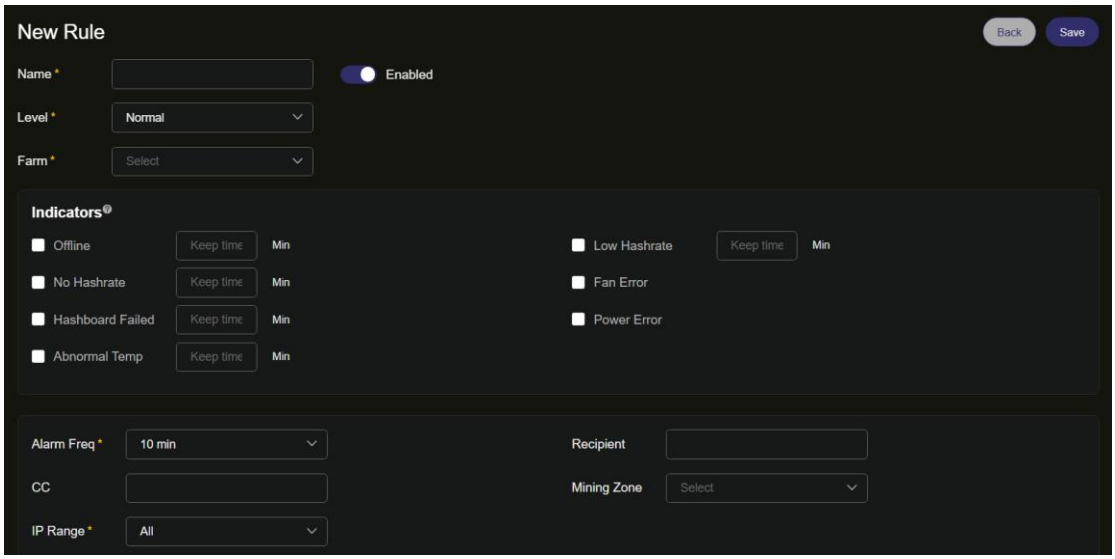
The Alarm Management allows mining farm operators to automatically receive alarms generated by designated mining farms for timely troubleshooting, minimizing the need for continuous manual supervision. Alarm Management consists of Alarm Rules and Alarm History.

7.1. Alarm Rule

The Alarm Rules page lists the already-created auto-reboot alarm rules for the corresponding site filtered by the navigation menu in the upper left corner. Users can edit or delete alarm rules, and also switch the enable/ disable status of the rules .



The rule list data can be filtered by rule creation time range, alarm level (Normal or Critical), and the rule's enabled/disabled status.



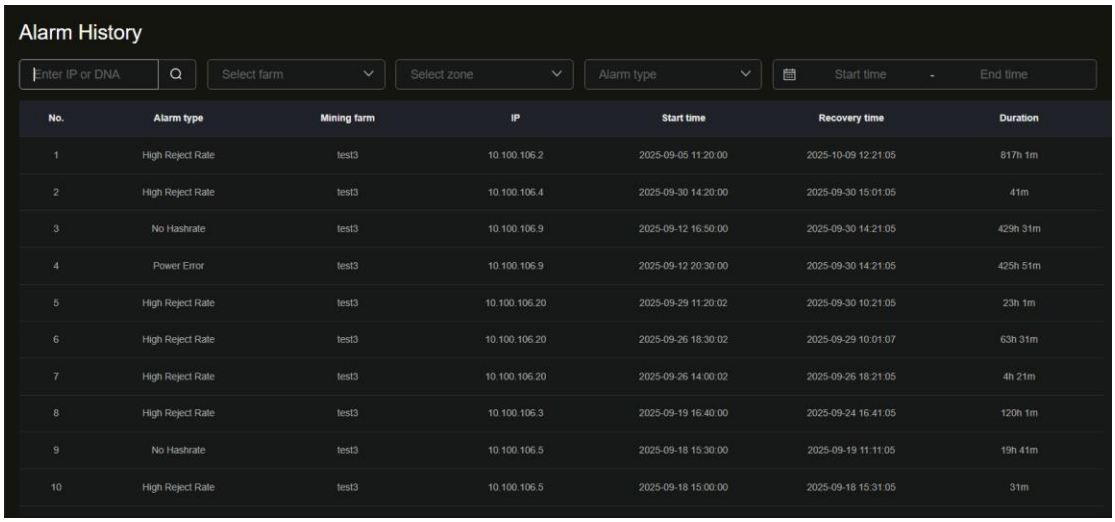
Click the "Add Rule" button on the right to create a new alarm rule. The alarm rules consist of Miner Indicator Alarm and Pool Alarm. On the rule creation page, alarm indicators selection is mandatory, and one rule can only be associated with one alarm indicator. For example, the illegal pool alarm, when selected, will generate real-time alarm if the pool account configuration is falsified to the settings outside the allowed pool list. This alarm will be sent to the recipient's email address (if provided by the customer), the alarm bell on the top of the desk, the real-time alarms list and the miner alarm chart on the dashboard .

The level of the rules must be defined and needs to be linked with mining farm; the IP range of miners is mandatory to input, covering either all miners of the selected mining farm or the custom subset. Customers can also define the channel to receive alarm information by entering CC email addresses and the scope of affected miners by selecting mining zones .

The Alarm Frequency is aligned with the system's default self-check frequency (10 minutes). Saved alarm rules are enabled by default.

Note: Part of the alarm indicators won't take effect without a prior configuration in Monitoring Setting, which includes Hashboard Failed, Abnormal Temperature, Low Hashrate, Fan Error, Power Error, High Reject Rate, and Pool Error. If the user insists on selecting it, the system will notify the user to update the Monitoring Setting of the mining farm.

7.2. Alarm History



No.	Alarm type	Mining farm	IP	Start time	Recovery time	Duration
1	High Reject Rate	test3	10.100.106.2	2025-09-05 11:20:00	2025-10-09 12:21:05	817h 1m
2	High Reject Rate	test3	10.100.106.4	2025-09-30 14:20:00	2025-09-30 15:01:05	41m
3	No Hashrate	test3	10.100.106.9	2025-09-12 16:50:00	2025-09-30 14:21:05	429h 31m
4	Power Error	test3	10.100.106.9	2025-09-12 20:30:00	2025-09-30 14:21:05	425h 51m
5	High Reject Rate	test3	10.100.106.20	2025-09-29 11:20:02	2025-09-30 10:21:05	23h 1m
6	High Reject Rate	test3	10.100.106.20	2025-09-26 18:30:02	2025-09-29 10:01:07	63h 31m
7	High Reject Rate	test3	10.100.106.20	2025-09-26 14:00:02	2025-09-26 18:21:05	4h 21m
8	High Reject Rate	test3	10.100.106.3	2025-09-19 16:40:00	2025-09-24 16:41:05	120h 1m
9	No Hashrate	test3	10.100.106.5	2025-09-18 15:30:00	2025-09-19 11:11:05	19h 41m
10	High Reject Rate	test3	10.100.106.5	2025-09-18 15:00:00	2025-09-18 15:31:05	31m

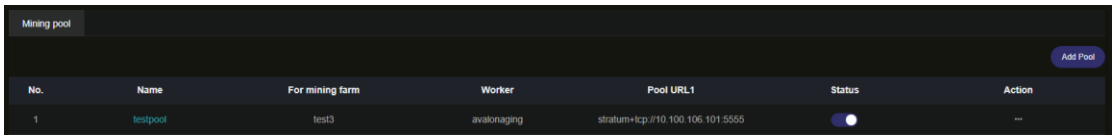
The Alarm History page shows all alarm information that has occurred within the corresponding sites.
The filters on the history page are mining farm, zone, alarm type, IP range, and the start/end time range of the alarm ; it can also be queried by a single device IP or DNA.

8. Statistics

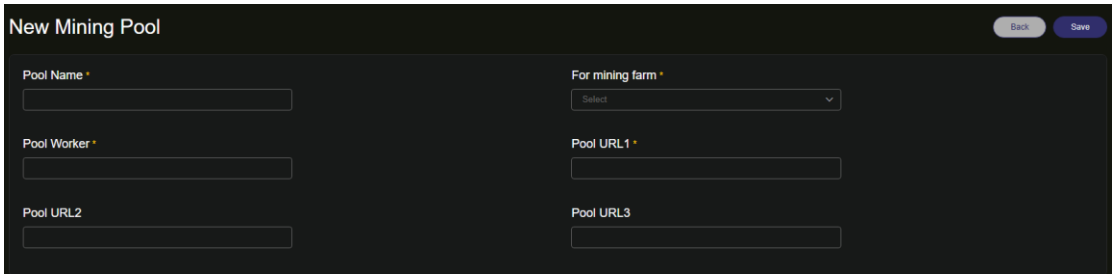
The Statistics aggregates all reports generated from mining farm operation and the basic data supporting system operation. The statistics consists of Operation and Data Management sections.

8.1. Operation

Mining Pool List: The Mining Pool List shows information such as Pool Name, Worker Name, Corresponding Mining farm , URL, etc. Pool configurations covers switching enable/ disable status, editing pool , and deleting pool. Details regarding a pool can be viewed via "Detail".



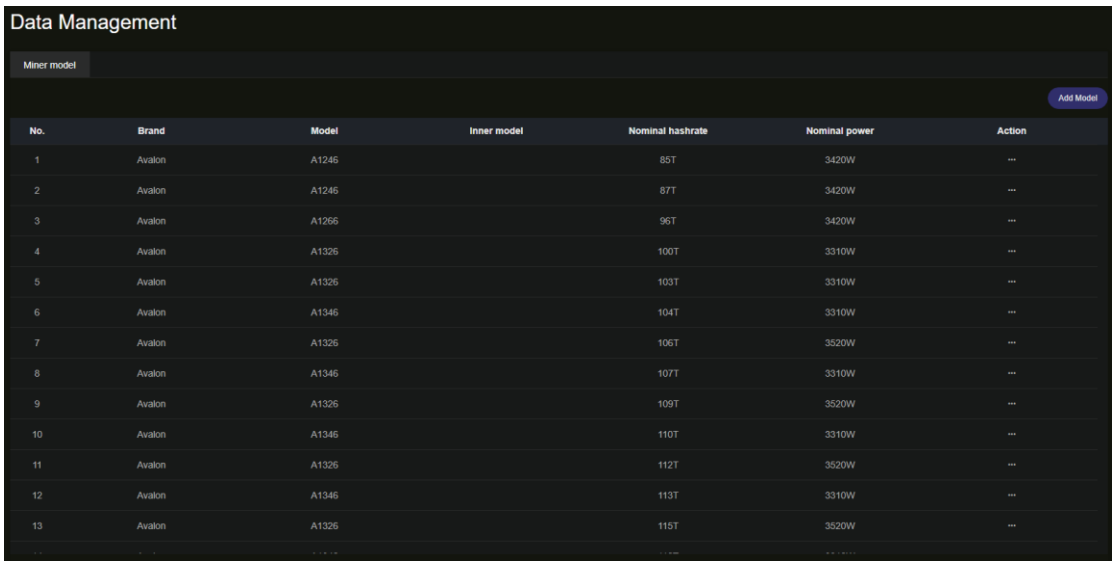
Click "Add Pool" button to jump to the "Add Pool" page.
A new pool configuration can be added by entering the Pool URL, Worker Name, Pool Name, and the Mining farm the pool belongs to.
Editing pool requires the same information as adding a pool.

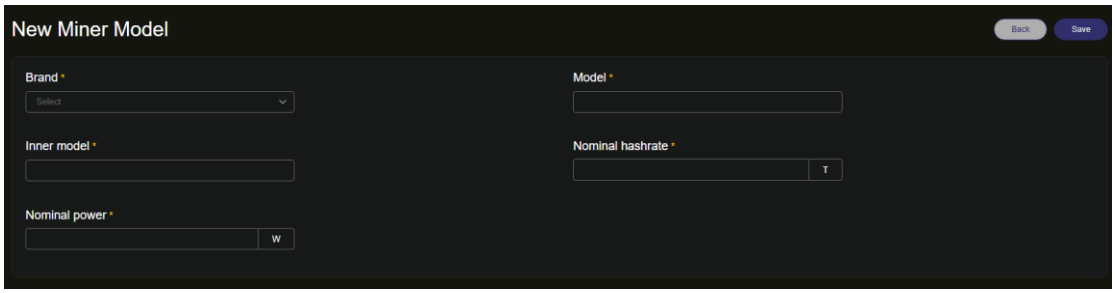


8.2. Data Management

Miner Model List: The Miner Model List shows the model information of the miners supported by the system, including brand, model, inner model, nominal hashrate, and nominal power consumption. Users can delete existed list items. Additionally, new miner model can be added via "Add Model".

Note: The Inner miner model required when adding new items must be obtained from the miner's logs (Device Management -> Device Details -> Log).



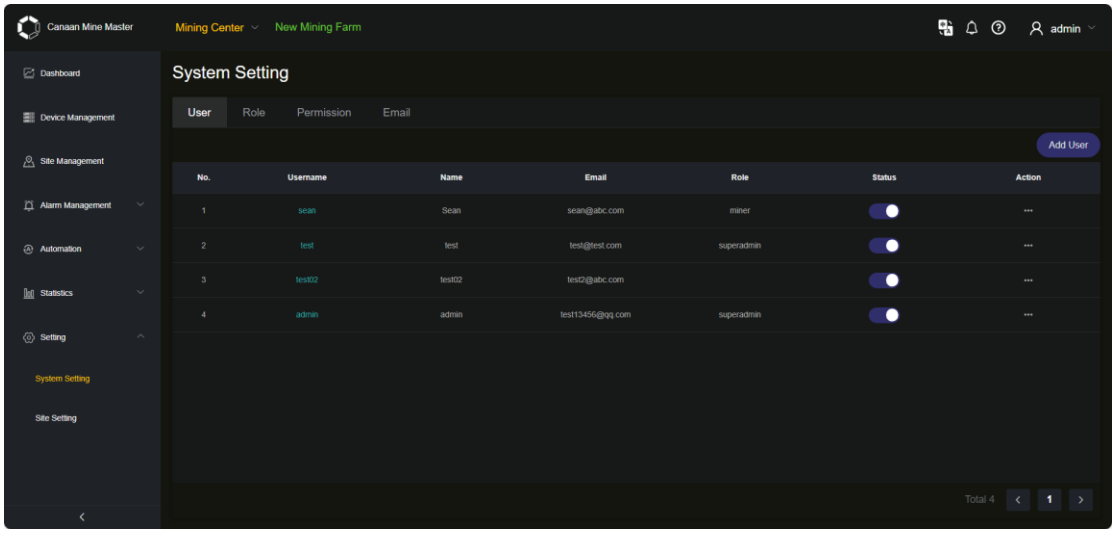


9. Setting

The Setting is used to manage sites and configure system personnel information. It consists of System Setting and Site Setting.

9.1. System Setting

System Setting consists of User, Role, Permission, and Email Management.



For user role part , the first user who logs in to the system will be the initial Super Admin by default. Initial Super Admin is unique. The initial Super Admin can't be deleted by anyone (including other Super Admin roles) within the system. And at the same time , the initial Super Admin can add or assign Super Admin role to other users. Only Super Admin role can access the User, Role, and Permission management pages in System Setting. Other roles added by Super Admin will have the access to Email management page if permitted .

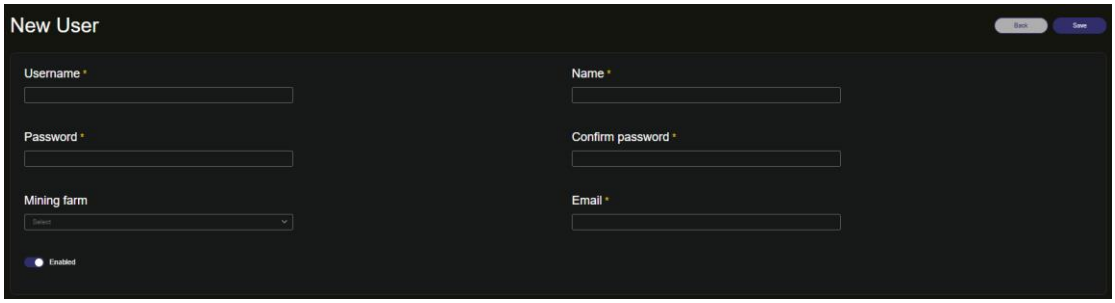
When adding a new role, the role name and description need to be given; editing role needs the same content with adding role.

Note: Initial Super Admin can delete other Super Admin In the system.

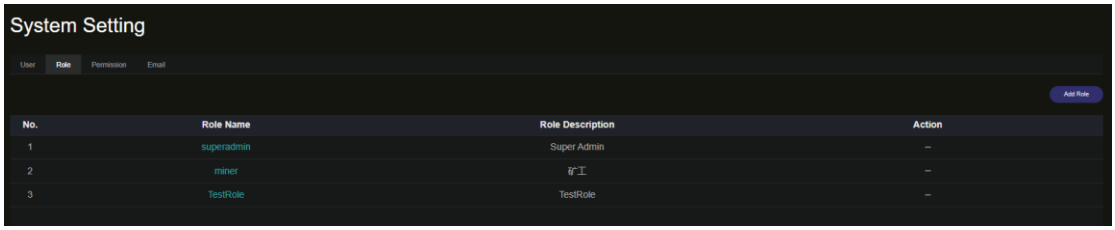
Only the users configured with username and password can log in to the system.

The User Management page shows all managed users' information, including username, name, email, and his/her role. Users with Super Admin role can edit, delete, assign roles, reset passwords, and switch the enable/disable status for the user . However, nobody can do modification to initial Super Admin user .

Clicking "Add User" to involve new users in the system as shown below:

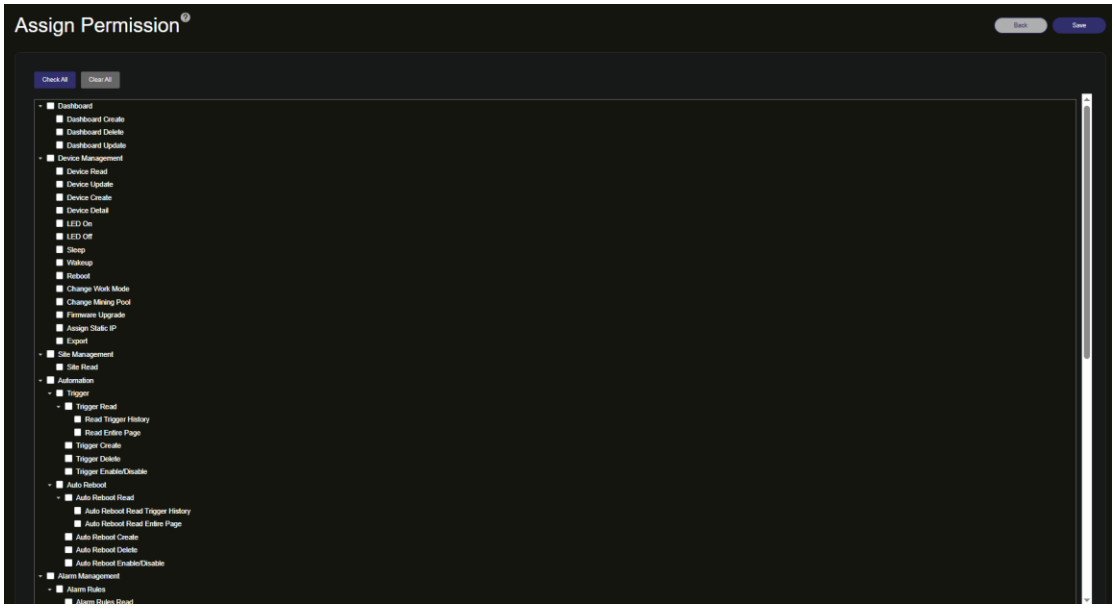


Without assigning a mining farm to a new user, the user can't access any mining farms. Editing the user can redefined its linked mining farms.



The User role items have the one-to-one correspondence with the role list in Permission page except for Super Admin since it has full system permissions by default. When editing permissions for a role, please check the page node or sepcific function node in the permission tree. The permission tree provides quick operation such as “Check All” and “Clear All”.

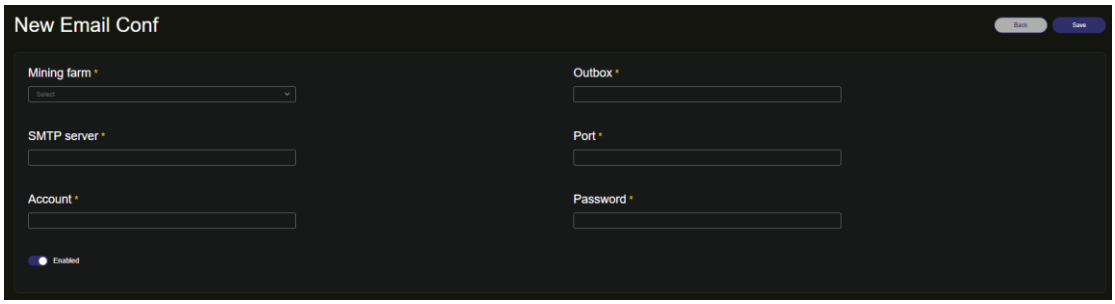
Note: The "Read" permission under parent node must be checked before other permission node at the same level.



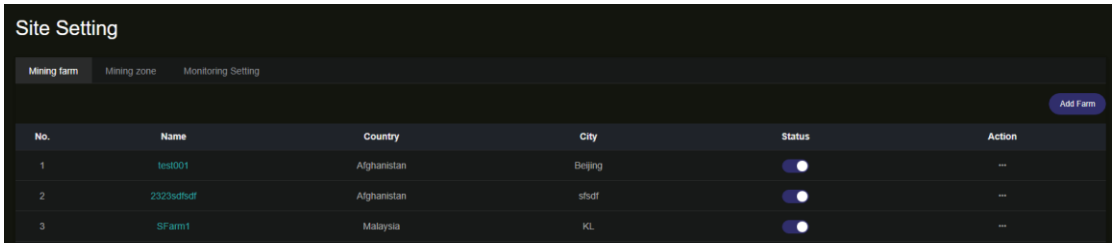
Monitoring alarms for mining farms and miners require a prior SMTP email setup and then the system sends timely information to the users.

The Email Management page shows the list of SMTP email settings, covering information such as the associated mining farm for the email setting, SMTP server, outbox, sender account, and the email setting status. Users can add new email setting and also delete existing email settings. Additionally, they can switch the enable/disable status of the email setting.

Editing email setting requires the same content as adding it .



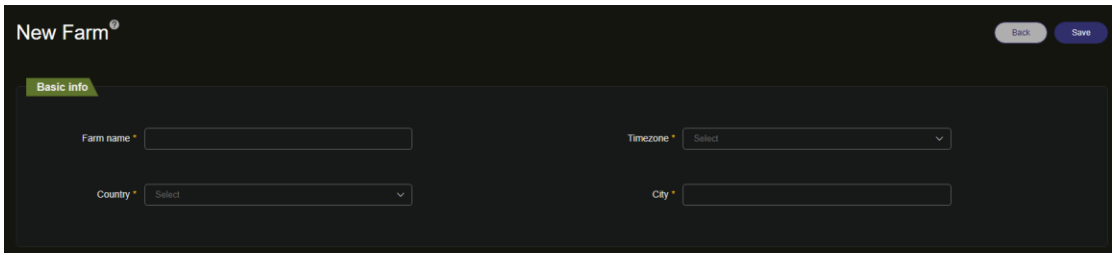
9.2. Site Setting



Basic configurations related to mining farm are in Site Setting part . Site Setting consists of Mining Farm , Mining Zone, and Monitoring Setting sections. Users can complete the basic configurations for managing sites here.

9.2.1 Mining Farm Setting

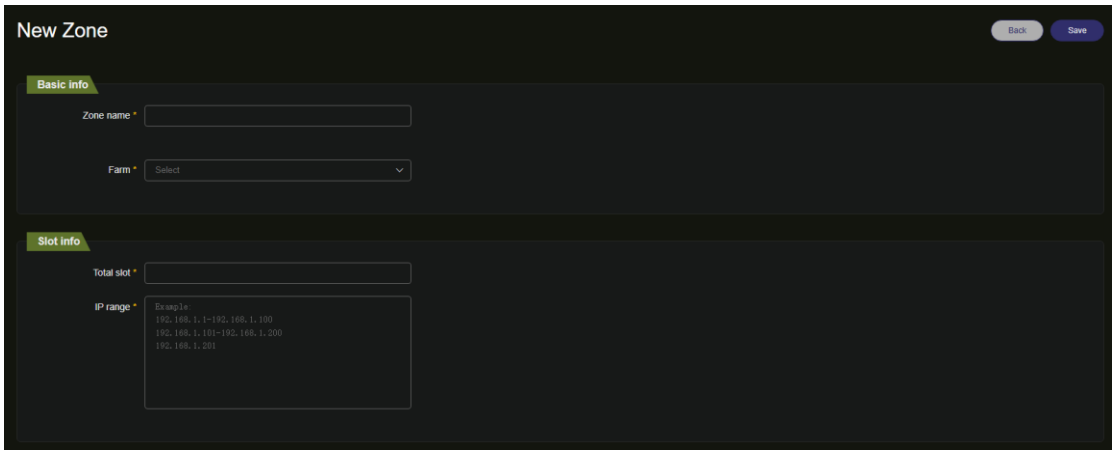
The Mining farm list data shows Farm Name, Country, City, Farm Enable / Disable Switch, and Farm Action (Edit Farm and View Details).



Click “Add Farm” to add a new mining farm. Enter the Farm Name, Time zone, Country, and City it belongs to , and then click "Save" to complete adding the farm .Once created ,the page will return to the mining farm list; click "Back" to abort the process .Creating a new mining farm will generate its monitoring setting and a mining zone will be assigned to it automatically. Editing an existing mining farm has the same fields as adding a new one , so no more detailed description here.

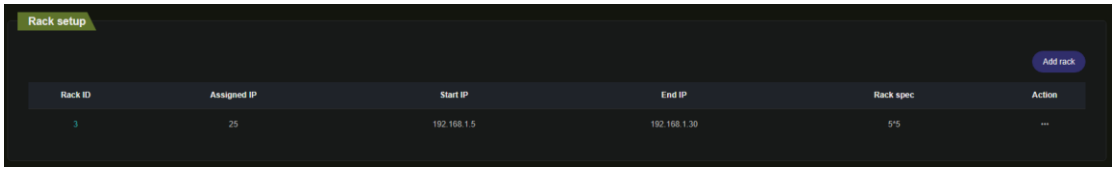
9.2.2 Zone Setting

The Zone list shows data such as Zone Name, Mining Farm the zone belongs to, Total slots of the zone , Zone Creation Time, and Action (Edit Zone, Edit Rack, Zone Detail, and Delete); users should take much caution to delete zones to avoid from serious data loss. Clicking "Detail" in the zone action menu slides the zone detail information window .
Mining Farm can be the filter to select the zones from the list.



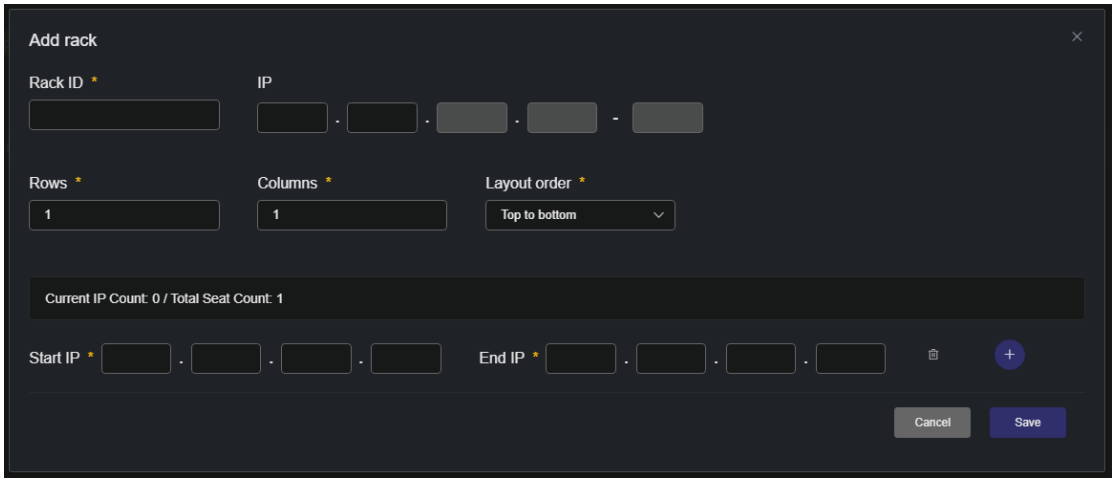
Click “Add Zone” to add a new zone. In the adding page, input Zone Name, Estimated Total slot of the zone, miner’s IP range in the zone , select the Mining Farm it belongs to, and then click "Save" to complete adding one zone .Once created ,the system returns to the zone list; clicking "Back" will abort the adding process.

Zone edit and rack edit are for existed zone. Already added and configured racks will appear in the rack setup list, showing the Rack ID, Assigned IP count , start IP, end IP, and Rack specification. Users can delete racks or add more racks here.



When adding a rack, specifying the rack scale and layout order is necessary, which will facilitate binding the rack's IP range to physical rack slot. IP range input supports autofill for the first two segments. Users can add IP ranges row by row according to the defined rack scales, or input it all at once based on IP continuity. If the IP count covered by the IP range exceeds the number of available rack slots, the system can’t support adding the rack.

Note: Racks can’t be added to the zone until IP range of the zone has been set.



9.2.3 Monitoring Setting

The Monitoring Setting list shows all monitoring rules bound to the existed mining farms,

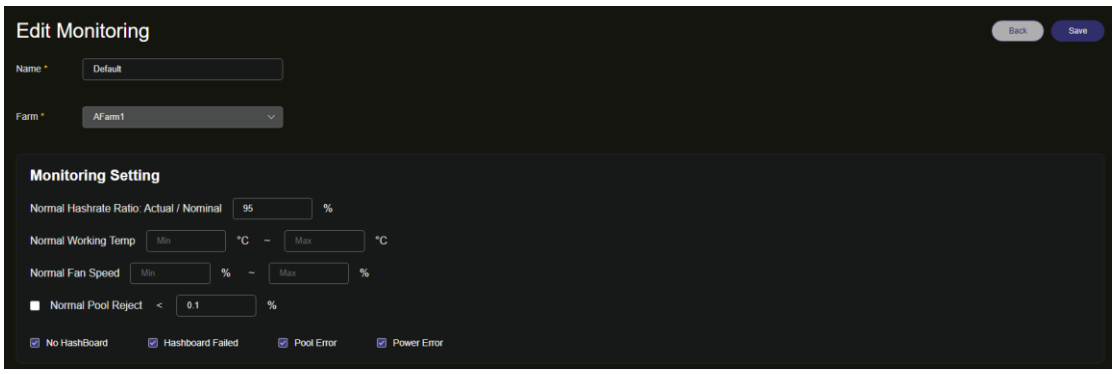
including: Monitoring Rule Name, Mining farm the rule belongs to, Enable/Disable Switch, Creation Time, and Actions (Edit rule and view Details).

Click the Disable/Enable button to disable or enable rules. When enabled, corresponding monitoring indicators and alarm notifications will be activated. For example, the Miner Alarm chart on the dashboard aggregates all real-time alarms triggered by monitoring setting rules.

The list supports filtering data by mining farm. Clicking the monitoring rule name slides the Monitoring Setting Detail.

Click"Edit" to configure monitoring settings for the selected mining farm. Monitoring setting configuration items include: Normal Hashrate Ratio, Normal working Temperature Range for Miners, Normal Fan Speed Range for Miners, Normal Pool Rejection Rate Threshold, and common failure checkboxes such as No Hashboard, Hashboard Failure, Pool Error, and Power Error.

Note: Part of the alarm indicators in Alarm Management won't take effect without a prior configuration in Monitoring Setting, which includes Hashboard Failed, Abnormal Temperature, Low Hashrate, Fan Error, Power Error, High Reject Rate, and Pool Error. If the user insists on selecting it, the system will notify the user to update the Monitoring Settings.



10. Technical Support

The system offers the entry jumping to Canaan official support page via clicking the "Question" mark at the upper side of the desk.

"Firmware & Document" block in the Canaan official support page offers the latest system version for download and installation as well as the system user manual.