iCAP

Innodisk Cloud Administration Platform

User manual

Version	V1.1.0.0
Issue date	2018/04/17

innodisk

Revision History

Reversion	History	Date
V1.0.0.0	■ Initial Release	2017-11-01
V1.1.0.0	■ Chart UI update	2018-04-17

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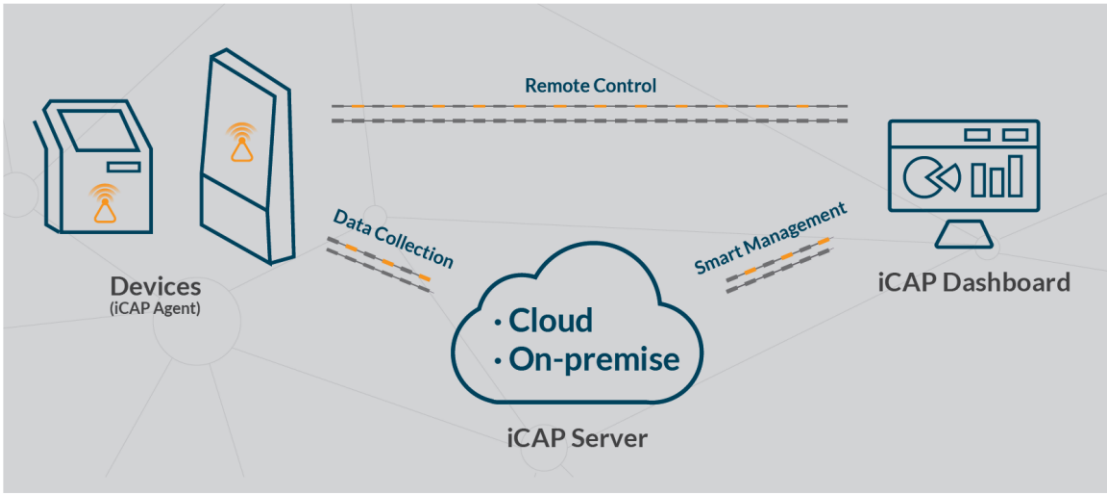
1. Solution overview

iCAP – Smart Management for Your Connected Systems

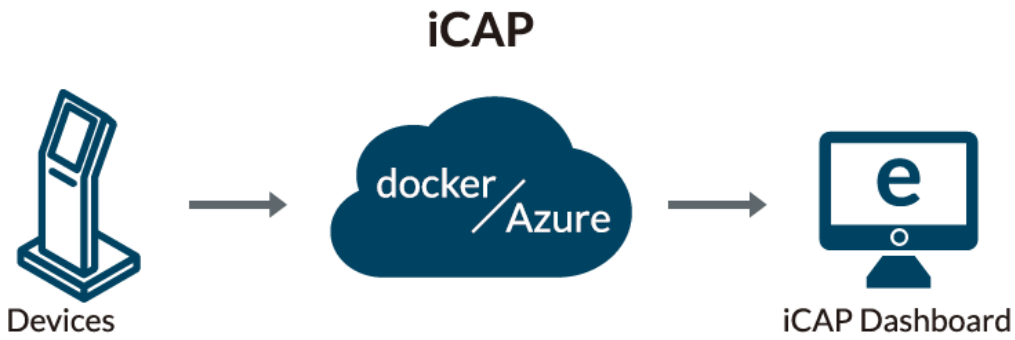
Innodisk cloud administration platform is a remote device management system for both private and public clouds, which primarily focuses on storage device management and monitoring. It provides remote device surveillance features, and also integrates with external sensors and IOs, offering a customizable approach to any applications.

iCAP utilizes the standard MQTT protocol from IBM. This machine-to-machine (M2M)/ Internet of Things (IoT) connectivity protocol is used to communicate with IPCs, IoT devices and sensors. iCAP also provides an agent application for data collection from devices, as well as RESTful API web service that allows the user to customize and integrate their specific application into the iCAP system.

iCAP is an IoT management platform that accesses connected devices through a centralized dashboard. The user can easily manage system/ storage status monitoring, system backup/recovery and remote-control functions.



2. Software structure



There are three parts of iCAP system architecture: Device Agent, iCAP Server and iCAP dashboard.

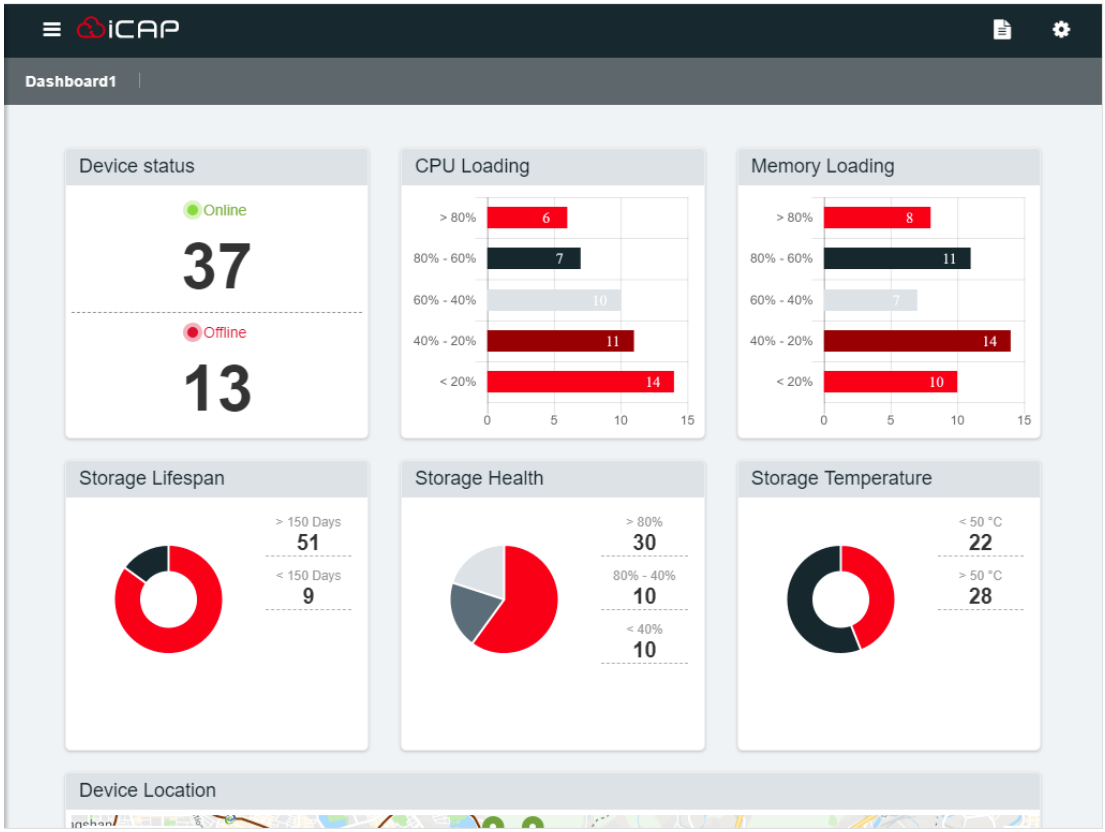
- iCAP Agent:
  This is a device-site program to collect and send the device status data to the iCAP server including system and storage information. This program can auto-run after the system boots up. Besides, the agent UI let users not only know the connected status but also set up the IP address and location easily.
- iCAP Server:
  The iCAP main program receives and stores the data sent from the agent program of connected devices.
- iCAP dashboard:
  The Web-based management interface with Responsive web design (RWD) offering the same support to a variety of devices for a single website cross browsers including Internet Explorer, Chrome, Firefox, Safari and etc..

3. iCAP Dashboard

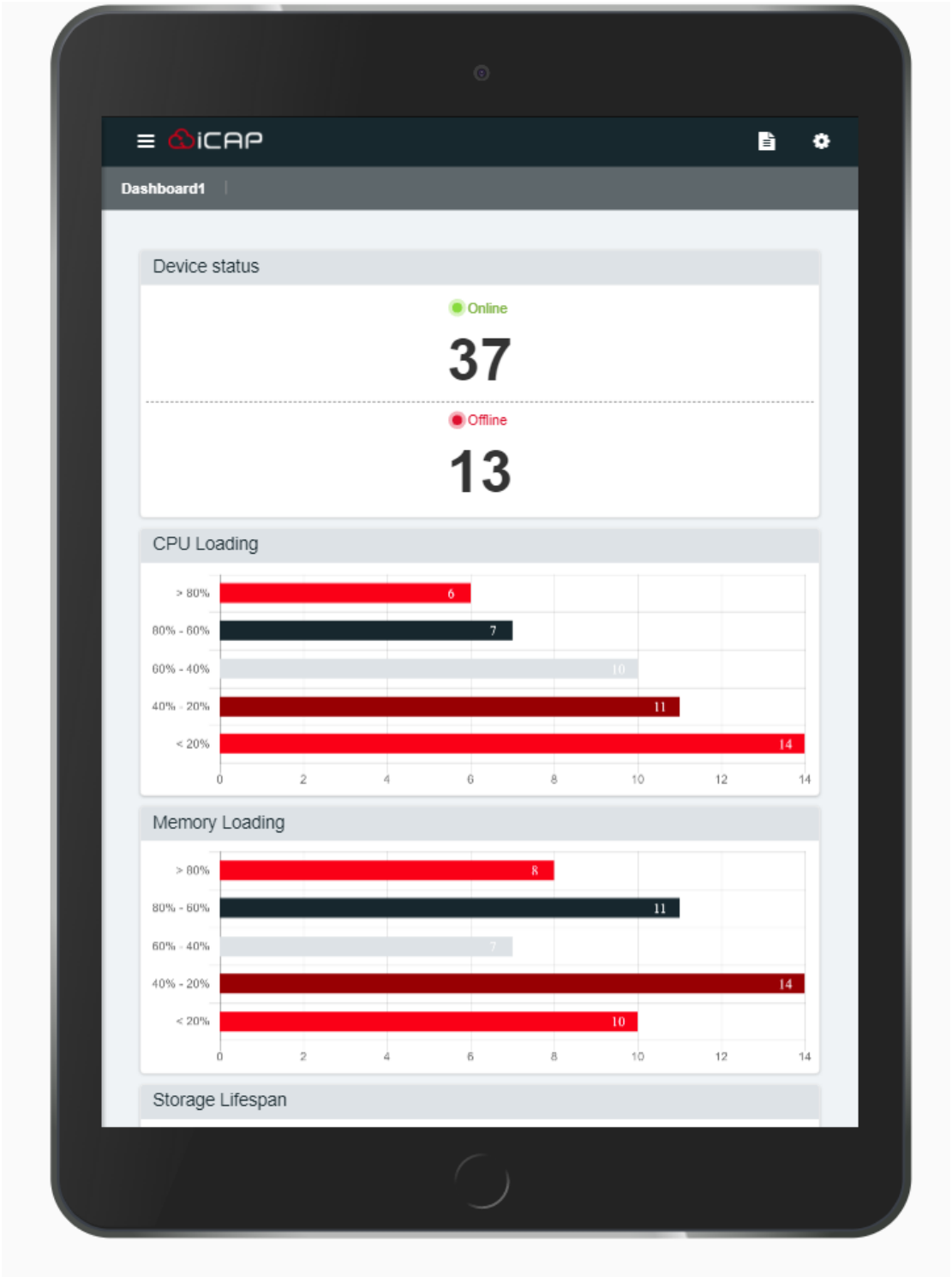
Users can connect to iCAP dashboard by typing the IP address of iCAP server which set up by referencing installation guide process.

The dashboard is designed with Responsive web design(RWD). RWD is an approach of laying-out and coding a website such that the website provides an optimal viewing experience, ease of reading and navigation with a minimum of resizing, panning, and scrolling across a wide range of devices (from desktop computer monitors to mobile phones).

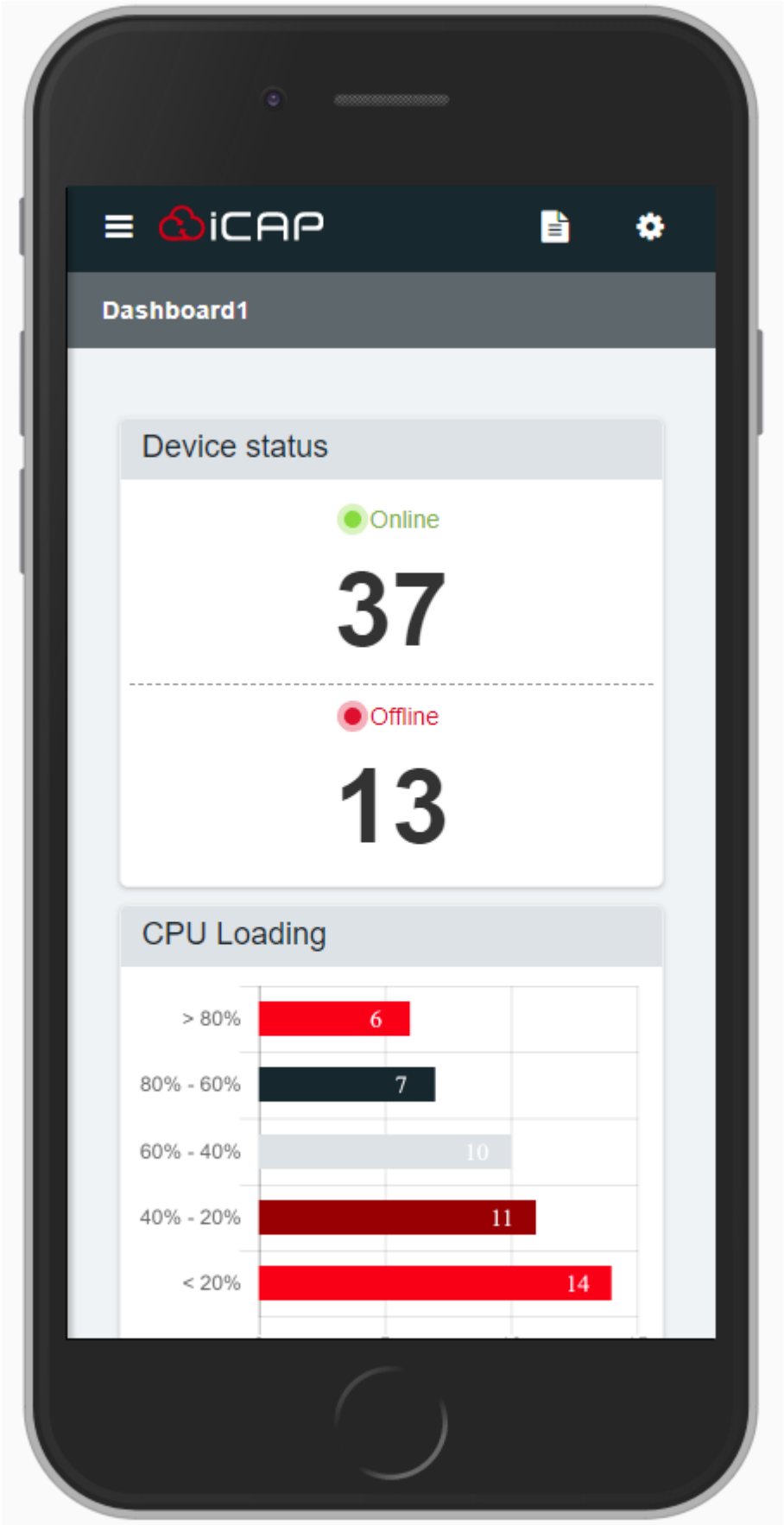
Basic user interface (Width over 992)：



Tablet user interface (Width in 768~992)：

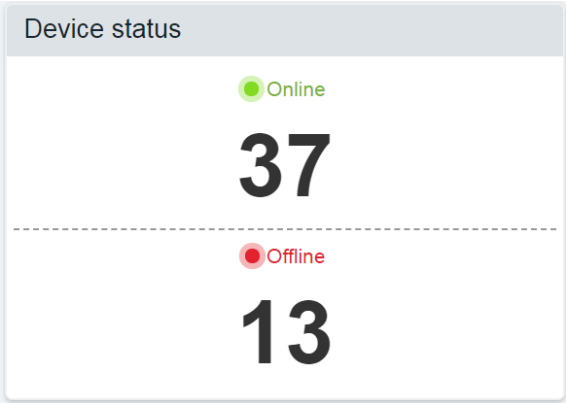


Mobile user interface (Width in 320~768)：


iCAP
Dashboard1
Device status
Online
37
Offline
13
CPU Loading
> 80%
6
80% - 60%
7
60% - 40%
10
40% - 20%
11
< 20%
14

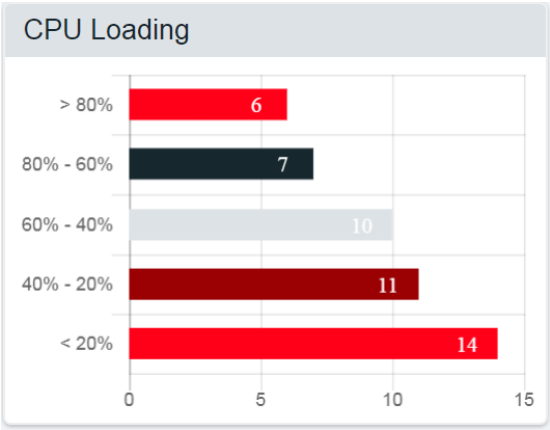
In following sections, it lists all of charts on the dashboard including Device status、 CPU loading、Memory loading、Storage Lifespan、Storage health、Storage temperature.

3.1 Device Status



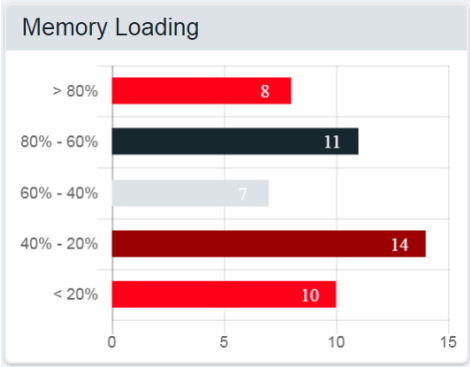
The light chart can display the numbers of connected devices for on-line and off-line status.

3.2 CPU Loading



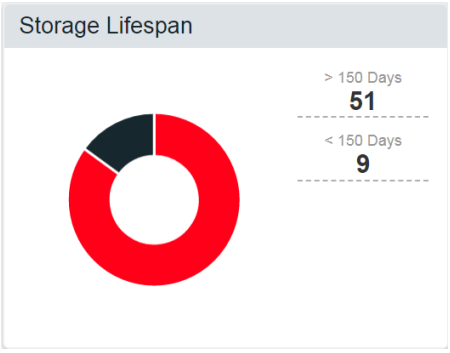
The bar chart can display the numbers and different percentage intervals of connected devices for CPU loading.

3.3 Memory Loading



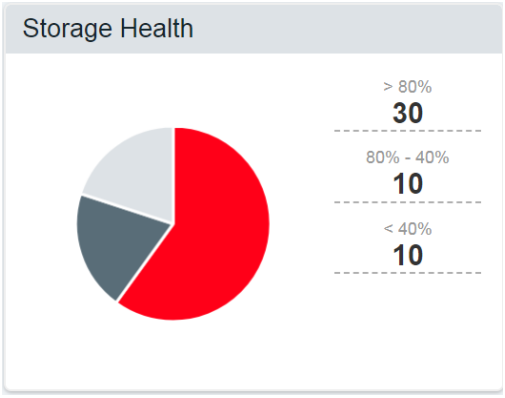
The bar chart can display the numbers and different percentage intervals of connected devices for memory loading.

3.4 Storage Lifespan



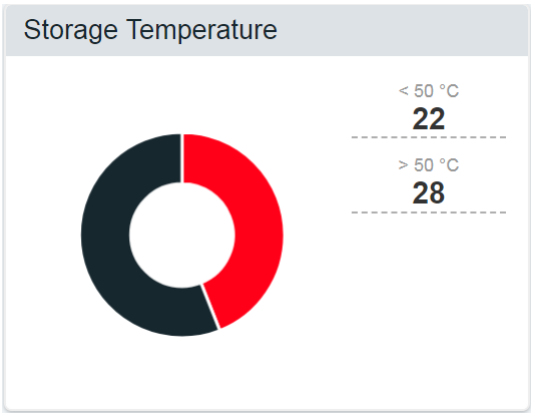
The donut chart can display the numbers of connected storages with the lifespan threshold.

3.5 Storage Health



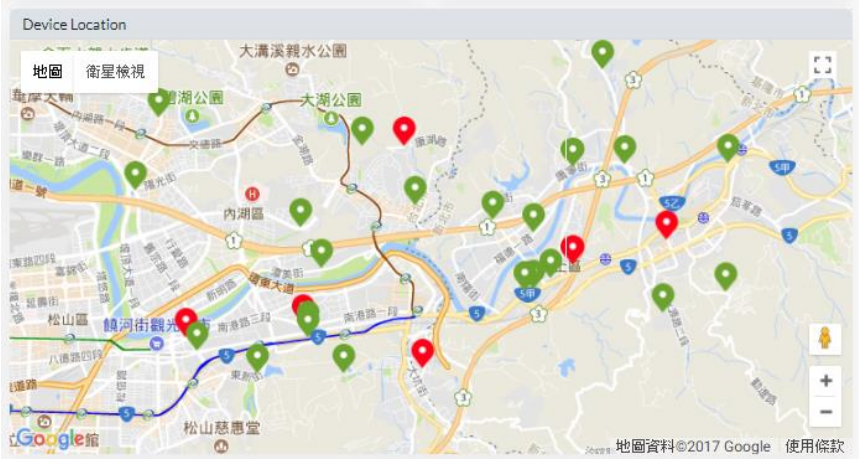
The pie chart can display the numbers of connected storages with the storage health threshold.

3.5 Storage Temperature



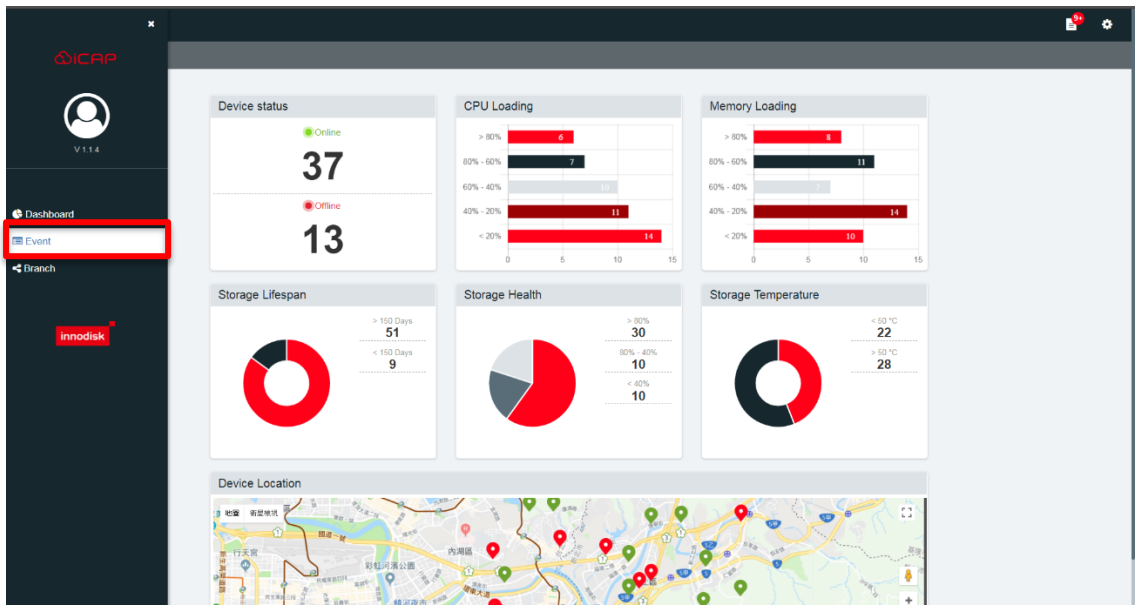
The donut chart can display the numbers of connected storages with the storage temperature threshold.

3.7 Device Location

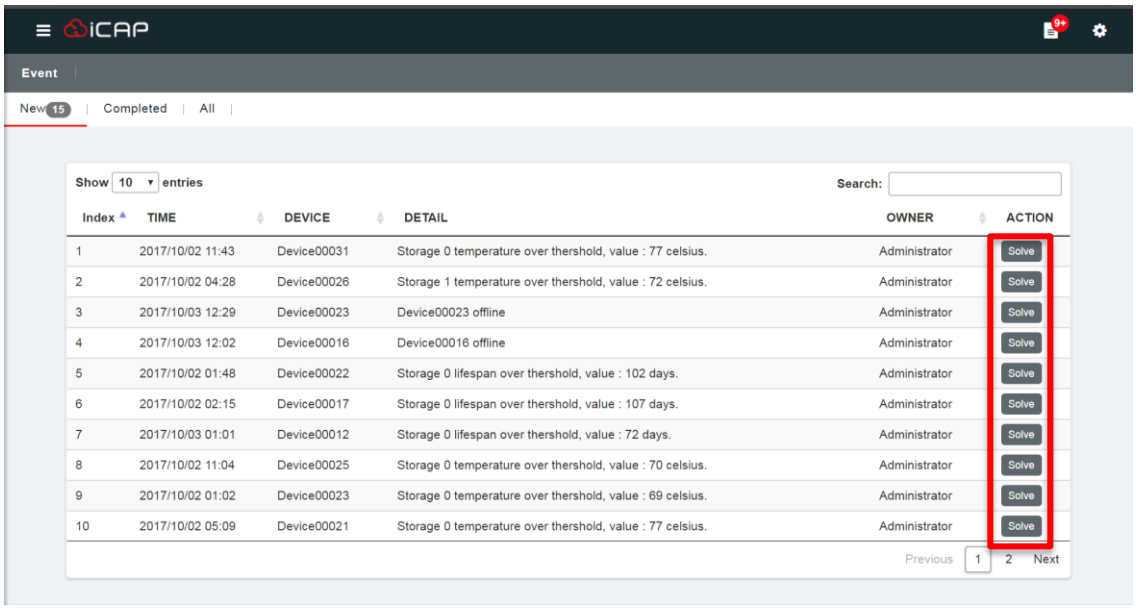


Device location provides google map to show the status of each devices by green and red marks, which make users very easy to know if the connected devices are workable now. Agent application can set up the longitude and latitude location for the devices.

4. Event



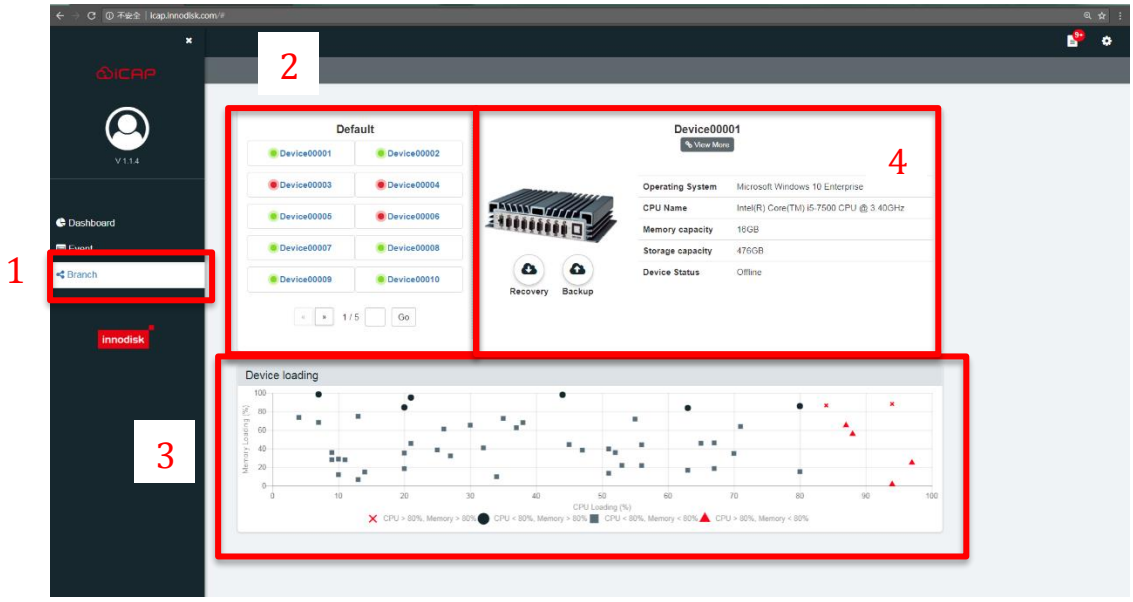
Press the [Event] button to enter the event tracker page from the side bar.



Event tracker collects the events that are over threshold. It also provide the sorting function to display the results clearly.

Besides, by clicking [Solve] buttons, users can label the event complete and send an email to notify the device owner simultaneously.

5.Branch



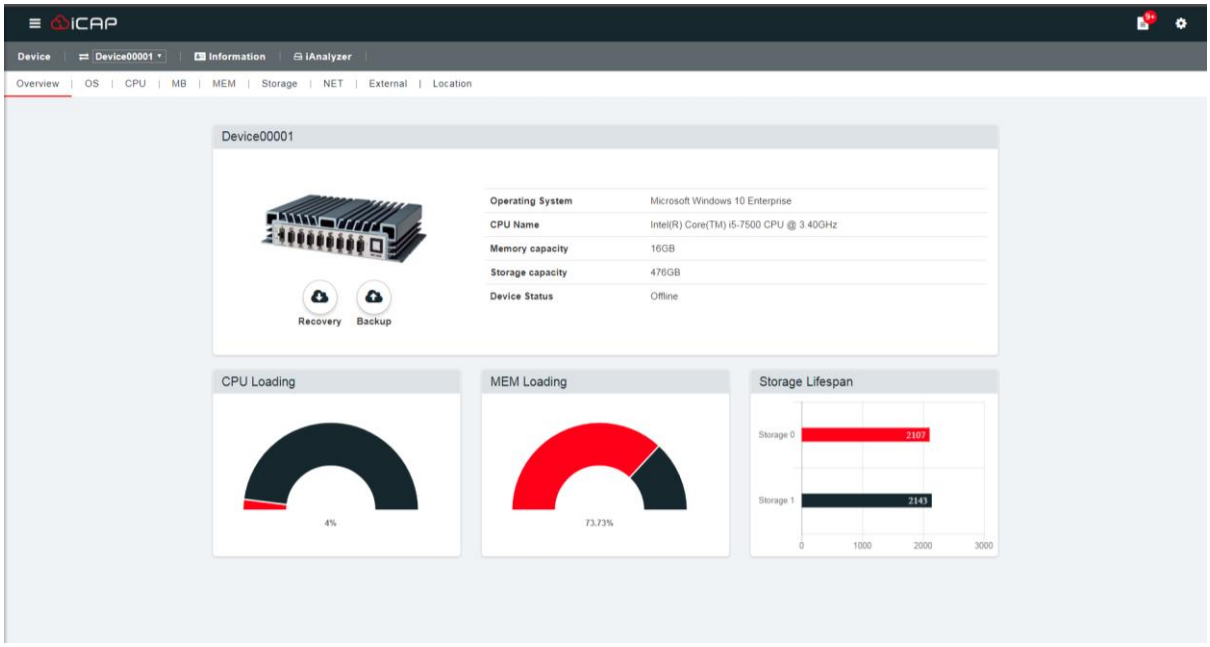
1.Click the Branch button can enter the default branch overview page.

2. In this page you can quickly select the device you would like to know in default branch.

3. The chart is a drop map for CPU & Memory loading.

4. There is a system overview of selected device. For more details of each device, please click [View More] button. Moreover, with one-click of recovery or backup button, it will trigger iCover to do the remotely system recovery or backup in the selected device.

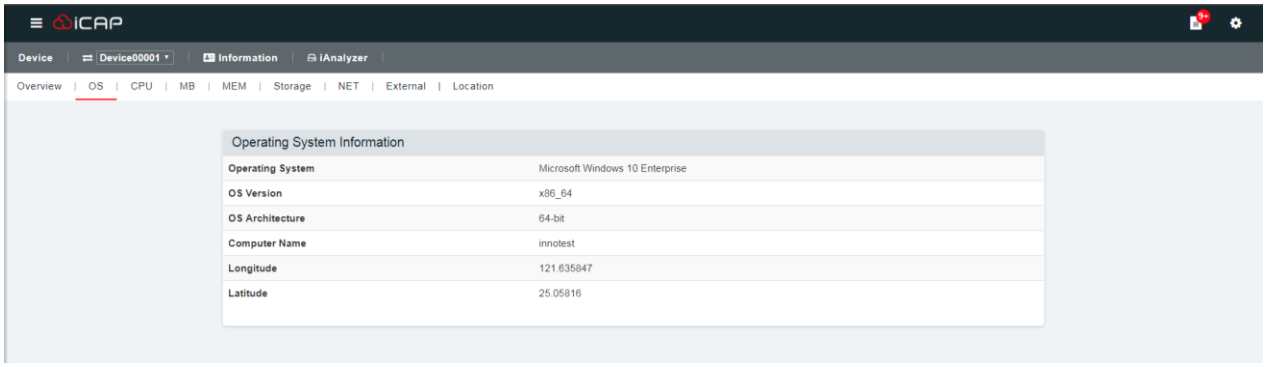
5.1 Device information



After clicking the [View More] button, you can see view the details of each device.

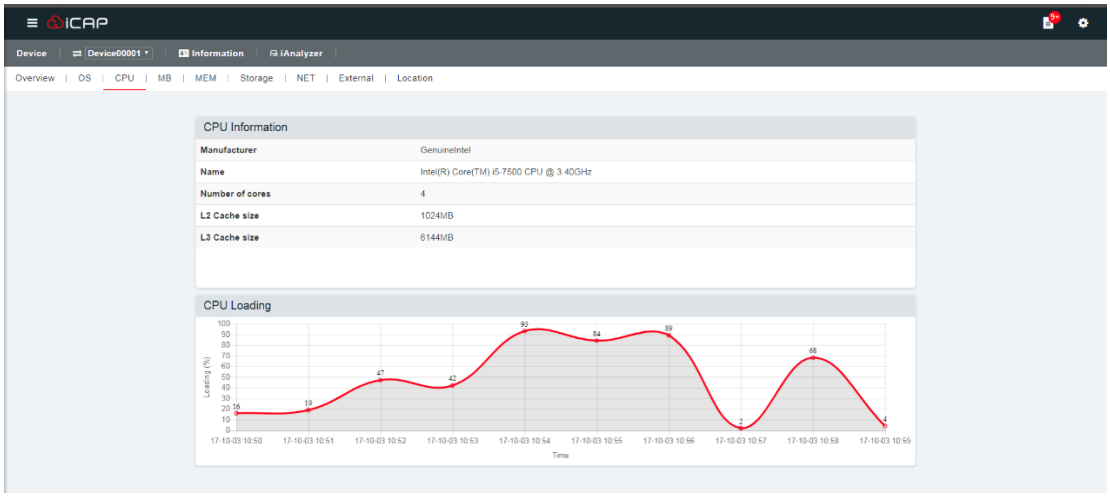
In this page, you can see the device overview. Click the related tag for more details including OS, CPU, Memory, Storage, NET, external sensor and location.

5.2 OS information



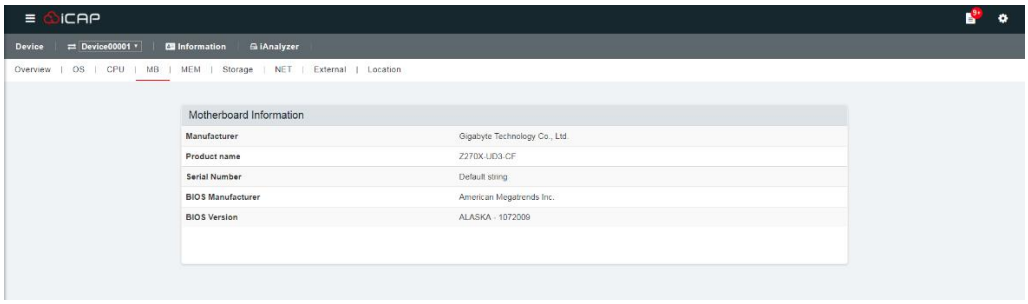
This page displays the OS information of the selected device in detail.

5.3 CPU information



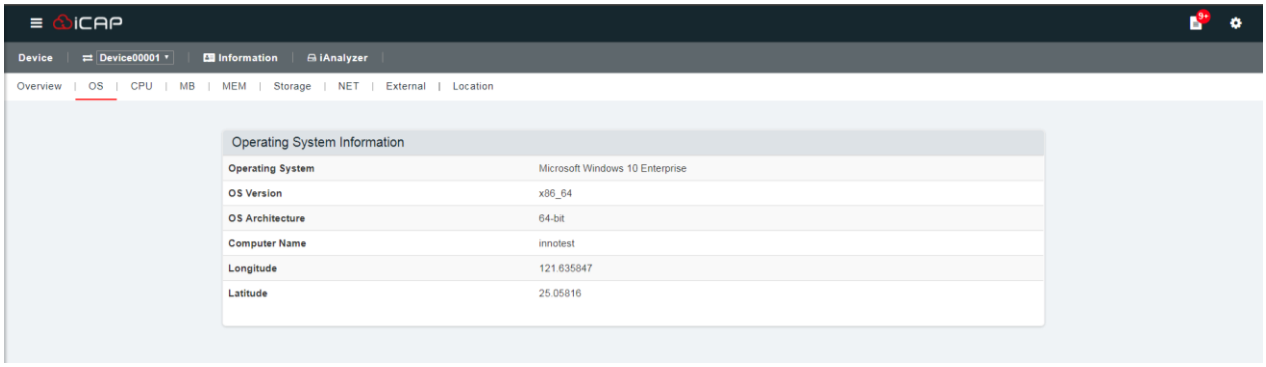
This page displays the CPU detailed information of the selected device. A line chart is provided to show the selected device CPU loading at different time.

5.4 MB(Motherboard) information



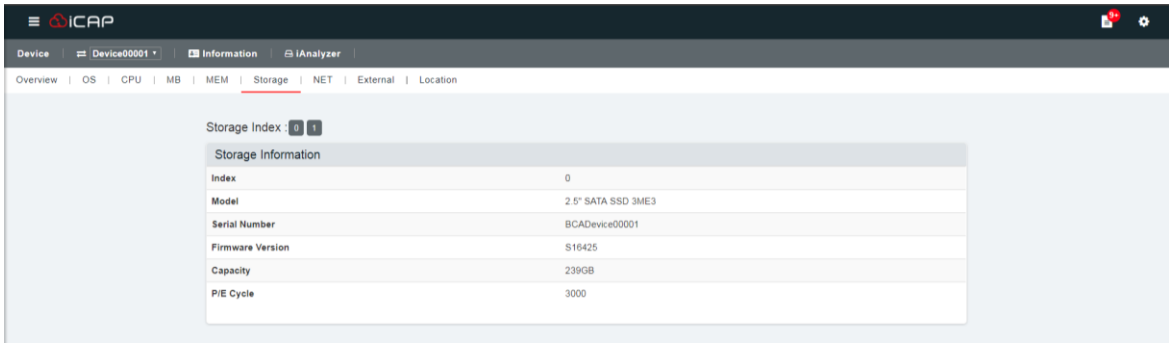
This page can display the motherboard information of the selected device in detail.

5.5 Memory information



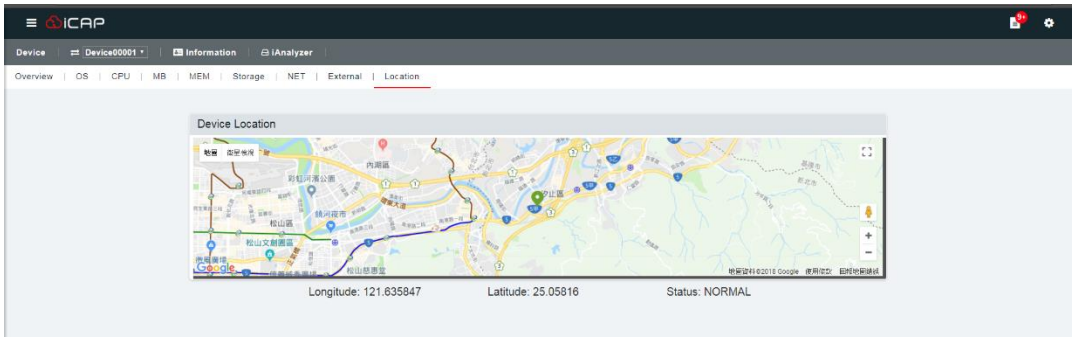
This page can display the memory information of the selected device in detail.

5.6 Storage Information



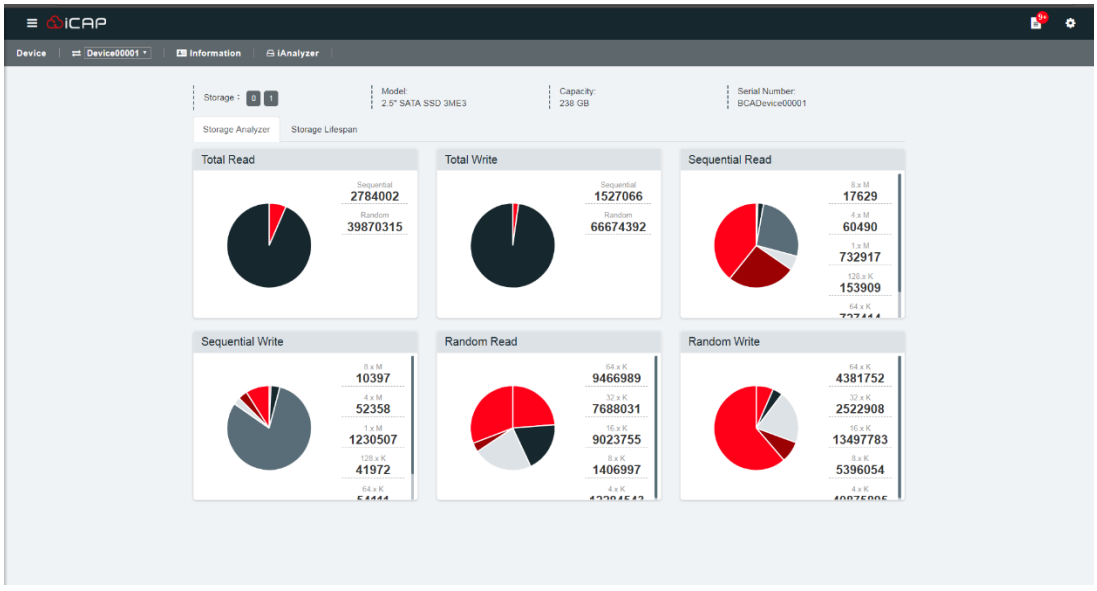
This page displays the selected storage information in detail.

5.7 Location



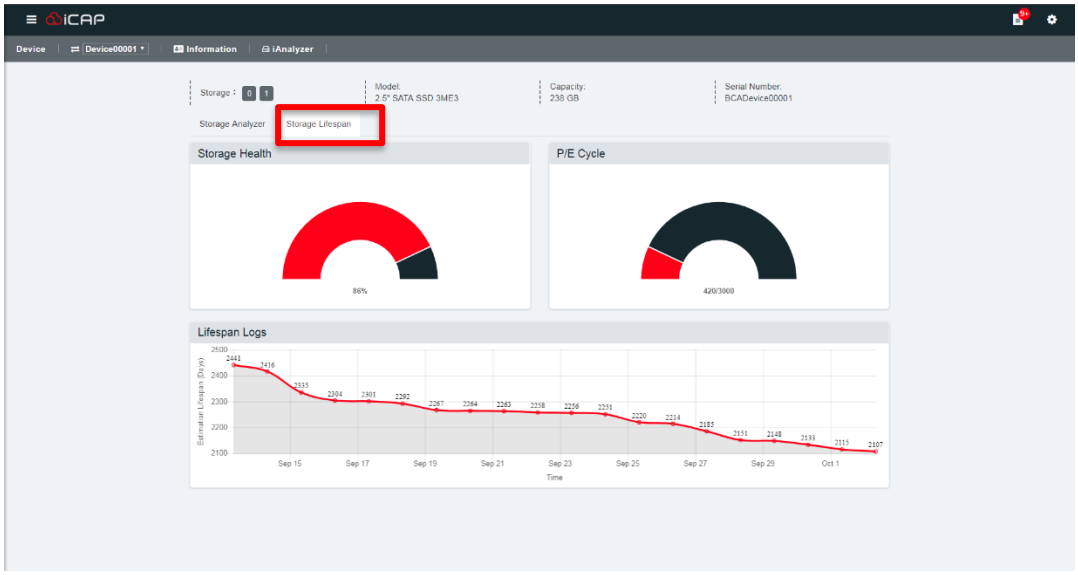
Device location point out the selected device location on the google map, including the information of current device status and its' longitude/latitude.

5.8 Storage R/W behavior



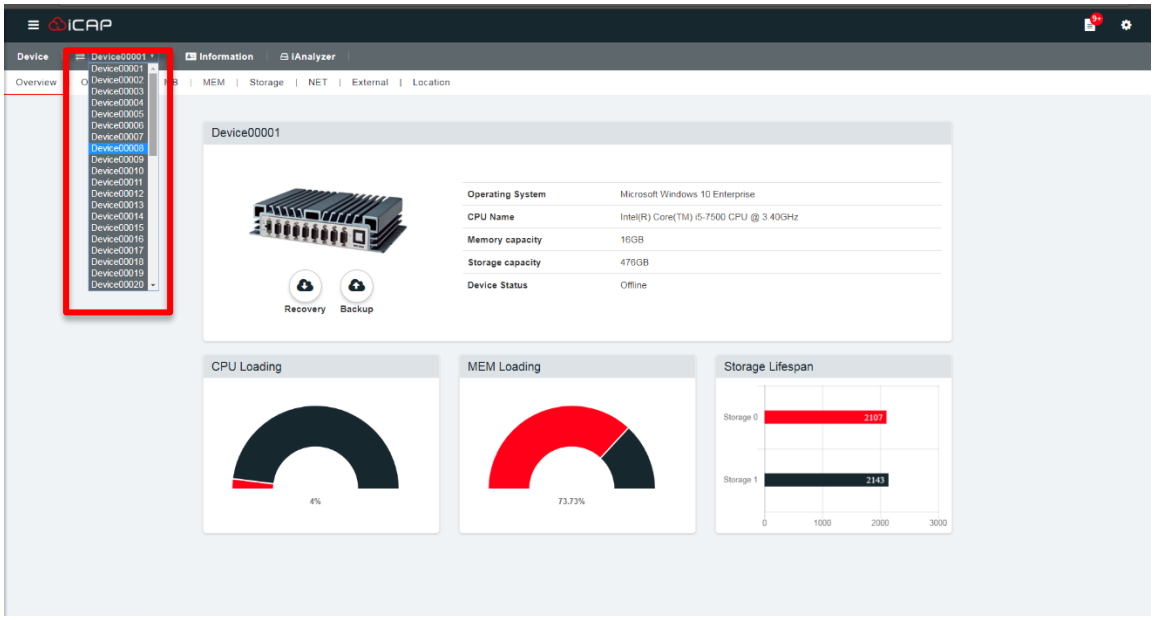
Storage R/W behavior tag can display the R/W information of the SSD on selected device including Total R/W, Sequential R/W and Random R/W. This allows the users to understand their application's usage of the SSD. Sequential and Random I/Os are easily broken down into percentages making them easy to read as well as segmenting by the size of the operation.

5.10 Storage lifespan



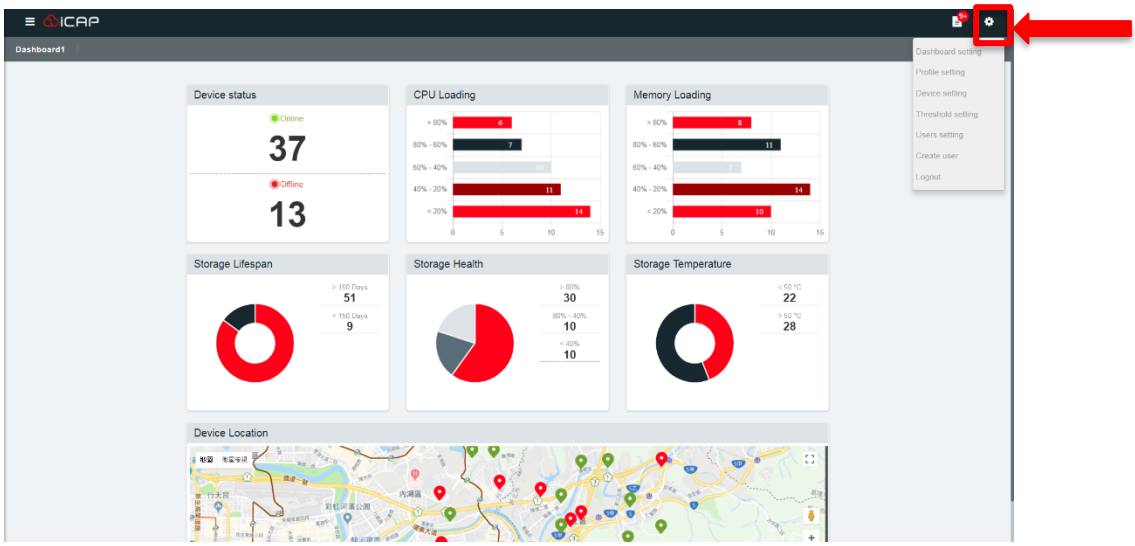
By clicking the storage lifespan tag, that can display the remain life time of the selected device with the line chart by date.

5.11 Select device



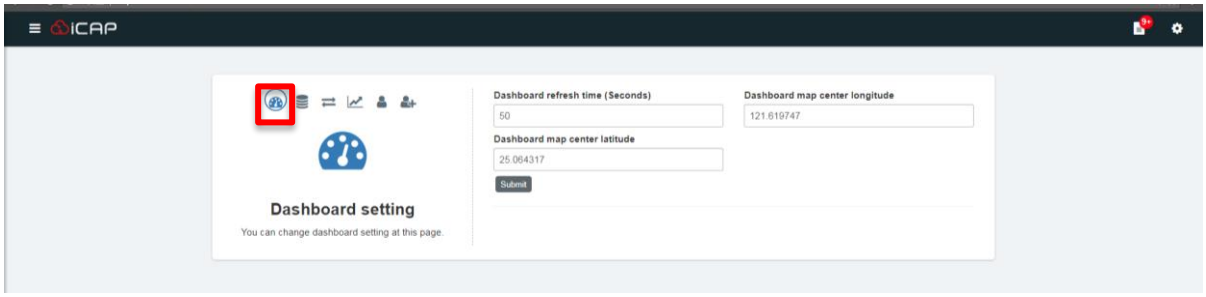
Select the device to get system and storage information in detail.

6.System setting



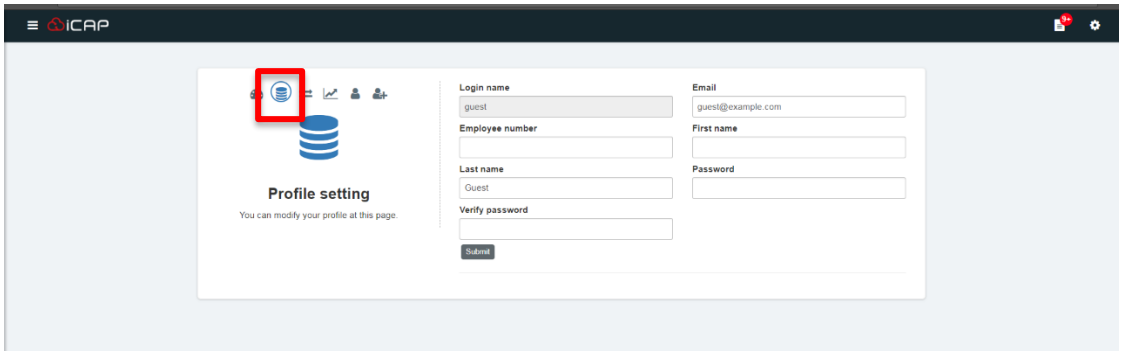
Users can set up the system configuration by clicking the setup button and choose the different configuration page to customize your own settings.

6.1 Dashboard setting



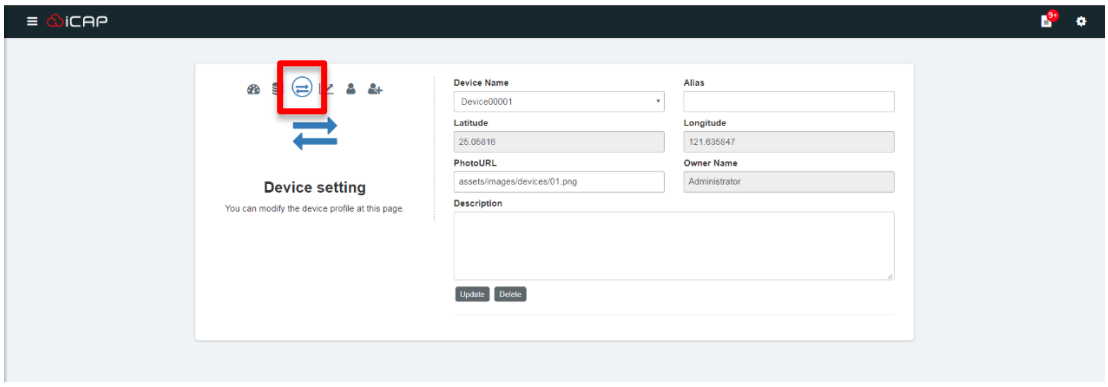
By clicking the Dashboard setting tag, users can set up the dashboard refresh timer, which is for the main dashboard to update the information from connected devices.

6.2 Profile setting



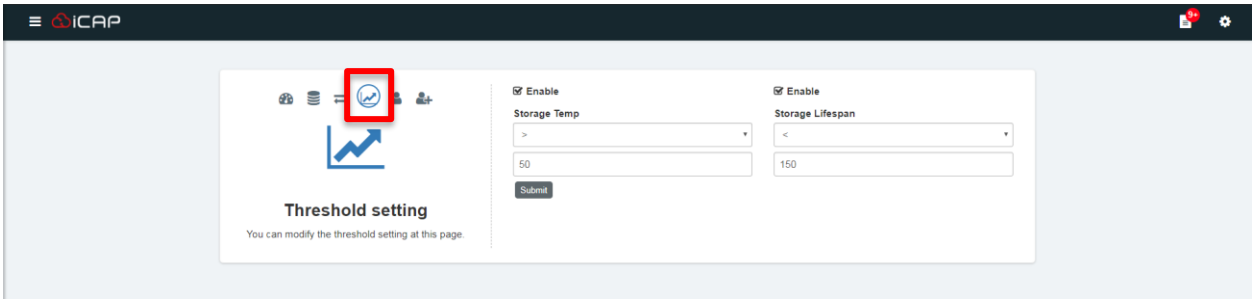
By clicking the profile setting tag, you can set up the account permission of the selected account.

6.3 Device setting



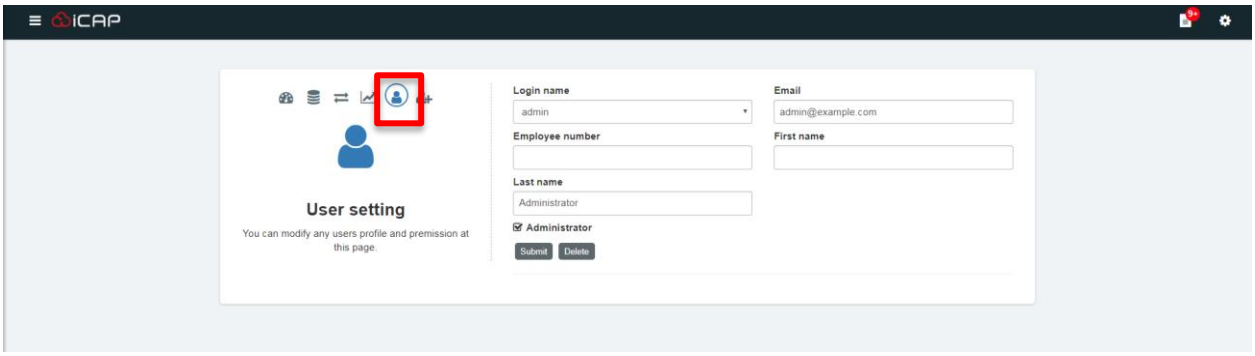
By clicking the device setting tag, you can setup the device name, alias and photo for the selected connected device.

6.4 Threshold setting



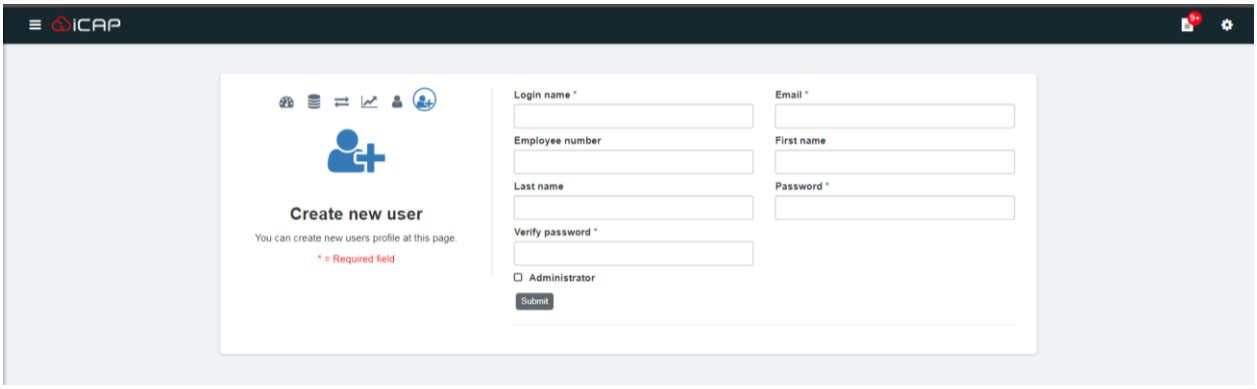
By clicking the threshold setting tag, users can set up the storage temperature and lifespan threshold of connected devices.

6.5 User setting



By clicking the storage lifespan tag, that can display the remain life time of the selected device with the line char by date.

6.6 Create user setting



By clicking the create user tag, you can create a new account.