



Delta Electronics, Inc

# InfraSuite Manager

Operation Edition

User's Manual

Model: EMS3000  
Doc. Version: v3.0

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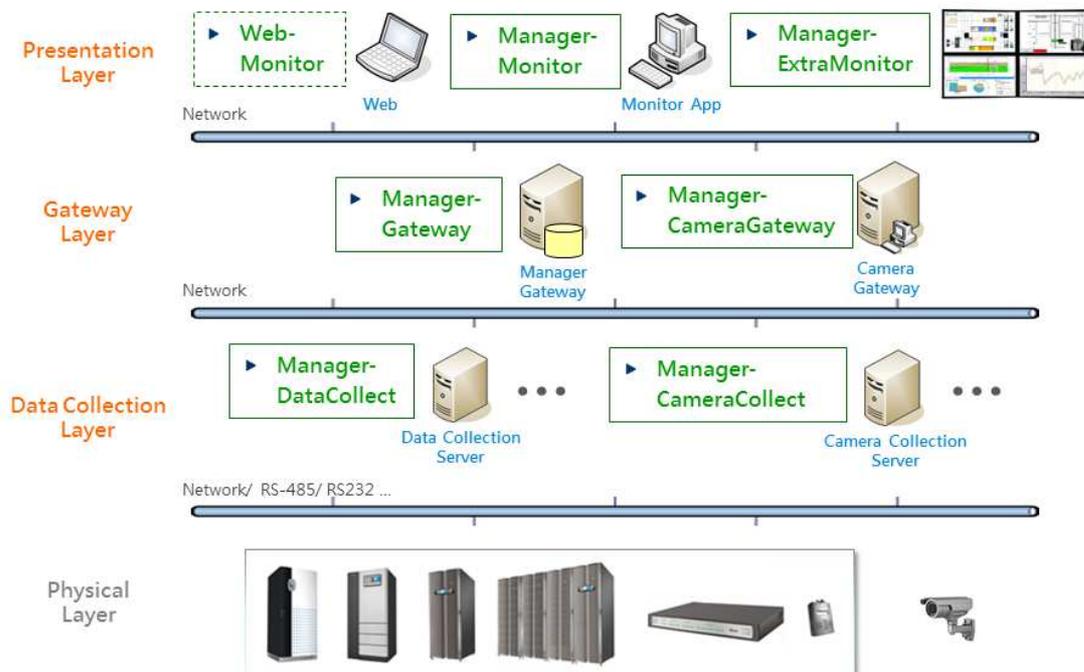
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# 1. Introduction

Thank you for choosing InfraSuite Manager to manage your facilities in the datacenter. InfraSuite Manager is designed to centralized monitoring and control a large number of devices through the network. It can adjust its scale to meet the customer's application and has the ability to let you quickly and easily create a powerful, full-featured human-machine interface (HMI) to manage all of the devices through the network. It allows you to observe all of the device status at a glance and query the event log and history data in a easy and quick way to help you to make the best management decisions.

## 1.1 System Architecture

InfraSuite Manager implements a 3-tiered design architecture, including the **Data Collection** layer, **Gateway** layer and **Presentation** layer. The advantages of this kind of design architecture are scalability, reliability, and diversity. Each layer represents an independent application and only deal with its own job, the data exchange between each layer through the network communication. These applications can be installed in the same PC or in different PCs to meet the customer's application.



**Data Collection Layer:** Program name Manager-DataCollect, Manager-CameraCollect

**Manager-DataCollect:**

Design to communicate with the physical devices directly through the serial and

network interfaces, it collects all of the device data which is defined in the protocol list then report it to Manager-Gateway.

**Manager-CameraCollect:**

If the environment needs to integrate with cameras then the Manager-CameraCollect needs to be installed. We recommend to install Manager-CameraCollect in another PC to take up most of the resources because the real-time image processing, network traffic may be totally consumed by the Camera Collector.

**Gateway Layer:** Program name Manager-Gateway, Manager-CameraGateway

**Manager-Gateway:**

Responsible for analyzing the received data, there are 3 major functions of the Gateway layer which are database handling, reaction and reply the Presentation layer query. Once the data feedback to the Gateway layer from the Data Collection layer, the Gateway layer analyzes the data to decide to store in the database or not. If there is an event occurs, it can sending the assigned commands to other devices, keeps the event in the event log, sending e-mail and/or SMS accordingly.

**Manager-CameraGateway:**

Manager-CameraGateway manages all of the Camera Collectors and communicate with Manager-Gateway to achieve the purpose of single entry management.

**Presentation Layer:** Program name Manager-Monitor, Manager-ExtraMoitor

**Manager-Monitor:**

Design to display the user interface and restrict the user privileges. Furthermore, the Manager-Monitor and web interface can display the historical data log and event log.

**Manager-ExtraMonitor:**

One Manager-ExtraMonitor can communicate with multiple Manager-Gateway to collect the layout plans and project them to the different video wall screens.

**Project Configuration:** Program name Manager-Configure

**Manager-Configure:**

Besides to the 3 layers, the customer also needs to develop his own project. InfraSuite Manager provides this application to create a project. The project includes user profile, privilege, protocol, device, camera setup and layout

configuration.

## 2. Software Installation

### 2.1 Presentation Layer (Manager-Monitor)

#### Hardware Requirement

CPU:  $\geq$  2G Hz

Memory:  $\geq$  4G

#### Software Requirement

OS: Windows 7, 8, 10, 2003, 2008, 2012

### 2.2 Web Monitoring

Customers can remotely from the web browser to monitor the InfraSuite Manager without installing any application.

#### Hardware Requirement

CPU:  $\geq$  2G

Memory:  $\geq$  4G

#### Software Requirement

OS: Windows 7, 8, 10, 2003, 2008, 2012

Tablet OS: iOS5, Android 2.3 or above.

We recommended to use the following web browser and video player for InfraSuite Manager.

Web Browser: IE11, Chrome30, Firefox23, Safari5.

### 3. Presentation Layer (Manager-Monitor)

The presentation layer (Manager-Monitor) is one of InfraSuite Manager user interfaces. Users can not only watch all of the monitoring facilities status and value but also query the event log and history data.

#### 3.1 Program Startup

Select the Start > Program Files > InfraSuite Manager > Manager-Monitor > Manager-Monitor to launch the Windows monitoring program. The connection dialog box will be popped up at the startup, please fill in the IP address of Gateway layer (Manager-Gateway) and the account and password then press the Login button to establish the connection. If the Enable Auto Login is checked then next time the Manager-Monitor will connect to the assigned IP address.

The screenshot shows a connection dialog box with the following fields and options:

- IP Address:** 172.16.190.38 (with a dropdown arrow and a 'Clear' button)
- Account:** Administrator
- Password:** Masked with 8 dots
- Keep Login Information
- Enable Auto Login
- Login** and **Cancel** buttons
- READY** status bar at the bottom left

The connection status is indicated in the following table.

| Connection Status |   |
|-------------------|---|
| Status            | Description   |
| Connected         | Connect to the Manager-Gateway successful.                                      |
| Verify Pass       | The account and password are matched.   |
| Verify Failure    | Either account or password is not matched. Please contact your account manager. |

Once you login to the system successfully, the presentation layer starts to download the project files from Manager-Gateway. After all of the necessary files are downloaded, the layout plan groups will be listed in the Select Group dialog box according to your login account privilege. Please select one of the layout plan groups to enter this group.



As you can see from the above picture, there are 2 parts in the dialog box. They are presentation screenshot area and selection group area.

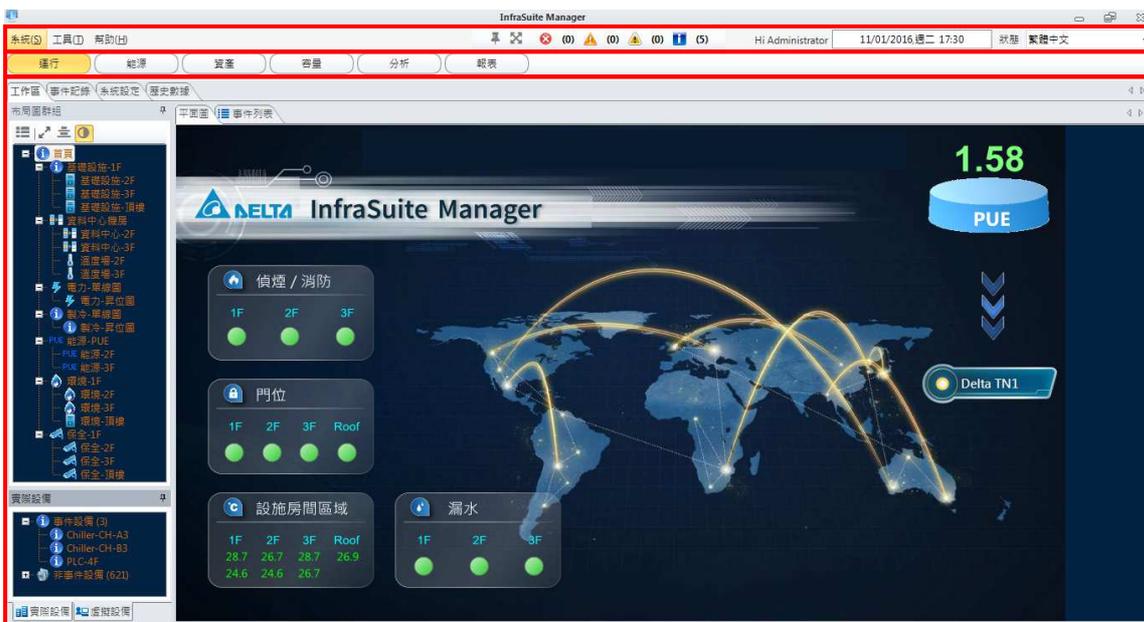
**Presentation Screenshot Area:** Display the selected group main screenshot.

**Selection Group Area:** Use the left and right arrows to move the group items and click on one of the items to select it or double click on the item to enter this group item.

## 3.2 Main Screen

There are 3 areas for the monitoring screen, they are

(1) Menu area, (2) Module button area and (3) Module functional area.

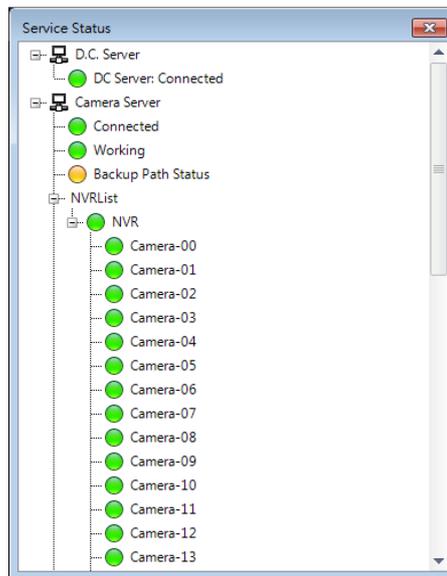


The manu area includes the menu bar(Left side), status panel(Middle) and the system information(Right side).

Status Panel:  Show the statistics of current

alarm in different levels. Moreover, press the  (Full screen) button to extend the Layout Plan area to the full screen, press the  (Fix) button to show or hide the status panel. If the status panel is hidden, move your mouse on the top of the status panel docking position to show the panel again.

System Information: To show the login account name and system time from the Manager-Gateway. Click on the language selection list to switch the selected language in Manager-Monitor. This will apply all the menus, buttons and dialog box text to the selected language but does not affect to the designed plans. Moreover, press the status button to pop up the service status windows to examine the related service programs and their working status.



### 3.2.1 Component Operation in Layout Plan

The components design in layout plan can be easily operated by the mouse to view the current device status, query event log and history data. The following table lists the operation function for the general components:

| Component              | Left Button                           | Right Button  |
|------------------------|---------------------------------------|---|
| <b>Layout Button</b>   | Go into the assigned layout plan.     |   |
| <b>Physical Device</b> | Open the physical device detail view. | Physical Device Menu<br>Content: Open the physical device configuration window to observe the communication parameters, protocol items. |

|                    |  |  |
|--------------------|--|--|
|                    |  | <p>Query Event Log: Pop up the event log window to list the event log for the device.</p> <p>Query History Data: Pop up the history data window to show the brief display items' trend.</p> <p>Preselection: Add or remove the selected component in a temporary memory then select the Query History Data or Query Event Log.</p>                               |
| <b>Camera</b>      | Open the camera live streaming window. |  |
| <b>Value</b>       |  | The same as Physical Device.   |
| <b>Status</b>      |  | The same as Physical Device.   |
| <b>Trend Chart</b> |  | <p>Trend Chart Menu</p> <p>Query History Data: Pop up the history data window to show the trend of the protocol items in the component.</p> <p>Save Data to File: Save the current trend chart value in an assigned CSV file.</p> <p>Preselect: Add or remove the selected item in a temporary memory then select the Query History Data or Query Event Log.</p> |

### 3.3 Menu

#### 3.3.1 System

| File Menu        |  |
|------------------|--|
| Menu Item        | Description  |
| Connect Gateway  | Connect to a Manager-Gateway.  |
| Logout           | Log out from the connected Manager-Gateway.                                      |
| Upload Project   | Upload the new project. (Only available for Administrator account)               |
| Download Project | Download the current running project. (Only available for Administrator account) |

|      |                                 |
|------|---------------------------------|
| Exit | Close the monitoring interface. |
|------|---------------------------------|

### 3.3.2 Tool

| Tool Menu              |   |
|------------------------|---|
| Menu Item              | Description   |
| Event Log              | Used to look up the event log in a period of time, display the event frequency by a graph.                |
| Event Ack.             | Used to record the device event is taking care or not by the related device manager.                      |
| Event Mask             | Mask the assigned devices which we don't want them to report any event.                                   |
| History Data > Search  | Look up the history data from the database and display the graph for the selected device elements.        |
| History Data > Comapre | Compare the different elements in the same period of time or compare the same elements in different time. |
| Camera                 | Display the camera live view.   |
| Camera Log             | Look up the camera log then play the recorded vido file.  |
| Door Access Log        | Look up the door access log.  |
| Report Edit            | To edit your report by copy and paste the event log or history data.                                      |
| Bulletin Board         | To add or delete the messages on bulletin board component.  |
| Snapshot               | Display or hide the snapshot window.  |
| Device List            | Display all of the physical devices in a list.  |

### 3.3.3 Help

| Help Menu |   |
|-----------|---|
| Menu Item | Description   |
| License   | Setup the software license for the management system. |
| Log Data  | Used to record the device communication for debug.    |
| About     | The software version.                                 |

## 3.4 Module

The module buttons will vary depending on the function module you have purchased.

Please refer to the following for the module buttons of base model.



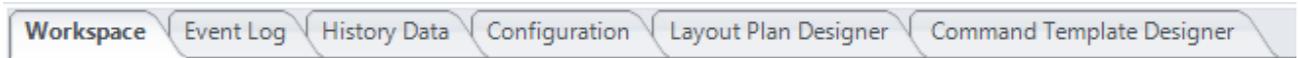
The complete functional module buttons are as the following:



This manual only explains for the base model, please refer to the related manual for the other modules.

## 3.5 Operation Module

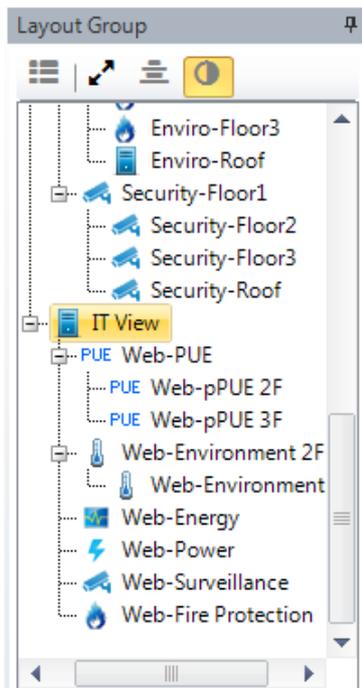
In the operation module, there are several tabs for it:



### 3.5.1 Workspace

In the workspace, we can observe the designed layout plans. The layout group tree, physical device list and virtual device list are on the left side. In the middle area, there are layout plan and event list. Each tab can be drag to the other docking position and remember it.

#### Layout Plan



This structure is designed by the project designer in the project file which is configured by the Manager-Configure, users can select one of the layout plans in the structure to jump to the plan directly. In general, the structure is divided by location or function to help users to manage their facilities more intuitive.

#### Layout Plan Button



-  Select the layout plan group: Press this button to pop up the selectable layout plan groups based on the login account. Users can switch to a different layout group from here.
-  Layout plan self-adjust: Divided into 3 stages, the stage 1 is to display the

layout plan by its original dimension. The 2<sup>nd</sup> stage is to stretch the layout plan and keep the ratio. The 3<sup>rd</sup> stage is to stretch to the display area.

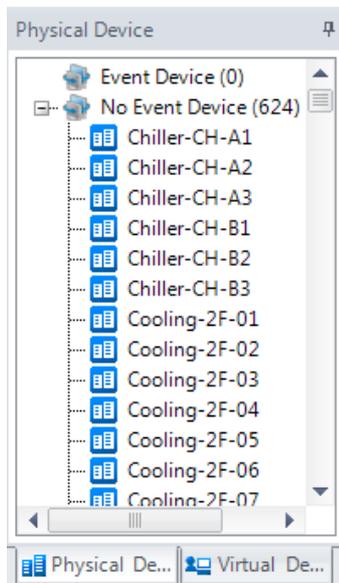


Center: To place the plan centered.



Extend background color: Enable this option will set the same background color with the layout plan.

## Physical Device List



This tab lists all of the physical devices in the project which was designed by the Manager-Configure. Users can press the right mouse button to pop up the floating menu. Select one of the menu items of Classify By menu to change the display sorting style. There are 6 additional items in the pop up menu to help users to observe all of the monitoring devices:

**Classify By:** To classify the physical devices by layout plans where the device component is placed.

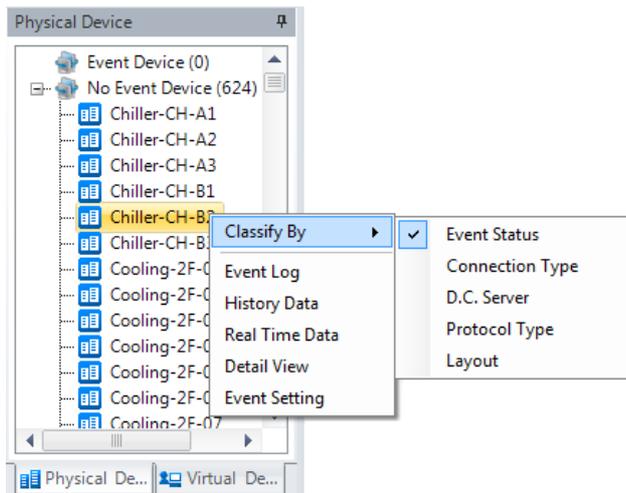
**Event Log:** Open the event log for the selected device.

**History Data:** Open the history data graph for the selected device.

**Real Time Data:** Watch the real-time data graph, values and alarm.

**Detail View:** Observe the device in a detail dialog box.

**Event Setting:** Change the event definition of this device.

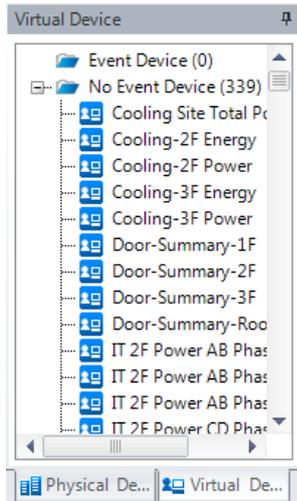


The Classify style lists in the following table.

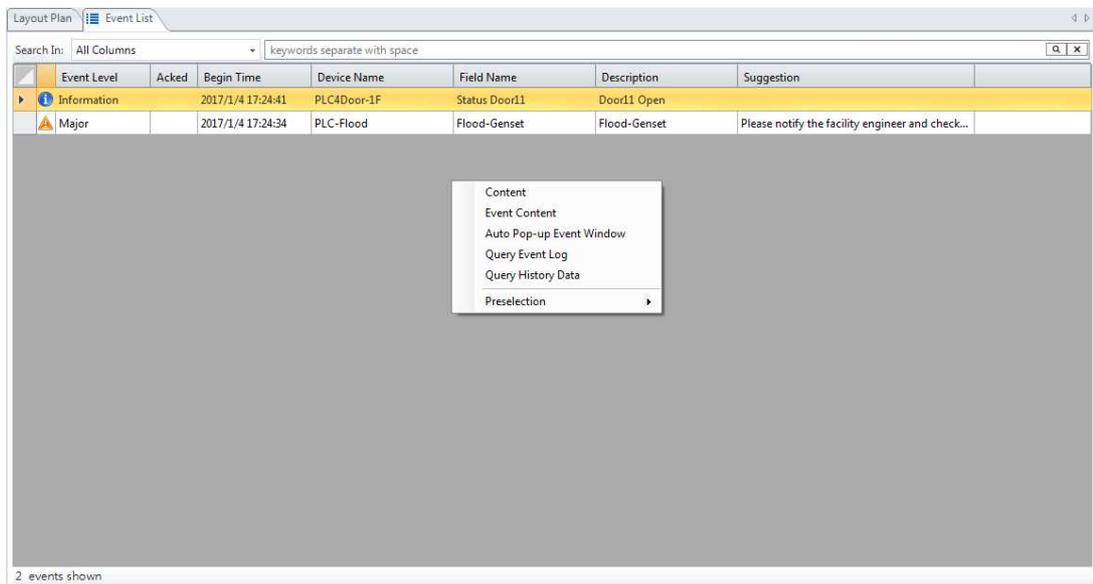
| Classify Style         |   |
|------------------------|---|
| Menu Item              | Description   |
| <b>Event Status</b>    | In this sorting type, the physical devices are divided into 2 categories: Event Device and No Event Device. The Event Device lists the devices which are currently alarming and the No Event Device lists the devices which are running normally.   |
| <b>Connection Type</b> | The physical devices are classified into several categories based on the connection type: They are Serial, SNMP, Door Access and Modbus TCP. The icon is used to indicate the alarm level for a device and the list rule is from serious to normal. |
| <b>D.C. Server</b>     | Classify the physical device by the Data Collection Server. The icon for each device is used to indicate the alarm level and the list rule is from serious to normal.   |
| <b>Protocol Type</b>   | Classify the devices by protocol. The icon for each device is used to indicate the alarm level and the list rule is from serious to normal.   |
| <b>Layout</b>          | Classify the devices by layout plan where the physical device is placed.  |

### Virtual Device List

This tab lists all of the virtual devices in the project which was designed by the Manager-Configure. Double click on the virtual device to open the detail view window or click on the right mouse button to pop up the floating menu to look up the event log, history data, real-time data and detail view.



## Event List



The event list shows the events which are triggered and not recover yet.

When a large number of events occur, the search field can help user to filter the events by the key word. Press the right mouse button to pop up the floating menu:

| Event List                      |   |
|---------------------------------|---|
| Menu Item                       | Description   |
| <b>Content</b>                  | Open the related device and protocol item to understand the thresholds, Users can change the settings or disable the condition judgement. |
| <b>Event Content</b>            | Open the event content window.  |
| <b>Auto Pop-up Event Window</b> | Enable this option to pop up the event content window to notify users.  |
| <b>Query Event Log</b>          | To query the event log based on the event.  |

|                           |   |
|---------------------------|---|
| <b>Query History Data</b> | To query the history data based on the event.   |
| <b>Preselection</b>       | Add or remove the selected event in a temporary memory then select the Query History Data or Query Event Log. |

### 3.5.2 Event Log

InfraSuite Manager records the system, operator and device events in the database, users can look up the event through the Event Log window by time, event type, event level and devices.

Please follow the instructions:

1. Click on the Event Log tab.
2. Assign the period of time.
3. Select the event type, event level, users or devices.

| Type            | Description   |
|-----------------|---|
| <b>All</b>      | <ul style="list-style-type: none"> <li>● Look up all event types.</li> <li>● Continue to select the event level and type.</li> </ul>  |
| <b>System</b>   | <ul style="list-style-type: none"> <li>● Look up the system type event.</li> <li>● Continue to select the event level.</li> </ul>   |
| <b>Operator</b> | <ul style="list-style-type: none"> <li>● Look up the operator type event.</li> <li>● Continue to select the event level and user.</li> </ul>  |
| <b>Device</b>   | <ul style="list-style-type: none"> <li>● Look up the device type event include the physical device and virtual device.</li> <li>● Continue to select the event level and device.</li> </ul> |

4. Select the Event Level.
5. Connect Event Begin and End: There are 2 display types to organize the event logs. One is Sequential type which lists the searched logs sequentially by time. The other one is Combined type, it combines the start and end time in a line for the users to easily identify when the event started and stopped.
6. Press the Submit button to search the event log.

The event log columns are related to the selected event type, please refer to the following table.

| Column \ Type      | All        |         | System | Operator | Device     |         |
|--------------------|------------|---------|--------|----------|------------|---------|
|                    | Sequential | Combine |        |          | Sequential | Combine |
| <b>Index</b>       | V          | V       | V      | V        | V          | V       |
| <b>Event Type</b>  | V          | V       | V      | V        | V          | V       |
| <b>Event Level</b> | V          | V       | V      | V        | V          | V       |
| <b>User</b>        | V          | V       |        | V        |            |         |

|                          |   |   |   |   |   |   |
|--------------------------|---|---|---|---|---|---|
| <b>Device Title</b>      | V | V |   |   | V | V |
| <b>Event Time</b>        | V |   | V | V | V |   |
| <b>Begin Time</b>        |   | V |   |   |   | V |
| <b>End Time</b>          |   | V |   |   |   | V |
| <b>Element Title</b>     | V | V |   |   | V | V |
| <b>Description</b>       | V | V | V | V | V | V |
| <b>Event Begin Value</b> |   | V |   |   |   | V |
| <b>Event End Value</b>   |   | V |   |   |   | V |
| <b>Camera</b>            | V | V |   |   | V | V |
| <b>Remark</b>            | V | V | V | V | V | V |

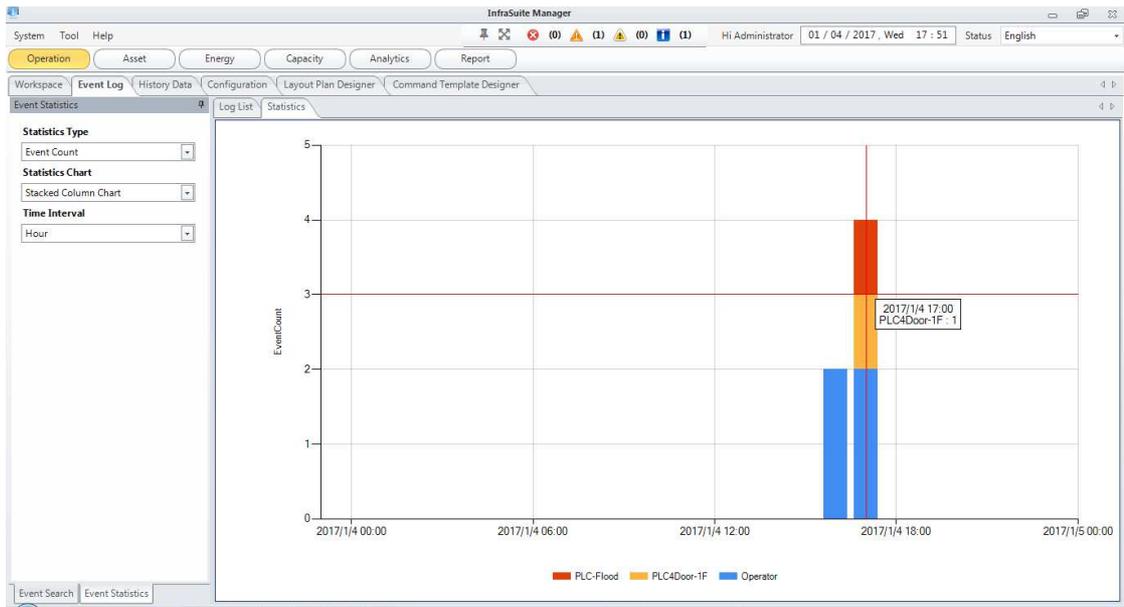
where

**Event Begin Value:** If this event is triggered by the assigned protocol element then InfraSuite Manager records the element value automatically with this event log. If this event log is related to a virtual device then the value is its outline value.

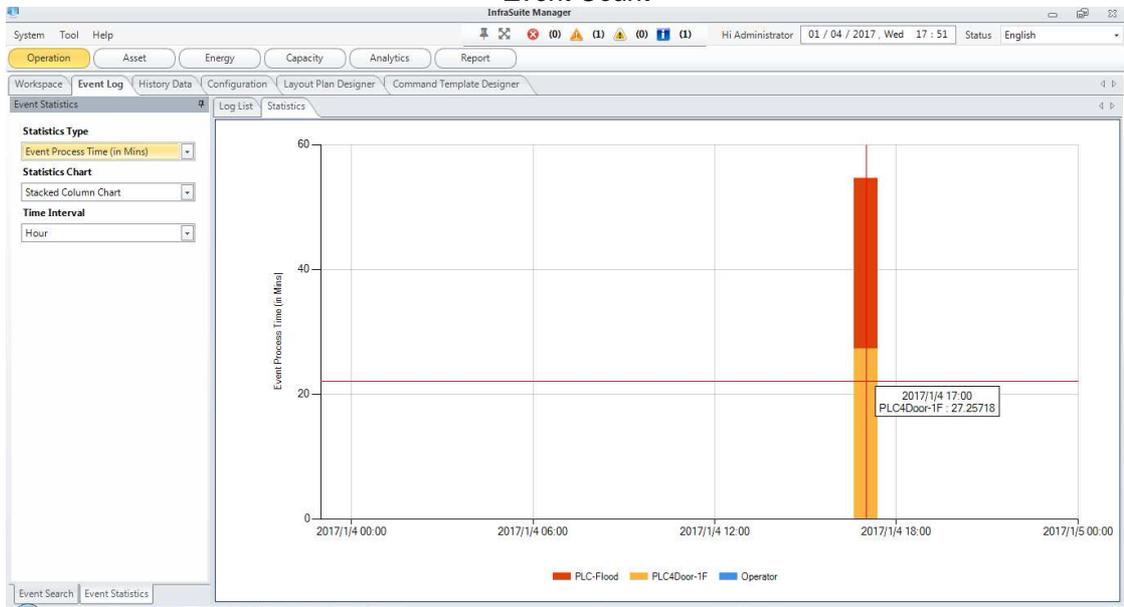
**Event End Value:** InfraSuite Manager records the element value with the event log. If this event log is related to a virtual device then the value is its outline value.

Once the event log is listed then we can continue to use the event log statistics function.

| <b>Statistics Category</b>  | <b>Description</b>  |
|-----------------------------|---|
| <b>Event Times</b>          | <ul style="list-style-type: none"> <li>● The event count for each device in the assigned period of time.</li> <li>● If the period of time is between 2012-01-01 00:00:00 and 2012-01-01 23:59:59, the Data Format is set to Hour then the result will show the event count for each device hourly.</li> </ul>   |
| <b>Average Process Time</b> | <ul style="list-style-type: none"> <li>● The average recovery time of events for each device.</li> <li>● If the period of time is between 2012-01-01 00:00:00 and 2012-01-01 23:59:59, the Data Format is set to Hour then the result will show the average recovery time to each device.</li> <li>● If the event begins on A period (e.g. 08:00) but ends on B period (e.g. 10:00) then this average recovery time is drawn on the A period.</li> <li>● If the event does not recover then the end time will use the current system time.</li> </ul> |



*Event Count*



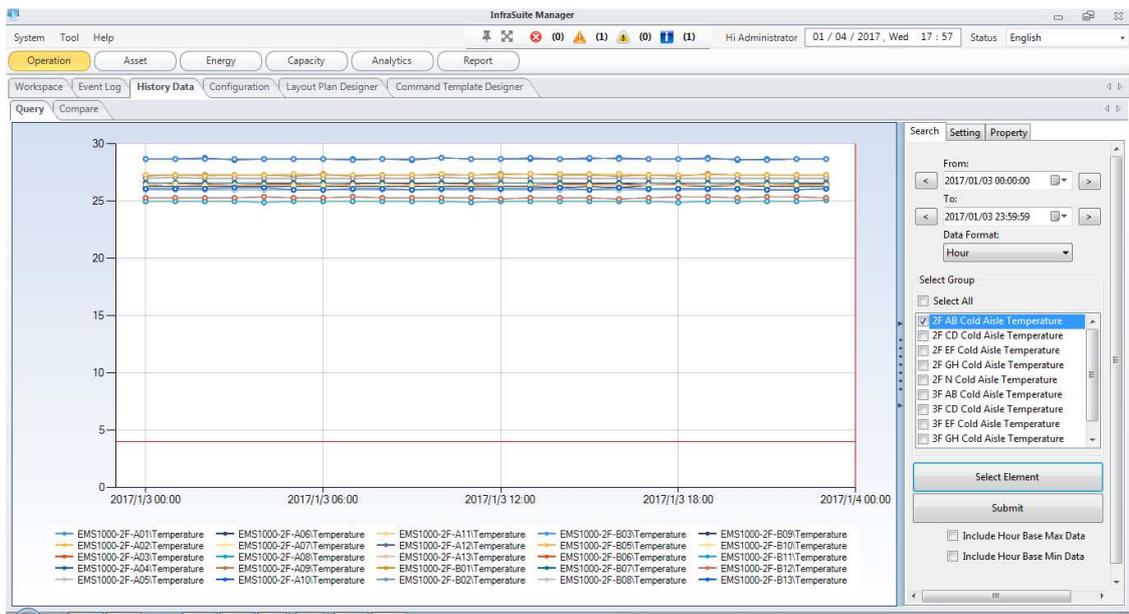
*Event Process Time*

### 3.5.3 History Data

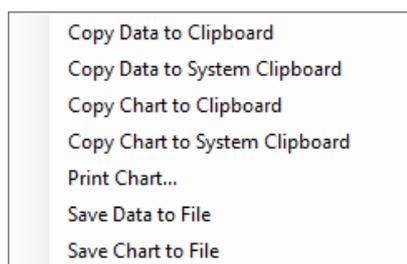
InfraSuite Manager can query the history data from its database. Users can select the Data Format from second to month to observe a trend in a long period of time or to analyze data in a short period of time. Please note that the history data is query from the database and if you select a long period of time with Second Data Format then it will create a huge network packets to transmit the data, to resolve this issue you can select the Hour Data Format to reduce the network traffic and the system provides the maximum and minimum data lines to observe the trend more precisely.

## Query Instructions

1. Select the following menu Tools > History Data > Search to open the history data search window.
2. Assign the period of time for the search.
3. Select the Data Format, there are Second, Minute, Hour, Day and Month.
4. Click on the Select Element to open the dialog box to choose the device elements.
5. Click on the Submit button to start query.



Move your mouse over the graphical area and press on the right mouse button to pop up the floating menu:



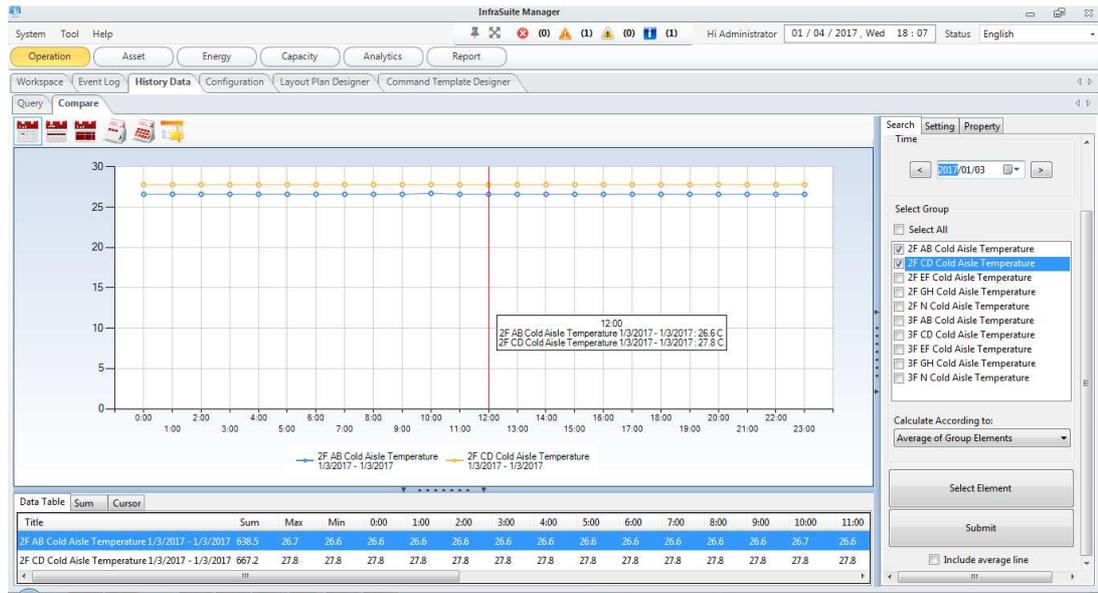
Besides to the history data query, users can grouping different device elements then compare the selected groups by summary, average, maximum and minimum or in different period of time. This function can be used to analyze the datacenter environment temperature and humidity or rack power consumption to improve the datacenter design.

## Compare Instructions

1. Select the following menu Tools > History Data > Compare to open the

history data compare window.

2. Select the time period, it can be day, week, month, quarter, year and user defined time.
3. Select the Compare By and Time parameters.
4. Select the pre-defined groups or click on the Select Element to open the dialog box to choose the device elements.
5. Click on the Submit button to start compare.



### 3.5.4 Configuration

Please refer to the installation and configuration manual.

### 3.5.5 Layout Plan Designer

This tab is enabled according to the license, not for all projects. The layout plan designer allows to add, modify and delete the plans online. Need not to upload the project file and restart the Manager-Gateway service.



The layout plan list on the left side, the left bottom tabs are used to switch the plan list and layout group. The Design and Preview area displays the plan per customer's selection in the plan list. During the design you can save this plan as a Temporary Plan then next time you can open the temporary plan to continue the design. After the design is finished, you can commit the new plan to the project. To show the updated plan you have to refresh your project by click on the layout group selection.

On the right side, the toolbox and properties resides. Toolbox lists the layout components, the Properties lists the selected component parameters.



 Open Running Plan: Open the selected plan selected from the left plan list.

 Save to Running Plan: Commit the current design plan to the project.

 Open Temporary Plan: Open the temporary plan.

 Save to Temporary Plan: Save the current design plan as the temporary plan, the temporary plan does not affect to the current project.

 Remove Temporary Plan: Remove the temporary plan.

The general instructions are:

Open Running Plan → [Modify] → Save to Temporary Plan → [Confirm] → Save to Running



Plan → Remove Temporary Plan

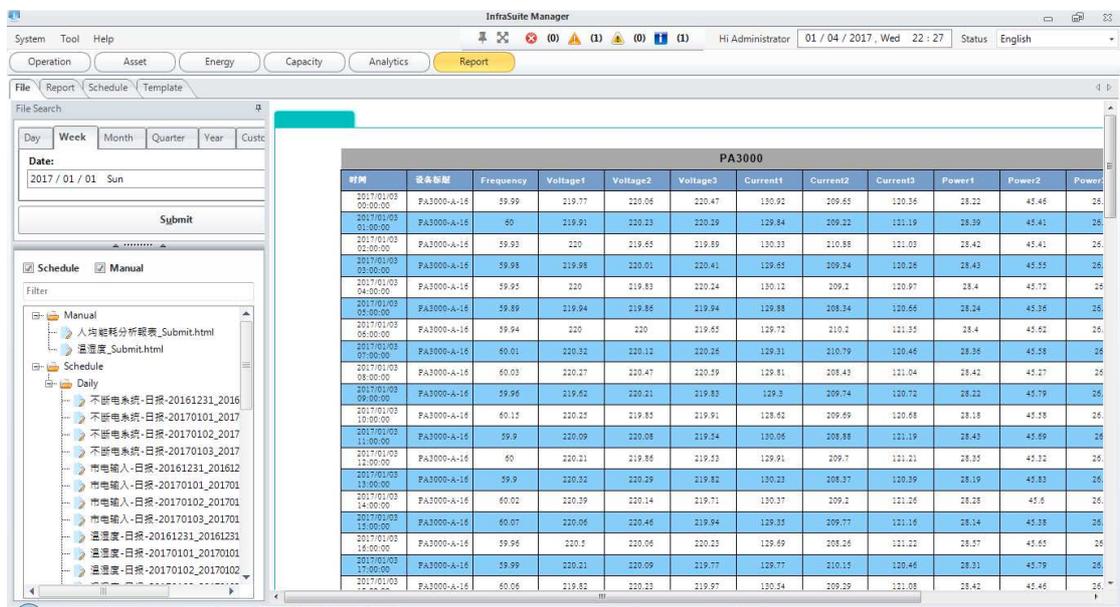
## 3.5.6 Command Template Designer

The command template designed is used to design the command dialog for the Command Dialogue component.

## 3.6 Report Module

### 3.6.1 File

Users can search, preview and download the generated report. From the File Search toolbox to assign the search period of time, the search result is placed in the left bottom list. Click on one of the result list to preview the report in the center area.



| PA3000              |             |           |          |          |          |          |          |          |        |        |        |
|---------------------|-------------|-----------|----------|----------|----------|----------|----------|----------|--------|--------|--------|
| 时间                  | 设备名称        | Frequency | Voltage1 | Voltage2 | Voltage3 | Current1 | Current2 | Current3 | Power1 | Power2 | Power3 |
| 2017/01/03 00:00:00 | PA3000-A-16 | 59.99     | 219.77   | 220.06   | 220.47   | 130.92   | 209.65   | 120.36   | 28.22  | 45.46  | 26.1   |
| 2017/01/03 01:00:00 | PA3000-A-16 | 60        | 219.91   | 220.23   | 220.29   | 129.84   | 209.22   | 121.19   | 28.39  | 45.41  | 26.1   |
| 2017/01/03 02:00:00 | PA3000-A-16 | 59.93     | 220      | 219.65   | 219.89   | 130.33   | 210.88   | 121.03   | 28.42  | 45.41  | 26.1   |
| 2017/01/03 03:00:00 | PA3000-A-16 | 59.98     | 219.98   | 220.01   | 220.41   | 129.65   | 209.34   | 120.26   | 28.43  | 45.35  | 26.1   |
| 2017/01/03 04:00:00 | PA3000-A-16 | 59.95     | 220      | 219.83   | 220.24   | 130.12   | 209.2    | 120.97   | 28.4   | 45.72  | 26.1   |
| 2017/01/03 05:00:00 | PA3000-A-16 | 59.89     | 219.94   | 219.86   | 219.94   | 129.88   | 208.34   | 120.66   | 28.24  | 45.36  | 26.1   |
| 2017/01/03 06:00:00 | PA3000-A-16 | 59.94     | 220      | 220      | 219.65   | 129.72   | 210.2    | 121.35   | 28.4   | 45.62  | 26.1   |
| 2017/01/03 07:00:00 | PA3000-A-16 | 60.01     | 220.32   | 220.12   | 220.26   | 129.31   | 210.79   | 120.46   | 28.36  | 45.58  | 26.1   |
| 2017/01/03 08:00:00 | PA3000-A-16 | 60.03     | 220.27   | 220.47   | 220.59   | 129.81   | 208.43   | 121.04   | 28.42  | 45.27  | 26.1   |
| 2017/01/03 09:00:00 | PA3000-A-16 | 59.96     | 219.62   | 220.21   | 219.83   | 129.3    | 209.74   | 120.72   | 28.22  | 45.79  | 26.1   |
| 2017/01/03 10:00:00 | PA3000-A-16 | 60.11     | 220.25   | 219.85   | 219.91   | 128.62   | 209.69   | 120.68   | 28.18  | 45.58  | 26.1   |
| 2017/01/03 11:00:00 | PA3000-A-16 | 59.9      | 220.09   | 220.08   | 219.24   | 130.06   | 208.88   | 121.19   | 28.43  | 45.69  | 26.1   |
| 2017/01/03 12:00:00 | PA3000-A-16 | 60        | 220.21   | 219.86   | 219.23   | 129.91   | 209.7    | 121.21   | 28.35  | 45.32  | 26.1   |
| 2017/01/03 13:00:00 | PA3000-A-16 | 59.9      | 220.32   | 220.29   | 219.82   | 130.22   | 208.37   | 120.39   | 28.19  | 45.83  | 26.1   |
| 2017/01/03 14:00:00 | PA3000-A-16 | 60.02     | 220.39   | 220.14   | 219.71   | 130.37   | 209.2    | 121.26   | 28.28  | 45.6   | 26.1   |
| 2017/01/03 15:00:00 | PA3000-A-16 | 60.07     | 220.06   | 220.46   | 219.94   | 129.35   | 209.77   | 121.16   | 28.14  | 45.38  | 26.1   |
| 2017/01/03 16:00:00 | PA3000-A-16 | 59.96     | 220.1    | 220.06   | 220.23   | 129.69   | 208.26   | 121.22   | 28.57  | 45.65  | 26.1   |
| 2017/01/03 17:00:00 | PA3000-A-16 | 59.99     | 220.21   | 220.09   | 219.77   | 128.77   | 210.15   | 120.46   | 28.21  | 45.79  | 26.1   |
| 2017/01/03 18:00:00 | PA3000-A-16 | 60.06     | 219.82   | 220.22   | 219.97   | 130.54   | 209.29   | 121.08   | 28.42  | 45.46  | 26.1   |

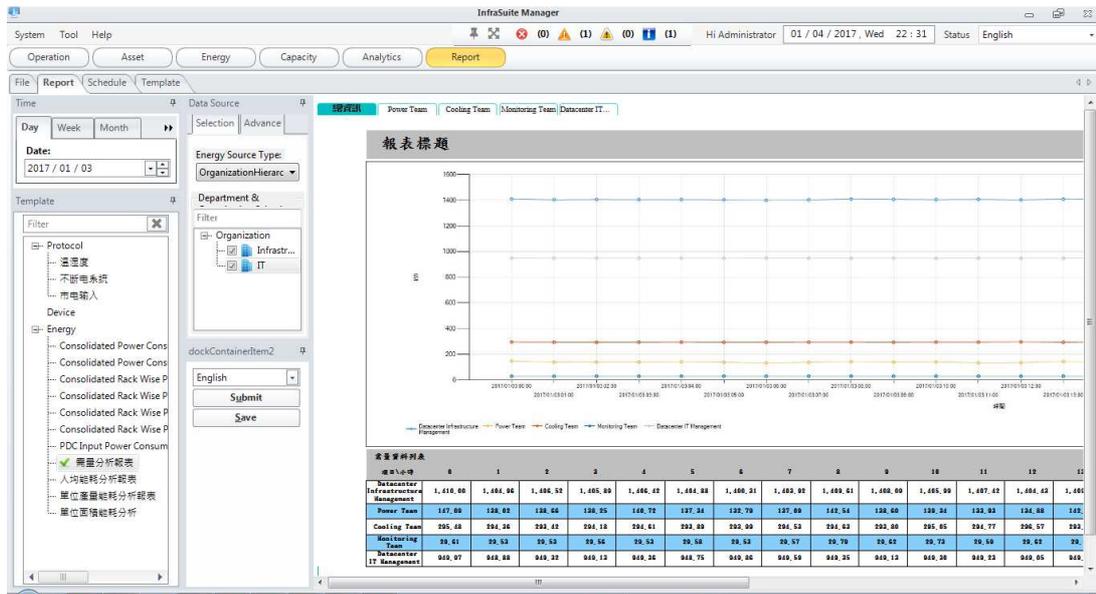
Double-click on the selected result list to download and open the report, click on the right mouse button to pop up the floating menu, select Download menu item to download the report or Remove to delete the report.

### 3.6.2 Report

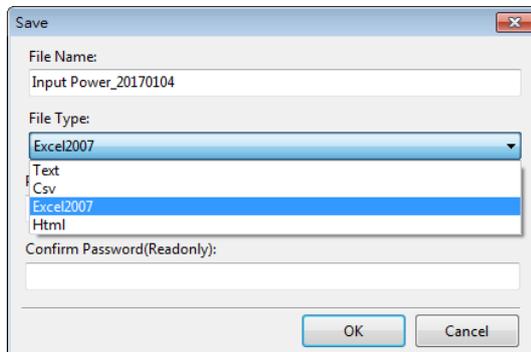
First please determine the report period from the left top side then pick up a report template from the Template toolbox (The report template can be defined by yourself). The report template is divided into 3 categories: Protocol, Device and Energy. After the template is selected, the data source will be changed accordingly.

Press the submit button to start to generate the report manually in the HTML

format. This report will show in the center area after the system finish generating it.

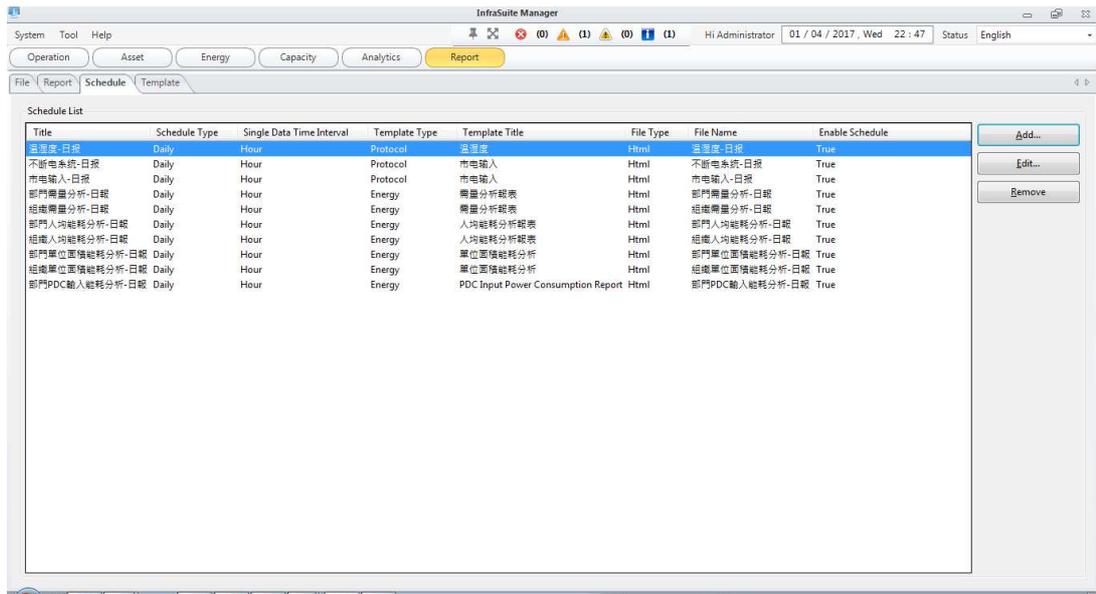


If you want to generate in the other format, please press the Save button to pop up the following dialog box to choose one of the following format: Text, CSV, Excel and HTML. If the Excel format is chose you can continue to assign a password to let this report be protected as read only.

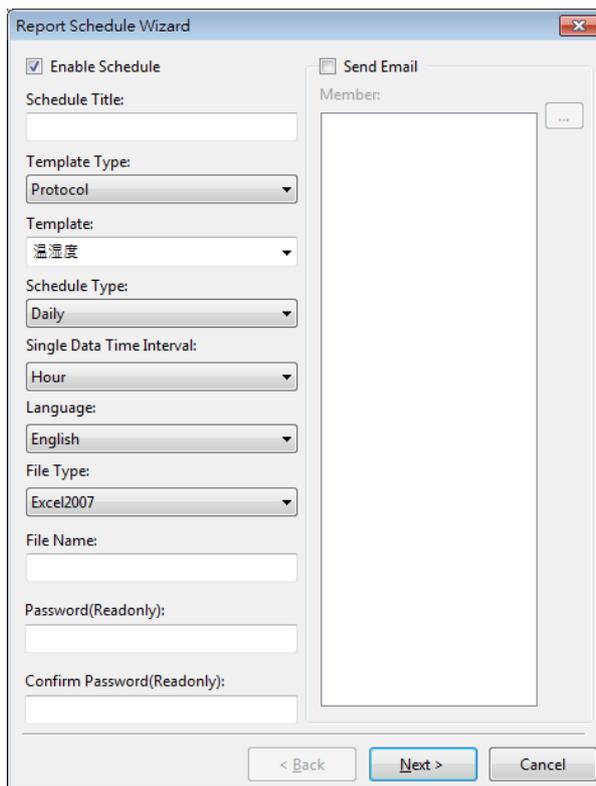


### 3.6.3 Schedule

In this tab, you can plan a schedule to generate the report from a reort template.



Press the Add button to pop up the following Report Schedule Wizard dialog box:



The parameters are:

- ◆ Template Type: Protocol, Device or Energy.
- ◆ Template: List the available report template based on the selected template type.
- ◆ Schedule Type: Daily, weekly, monthly, quarterly and annually.
- ◆ Single Data Time Interval: The time period of time to calculate for one line.

- ◆ File Type: The generated file format: Support Text, Csv, Excel and Html.
- ◆ File Name: The file name for the generated report.
- ◆ Send e-mail: Send the generated report to the assigned mail account.

### 3.6.4 Template

Users can create a customerized report template in this tab. The created template will be listed in the schedule and manual report function.

Here list the Template functions:

| Function                     |                  | Icon  | Description   |  |
|------------------------------|------------------|---|---|--|
| File                         | Picture          |    | Load the picture.   |  |
|                              | Save             |    | Save the content to .xls file format (Support Office2007 and Office2010).           |  |
| Table                        | Size             |    | Modify the cell size.   |  |
|                              | Insert           |   | Column  | Insert a new column.                                   |
|                              |                  |   | Row   | Insert a new row.                                      |
|                              | Delete           |  | Colmun  | Delete the current column.                             |
| Row                          |                  |   | Delete the current row.   |  |
| Font                         | Name             |   | Select the font name.   |  |
|                              | Size             |   | Select the font size.   |  |
|                              | Increase         |   |  | Increase the font size(The maximum font sizeis 72 pt). |
|                              | Decrease         |   |  | Reduce the font size(The minimum font sizeis 1).       |
|                              | Bold             |   |  | Change the text style to bold.                         |
|                              | Italic           |   |  | Change the text style to italic.                       |
|                              | Background Color |   |  | Change the cell background color.                      |
|                              | Foreground Color |   |  | Change the text color.                                 |
| Cell Style<br>-<br>Alignment | Vertical         | Top   |  | Set the vertical text alignment to top.                |
|                              |                  | Center  |  | Set the vertical text alignment to center.             |

|                           |            |        |   |  |
|---------------------------|------------|--------|---|--|
|                           |            | Bottom |    | Set the vertical text alignment to bottom.   |
|                           | Horizontal | Left   |    | Set the horizontal text alignment to left.   |
|                           |            | Center |    | Set the horizontal text alignment to center. |
|                           |            | Right  |    | Set the horizontal text alignment to right.  |
| Cell Style<br>-<br>Border | Left       |        |    | Draw the left border.                        |
|                           | Right      |        |    | Draw the right border.                       |
|                           | Top        |        |    | Draw the top border.                         |
|                           | Bottom     |        |    | Draw the bottom border.                      |
|                           | None       |        |    | Don't draw the border.                       |
|                           | Inner      |        |  | Draw the inner borders.                      |
|                           | Outer      |        |  | Draw the outer border.                       |
|                           | Full       |        |  | Draw all of the border.                      |
| Cell Style<br>- Merge     | Merge      |        | None  | Merge the selected cells.                    |
|                           | Restore    |        | None  | Restore the merged cells.                    |
| Clipboard                 | Clipboard  |        |  | Open the clipboard window.                   |

| Report Edit Quick Shortcut Buttons |               |
|------------------------------------|---------------|
| Button                             | Description   |
| Crtl+S                             | Save Report   |
| Crtl+C                             | Copy          |
| Crtl+V                             | Paste         |
| Delete                             | Delete        |
| Crtl+M                             | Merge         |
| Crtl+R                             | Restore merge |
| Crtl+N,C                           | New Column    |
| Crtl+D,C                           | Delete Colmun |

|          |            |
|----------|------------|
| Crtl+N,R | New Row    |
| Crtl+D,R | Delete Row |

## 3.7 Camera

Please install the IP camera which supports the RTSP or motion JPEG streaming for InfraSuite Manager to integrate the video in the system. Users can watch the live image in the real world to observe the device situation visually.

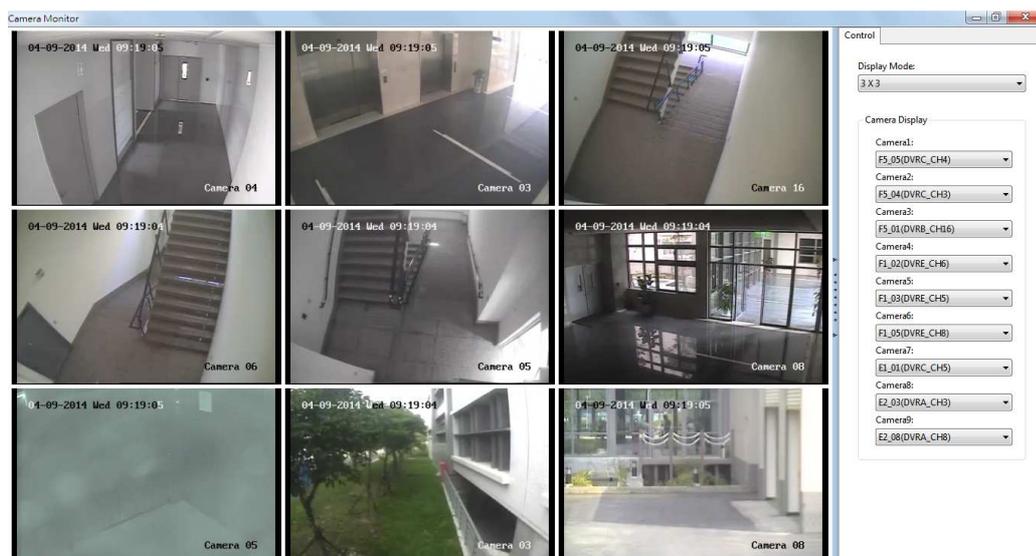
The live video is one of the layout components which can be embedded in the layout plan, the device manager can just switch to the layout plan to watch the live video with the device status components.

To adapt the most public network environment, the camera monitoring can receive the camera video stream by direct or indirect connection. This feature is used for the users to watch the video image in the local network or outside from the LAN, another benefit is to keep flexibility for the network traffic and image quality.

### 3.7.1 Camera Monitoring

Select the Tools > Camera menu to open the Camera Monitor window.

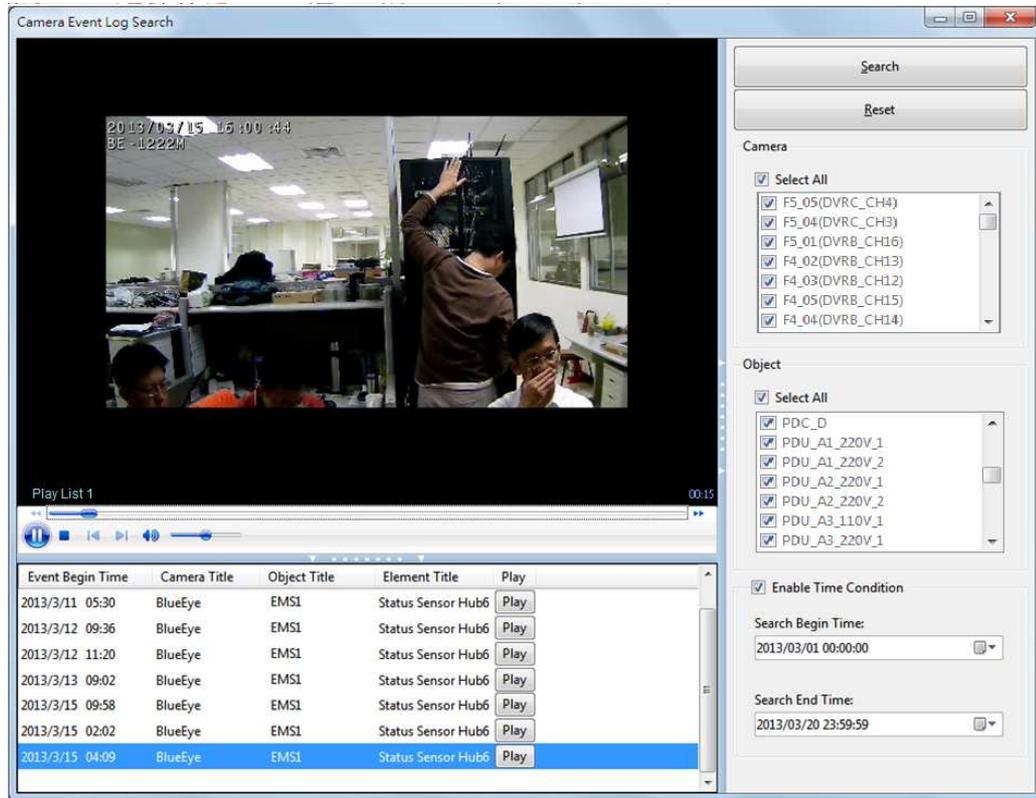
The default connection is indirect mode, if you want to switch to the direct mode then please refer to the following picture to select the Link to Camera menu item. InfraSuite Manager will connect to the IP camera directly.



### 3.7.2 Camera Log

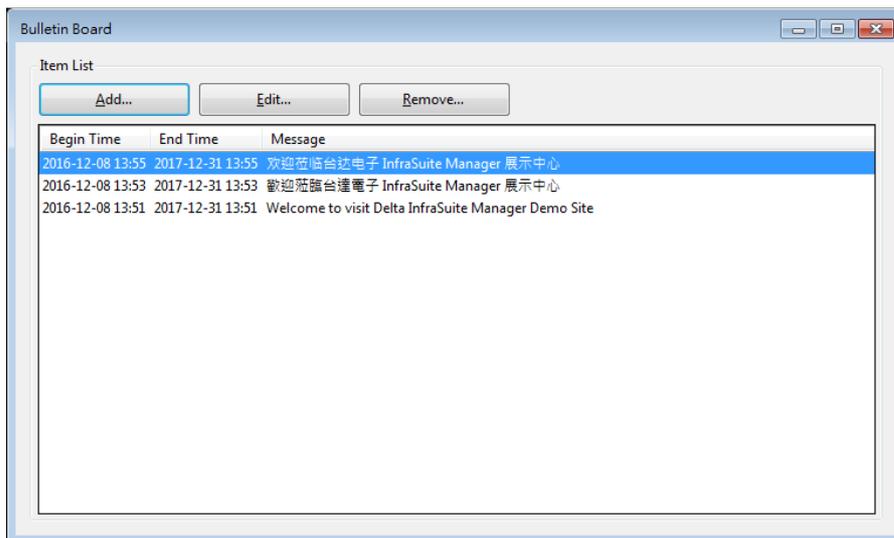
The camera can be triggered by any device event to record the video file and each event can trigger more than one cameras. The project designer can

configure the event and camera by the Manager-Configure. Please select the Tools > Camera Event Log to open the camera event log window, look up the recorded video files, select one of the listed items and click on the Play button to play the video file.



### 3.8 Bulletin Board

the layout plan designed a marquee component then the message can be add, edit and delete from the bulletin board.



### 3.9 Device List

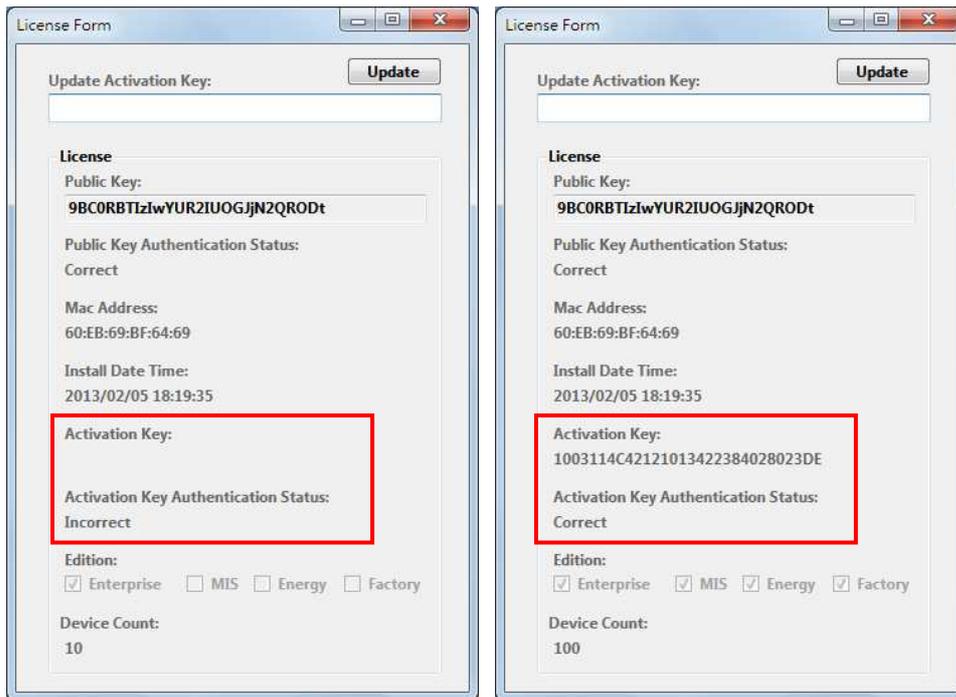
List all of the physical devices, users can sort by the Event Level, Device Name, Value or Alarm.

| Event Level | Device             | Value   | Alarm                        |
|-------------|--------------------|---|------------------------------|
| Major       | PLC-Flood          | Flood-CH-A1 : 0, Flood-CH-A2 : 0, Flood-CH-A3 : 0, Flood-CH-B1 : 0, Flood-CH-B2 : 0   | Flood: Genset : Flood-Genset |
| Information | PLC4Door-1F        | Status Door1 : 0, Status Door2 : 0, Status Door3 : 0, Status Door4 : 0, Status Door5 : 0                                    | Status Door11 : Door11 Open  |
|             | Chiller-CH-A1      | Chiller Running : 1, Chiller Capacity : 496; Evap Leaving Water Temp : 10; Evap Entering Water Temp : 16; Cond Entering ... |                              |
|             | Chiller-CH-A2      | Chiller Running : 1; Chiller Capacity : 492; Evap Leaving Water Temp : 10; Evap Entering Water Temp : 16; Cond Entering ... |                              |
|             | Chiller-CH-A3      | Chiller Running : 0; Chiller Capacity : 0; Evap Leaving Water Temp : 0; Evap Entering Water Temp : 0; Cond Entering Wat...  |                              |
|             | Chiller-CH-B1      | Chiller Running : 1; Chiller Capacity : 493; Evap Leaving Water Temp : 10; Evap Entering Water Temp : 16; Cond Entering ... |                              |
|             | Chiller-CH-B2      | Chiller Running : 1; Chiller Capacity : 510; Evap Leaving Water Temp : 10; Evap Entering Water Temp : 16; Cond Entering ... |                              |
|             | Chiller-CH-B3      | Chiller Running : 0; Chiller Capacity : 0; Evap Leaving Water Temp : 0; Evap Entering Water Temp : 0; Cond Entering Wat...  |                              |
|             | Cooling-2F-01      | Supply Air Temperature : 25; Supply Air Humidity : 64.8; Return Air Temperature : 30.5; Return Air Humidity : 45.7          |                              |
|             | Cooling-2F-02      | Supply Air Temperature : 25; Supply Air Humidity : 64.8; Return Air Temperature : 30.5; Return Air Humidity : 45.7          |                              |
|             | Cooling-2F-03      | Supply Air Temperature : 25; Supply Air Humidity : 64.8; Return Air Temperature : 30.5; Return Air Humidity : 45.7          |                              |
|             | Cooling-2F-04      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-2F-05      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-2F-06      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-2F-07      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-2F-08      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-01      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-02      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-03      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-04      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-05      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-06      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-07      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | Cooling-3F-08      | Supply Air Temperature : 24.4; Supply Air Humidity : 64.5; Return Air Temperature : 30.2; Return Air Humidity : 45.8        |                              |
|             | EMS1000-1F-CHILLER | Temperature : 26.7; Humidity : 55   |                              |
|             | EMS1000-1F-GMSB-A  | Temperature : 26.4; Humidity : 61   |                              |
|             | EMS1000-1F-GMSB-B  | Temperature : 25.4; Humidity : 54   |                              |
|             | EMS1000-1F-GSA     | Temperature : 26.3; Humidity : 49   |                              |
|             | EMS1000-1F-GSB     | Temperature : 26.4; Humidity : 60   |                              |

### 3.10 License

You need to buy a license before running InfraSuite Manager, if the license is not available then it is only a demo version. The demo version limits the monitoring device number up to 10 and can only work in 30 days.

Please select the Help > License menu to open the license dialog box, check the License Key Authentication Status for the license status.



Before the software is licensed, the Activation Key is empty or the License Key Authentication Status is incorrect. Please follow the instructions to activate InfraSuite Manager:

1. The software generates a public key automatically in the Public Key text box.
2. If you bought InfraSuite Manager with an industrial computer then there is a serial number(S/N) on the front panel of the EMS3000 computer.
3. If you only bought the software then you don't need to provide the serial number.
4. Send this public key and/or the serial number(S/N) to the Delta contact window to request for an Activation Key.
5. Fill in the Activation Key in the Update Activation Key text box then press the Update button. The Activation Key Authentication Status should show "Correct" status. If it shows "Incorrect", please contact Delta again.

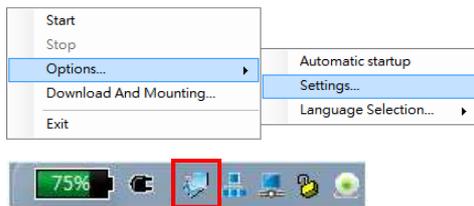
Please note that if the monitoring physical device number is greater than the license authorized, the software will stop monitoring and wait for the user to update the Activation Key or remove some of the physical devices.

## 4. Presentation Layer (Manager-ExtraMonitor)

The presentation layer (Manager-ExtraMonitor) is another user interface of InfraSuite Manager. Users can play the slideshow and display message by Manager-ExtraMonitor.

### 4.1 Program Startup

Before using the Extra Monitor, you have to install the Manager-ExtraMonitor application in a Windows computer. There is an Extra Monitor icon in the system tray as the following screenshot:

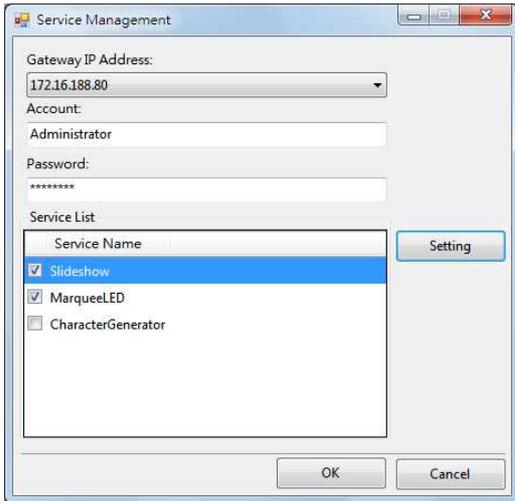


The function is described in the following table:

| Function                |                    | Description   |
|-------------------------|--------------------|---|
| Start                   |                    | Start the Extran Monitor functions. If we only enable the Slideshowfunction then only the slideshow function will be performed on the screen. |
| Stop                    |                    | Stop the Extra Monitor functions.   |
| Options                 | Automatic startup  | If this option is enabled then the ExtraMonitor will be started automatically next time when the OS startup.                                  |
|                         | Settings           | To open the Service Management dialog box to configure the Extra Monitor, please refer to the following table.                                |
|                         | Language Selection | To select one of English, Traditional Chinese and Simplified Chinese languages.   |
| Download And Monitoring |                    | Download the settings which the project designer has designed for the Extra Monitor.  |
| Exit                    |                    | Exit from the system tray.  |

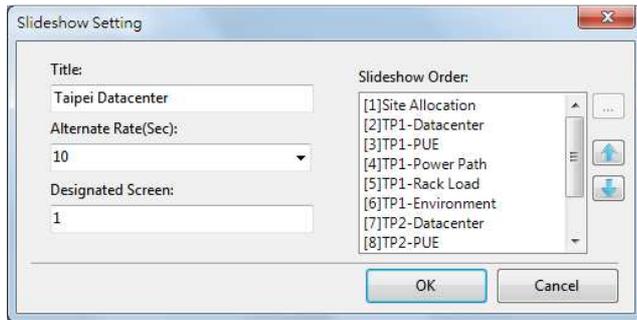
The following table describes the Servie Management dialog box.

| Function           |            | Description  |
|--------------------|------------|--|
| Gateway IP Address |            | The Gateway IP address to connect.                 |
| Account            |            | The account to login to Manager-Gateway remotely.  |
| Password           |            | The password to login to Manager-Gateway remotely. |
| Service List       | Slideshow  | To configure the slideshow function.               |
|                    | MarqueeLED | To configure the marquee function.                 |



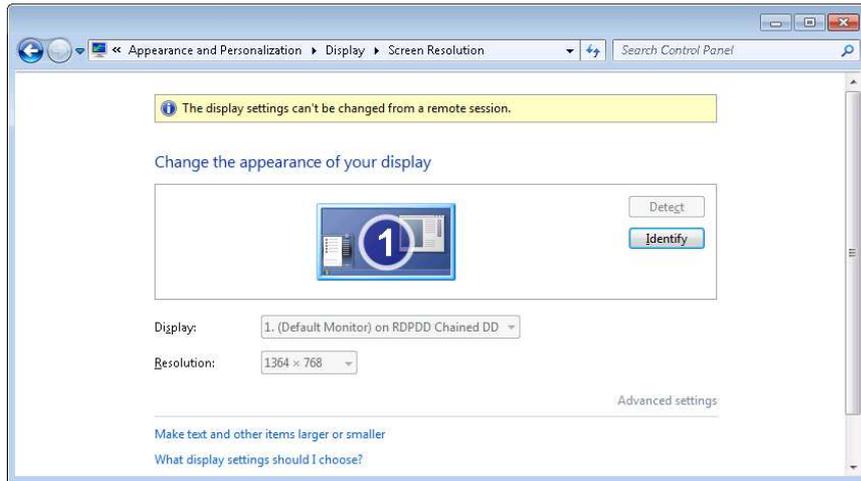
### 4.1.1 Slideshow

Press the Edit button from the Slideshow Setting List to open the following dialog box:



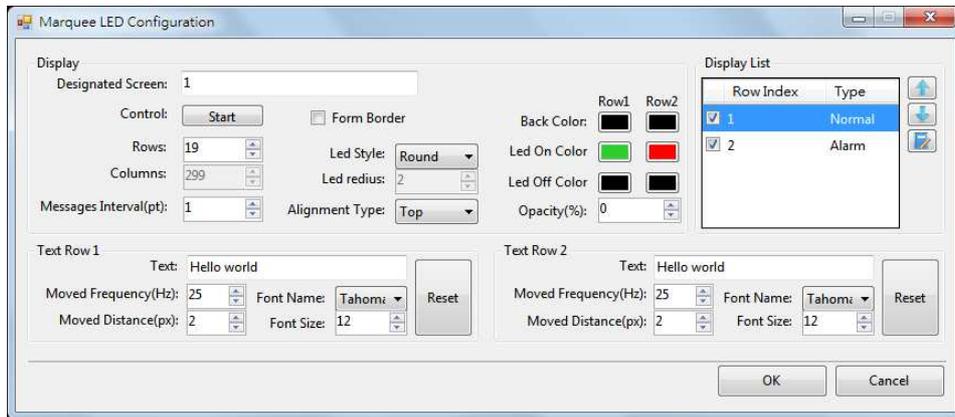
The configuration parameters are described in the following table:

| Item              | Description  |
|-------------------|--|
| Title             | The title name of this slideshow.  |
| Alternate Rate    | Time interval to change the layout plan.   |
| Designated Screen | The monitor screen number, you can observe the screen number in the following picture. |
| Slideshow Order   | List the layout plans which we want to play on the designated screen.                  |
| Up                | Move the selected layout plan forward.   |
| Down              | Move the selected layout plan backward.  |



### 4.1.2 Marquee

The marquee works in an independent client window to display the alarm and/or normal messages.

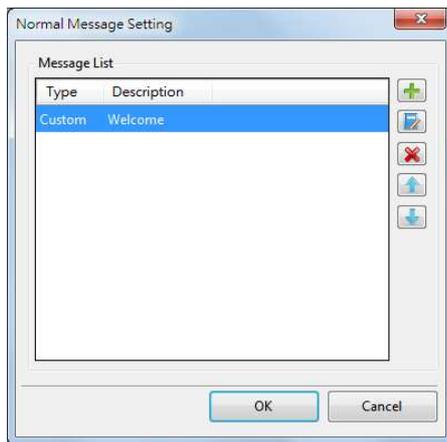


The followings are the configuration parameters description:

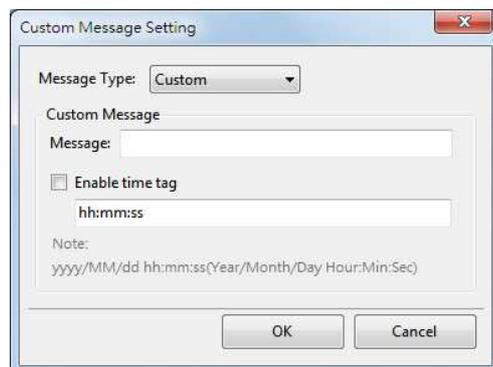
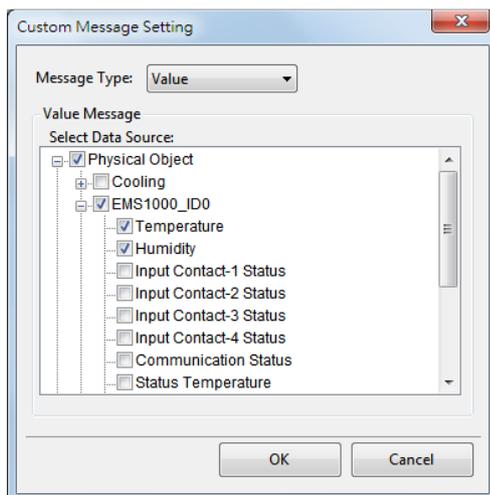
| Item                  | Description   |
|-----------------------|---|
| Designated Screen     | Display the marquee on the assigned monitor screen.                               |
| Simulate              | Simulate the marquee display to check the font style and size during design time. |
| Height                | The LED number in height.   |
| Width                 | The LED number in width.  |
| Messages Interval(pt) | To separate different messages by the assigned LED distance.                      |
| Show Border           | Display the marquee border.   |
| LED Style             | There are round and square types.   |
| LED Radius            | The LED radius in pixel.  |
| Opacity               | The transparent of marquee window, the higher value the more transparent.         |
| Display List          | List  |
|                       | There are Normal and Alarm messages in the different                              |

|           |                     |   |
|-----------|---------------------|---|
|           |                     | lines, use the Up and Down to switch the line position. |
| Test Text | Text                | The simulate text string in the marquee.                |
|           | Moving Freq.(Hz)    | Moving frequency of the text string.                    |
|           | Moving Distance(Pt) | Moving LED distance per time.                           |

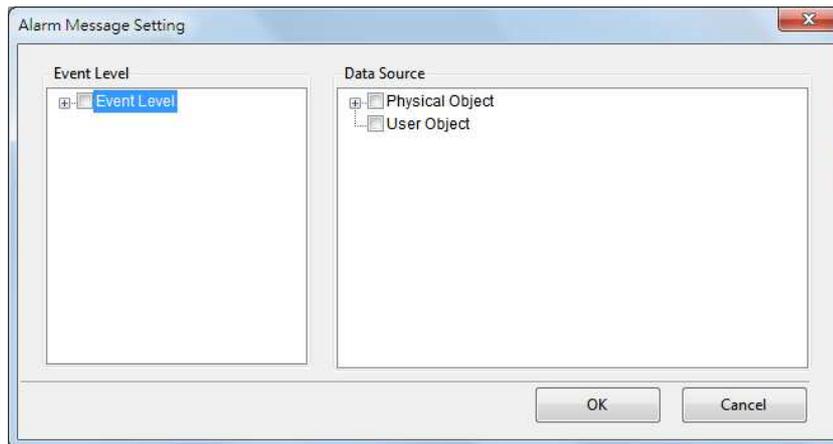
There are alarm and normal messages in the Display List. Double click on the Normal line to open the following Normal Message Setting dialog box.



There are Add, Edit and Remove buttons to maintain the normal messages: Press the Add button to setup the normal messages, there are Value and Custom types. The Value type is used to report the device protocol element values which we care periodically, the Custom type is used to show the assigned text message. Please refer to the following screenshots for more detail.



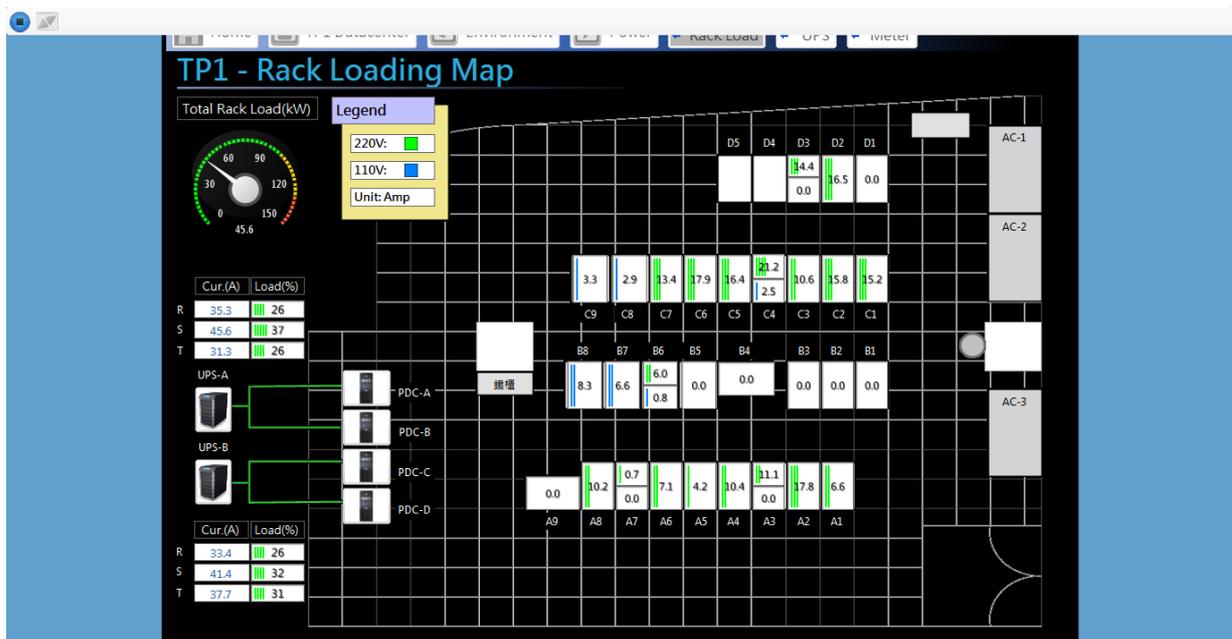
Double click on the Alarm line in the Display List to open the following Alarm Message Setting dialog box.



Please select the event levels and devices to report the alarm messages in the marquee once the event triggers.

## 4.2 Slideshow

Please enable the Slideshow service in the Service Management dialog box then select the Start menu item from the floating menu to start the slideshow.



Move your mouse to the left top corner on the screen, there will show a banner with 2 buttons to operate the slideshow window. One is Play and Stop, the other one is Full Screen and Resize.

## 4.3 Marquee

Please enable the MarqueeLED service in the Service Management dialog box then select the Start menu item to start the marquee.



01:52:51 welcome

Move your mouse to the left top corner on the screen to show a banner with buttons:

Play: To play the marquee.

Stop: To stop the marquee.

Configure: To configure the color, size, ... of the marquee.