LifeSafetyPower®

Advanced Analytics
DETECT | REPORT | ASSESS | RESPOND

Overview

The MSM-Enterprise software package allows the user to manage, control, and analyze 500 or more* LifeSafety Power networked power systems across multiple locations through one user interface. A PC-driven platform using a robust software database, MSM-Enterprise lets users gain real-time insights into critical information and data related to their networked power solutions, allowing proactive performance assessment through managed power services. Users can extract comprehensive information, produce charts, graphs and other critical data concerning the integrity of power across connected access control devices. NEW Multi-Client features allow system grouping and permissions-based access for installations covering more than one location or covering multiple clients. The MSM-Enterprise database manager runs as a background Windows service, allowing access to data through a web browser interface.

Software Features

- **Centralized Dashboard**
  - *All connected systems on one screen*
  - *Current Status of Each System*
  - *Hyperlink to System Interface*
  - *Analyze button to view system data*

- **Critical Event Summary**
  - *All recent critical faults and alerts on one screen*
  - *Link to jump to full data at time of event*

- **Email Alerts**
  - *Email on new device entry or network disconnect*

- **Cybersecure**
  - *Certificate based login*
  - *Hashed salted password protection for web client.*
  - *Authenticated, encrypted communication between MSM and NetLinks*
  - *Optional Secure Certificate-based communication to connected devices*

- ◆ **New Multi-Client Feature**
  - *Allow system grouping & permission controls*
  - *Cloud Notification and download of new firmware*
  - *One click batch firmware update of all connected systems*
  - *View and print pre-defined data charts*

Analytics Features

- **Formatted Data View**
  - *Color coded status*
  - *Data Comparison Charting*
  - *Clearly formatted raw data*

- **Snapshot View**
  - *Single-screen dashboard view of all data at a single point in time*
  - *Step through historical data*

- **System Statistics**
  - *View statistical data of the overall system and individual outputs*
  - *Average, Minimum, and Maximum values of the specified time period*

- **Analysis**
  - *View and print pre-defined data charts*

Ordering

Ordering	Description
MSM25	25 System License Block for MSM-Enterprise

(Combine license blocks to add systems in increments of 25)

Free demo available (4 system max). See page 6 for download instructions.

Windows recommended minimum system requirements*

CPU	Intel CORE i5-3210M or above
Memory	8GB
Screen Resolution	1366 x 768
Drive Space	10GB (SSD Recommended)

* Note - MSM Enterprise will connect to a theoretically unlimited number of networked LSP systems, however, as the number of systems increases, the speed of MSM Enterprise reduces. The speed decrease is dependent on the speed of the server on which MSM Enterprise is installed. LifeSafety Power has tested MSM Enterprise with more than 500 connected systems with acceptable results.

Multi-Client System Grouping & Permission Controls

New MSM Enterprise Multi-Client controls are ideal for end users with multiple locations as well as Integrators monitoring multiple clients. Systems can be grouped by location, client, or other designation and users are given permission to one or more groups, restricting access to the other groups.

Client 1

Client 2

Client 3

Admin
Access to all clients

User 1
Access to client 1 only

User 2
Access to clients 2 and 3 only
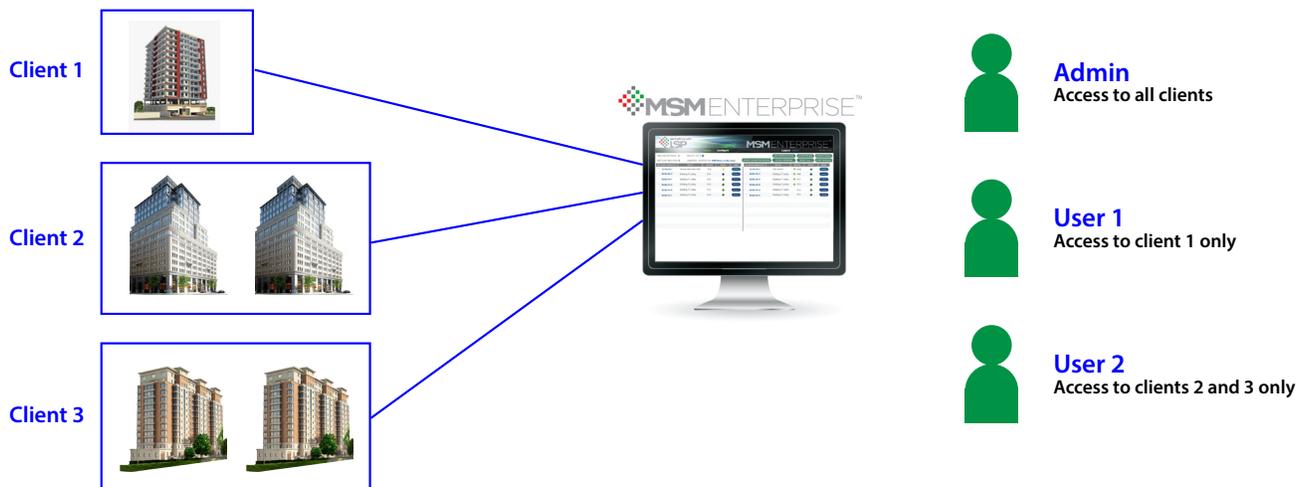
Multiple Data Screens For Event Analysis

🟥 **Enterprise view - all sites**

🟩 **Site view**

🟩 **Site statistics**

⬜ **Critical events**

⬜ **Event analytics**

⬜ **Event log**

Extensive Data Charting and Analysis Features
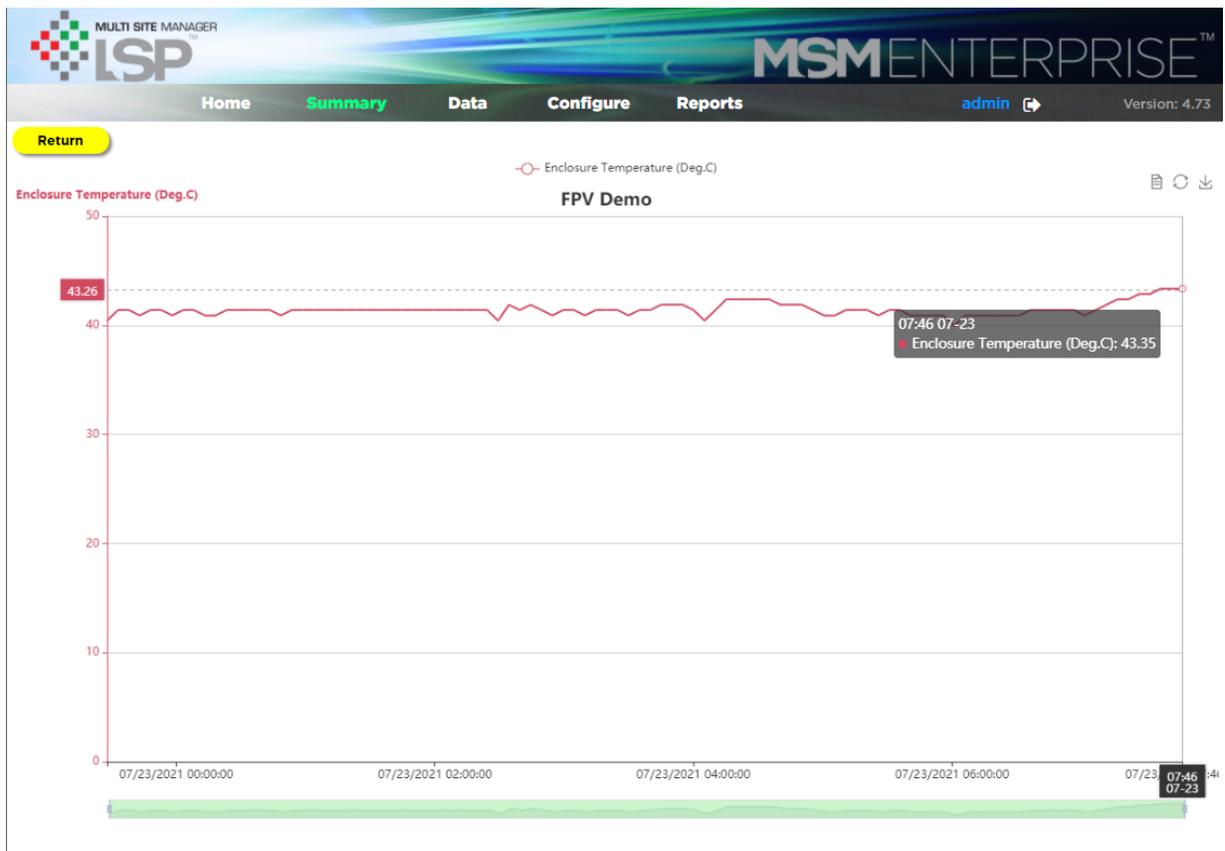
Rapid Infrastructure Troubleshooting through Event Analytics

The dashboard, charts, and formatted data view provided by the MSM-Enterprise allow a user to more effectively troubleshoot and determine the root cause of failure in a managed power system from a remote location without dispatching a truck. Below are some examples of using the advanced analytics capabilities of MSM-Enterprise in real-world applications.

LOCKS

Reporting Compromised Locks

Problem: Although the lock is still operational, a failing lock will begin to exhibit a change in operating current over time with no physical indication. Complete failure could occur at any time, leaving the door unsecured.

Identifying the issue through the MSM-Enterprise:

The Summary page of the power supply (Figure 1) shows the fault in question, which is indicated as "M8-1-1 Current Exceeds Upper Limit" as well as system faults on the two FPO power supplies.

Clicking the timestamp link in the right column brings us to the Dashboard view (Figure 2), showing the point in time where the fault occurred. The expected fault conditions are shown as well as the voltages, currents, and other parameters at that point in time. The current of the M8-1 output 1 is reading high in this case (0.28A while the expected current is 0.15A maximum). The voltage of this output is normal, as well as all other parameters shown.

This indicates that the lock is failing internally. The extra current draw will now begin to cause excessive heat in the lock, speeding the impending failure.

By going to the Analysis tab and looking at the chart of output current on M8-1 output 1 (Figure 3), we can see that the current almost doubled on 2/20/2018. This again indicates an impending lock failure.

At this point a site visit would need to be scheduled to investigate the lock's condition. Knowing the likely failure, the correct replacement lock can be brought to the site for a single-visit resolution - before the end user even knew there was a problem.

Figure 1
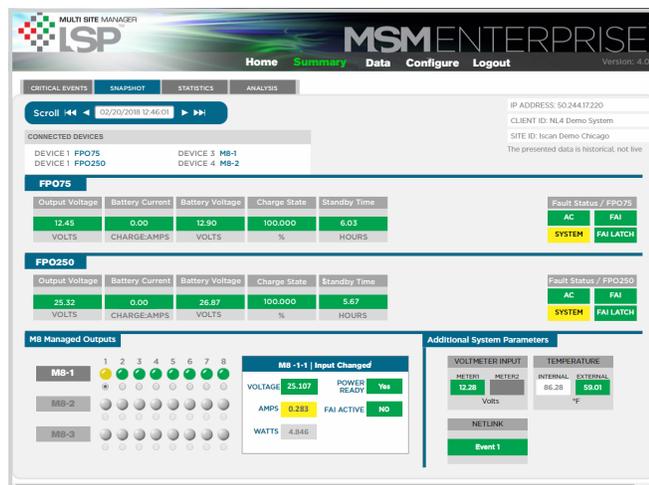
Figure 2

Figure 3

POWER SYSTEM

Troubleshooting Intermittent System Faults

Problem: The power supply is indicating an intermittent system fault that is difficult to observe on-site.

Investigating with the MSM-Enterprise:

The Summary page of the power supply (Figure 4) shows the System Fault on the two FPO power supplies appearing multiple times.

Clicking one of the timestamp links in the right column brings us to the Dashboard view (Figure 5), showing the point in time where the fault occurred. Again, the expected fault conditions are shown as well as the voltages, currents, and other parameters at that point in time. Notice that the battery voltage of the FPO250 is at 0V.

By going to the Analysis tab and looking at the chart of FP1 Battery Voltage (Figure 6), we can see that the voltage is going from a normal voltage around 13.8V to 0V randomly. This would indicate a connection issue between the battery and power supply. A site visit can be scheduled to verify the battery connections and replace the battery if needed.

Figure 4

Figure 5

Figure 6

BATTERIES
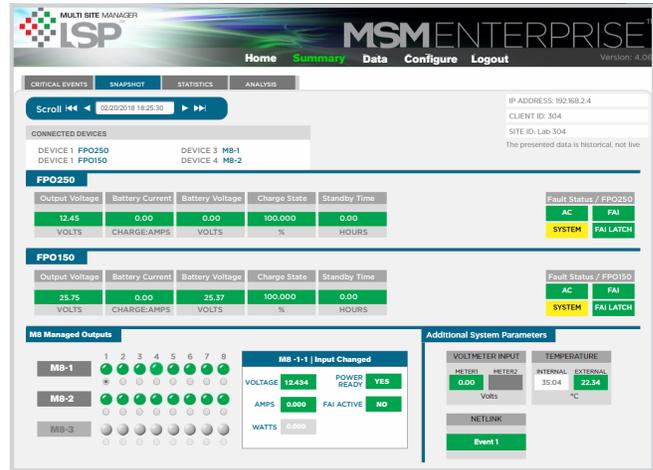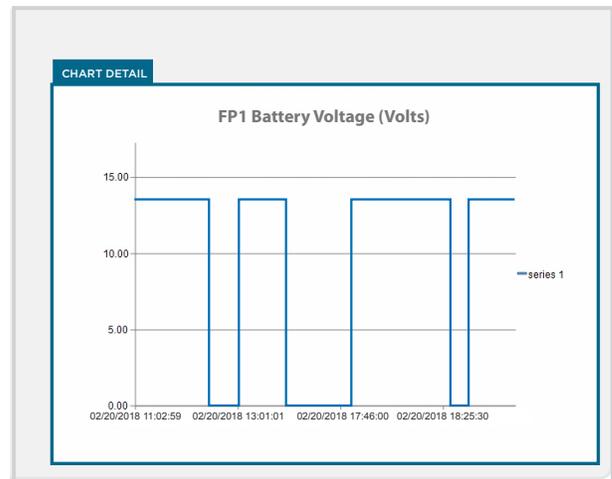
Proactive Alert of Degraded Battery Performance

Problem: The power system is indicating insufficient battery capacity.

Analysis through the MSM-Enterprise:

The Summary page of the power supply (Figure 7) shows the "Battery Backup Time Failed" alert.

Clicking into the analysis tab (Figure 8), we can then select the "FP1 Battery Actual Standby" chart to see the history of the battery's performance over time. The required standby time for this system is 4 hours. Looking at the data, you can see that the standby time was close to the limit before the failing test. This would indicate either a failing battery set, or an undersized battery set for the application.

Figure 7

Figure 8

PANELS
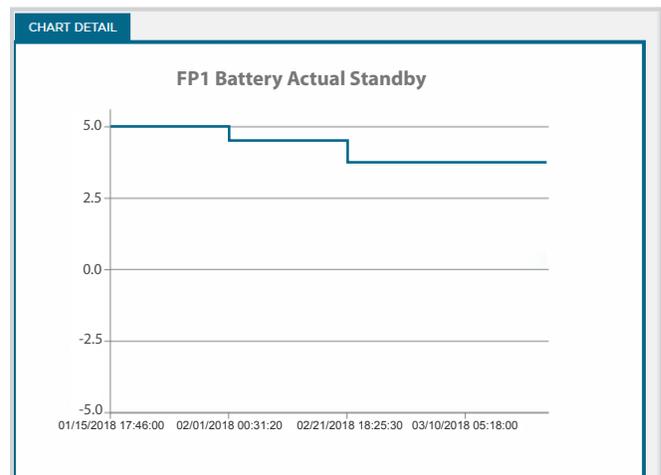
Notification of Failed Network

Problem: The network at the protected location has failed or is compromised.

Investigating with the MSM-Enterprise:

The Home page of the MSM (Figure 9) shows the current status of all connected systems. In this scenario, we can see that the system labeled **IDF_15-2** is showing as offline.

This indicates that there is a connection issue between the system and the MSM server. This could be due to a network issue within the protected building, an internet issue either due to ISP problems or a cut line into the building, or it could indicate that the system showing as offline is completely powered down or disabled.

Further investigation would be needed to determine the cause of action, including a call to the ISP, network troubleshooting, or power system troubleshooting. If the situation warrants it, a guard service could also be activated.

Figure 9

LOCKS

Remote Troubleshooting a Non-Operational Lock

Problem: An on-site lock is not operating when activated.

Lock troubleshooting with the MSM-Enterprise:

The Summary page of the power supply (Figure 10) shows the "Voltage Under Lower Limit" alert for the lock output along with the corresponding System Fault.

Clicking the timestamp link in the right column brings us to the Dashboard view (Figure 11), showing the point in time where the fault occurred. Again, the expected fault conditions are shown as well as the voltages, currents, and other parameters at that point in time. Notice that the voltage of M8-1 output 1 is at 0V and Power Ready is indicated as "No". Since the other M8 outputs are showing voltage and power ready as "Yes", this would indicate that the fuse for the zone is blown. A site visit should be scheduled to inspect the lock & wiring and to replace the fuse.
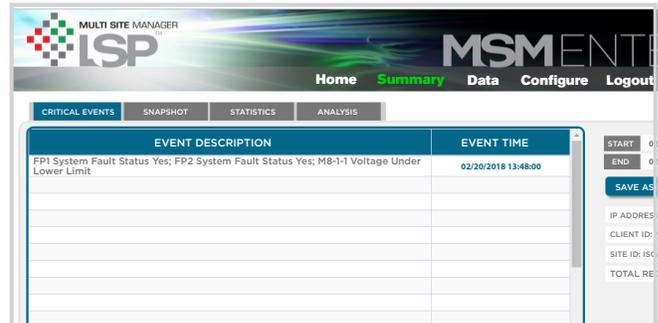
Figure 10
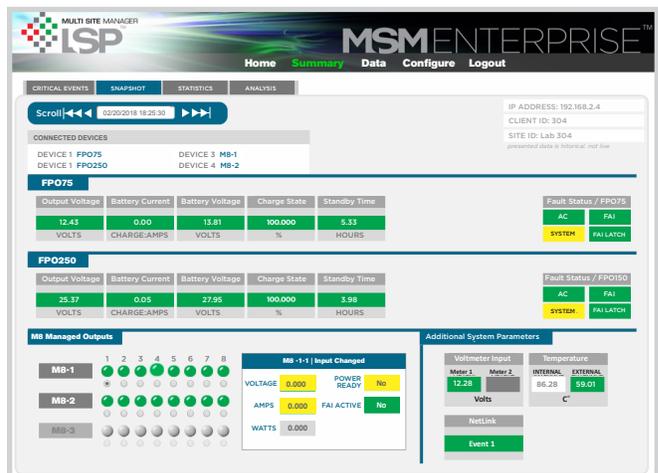
Figure 11

NEW Multi-Client Features

MSM Enterprise now contains Multi-Client features to allow grouping systems based on location, end user, or other parameter. Permission-based user access allows users to only see the systems they are authorized to see, while hiding others from view.
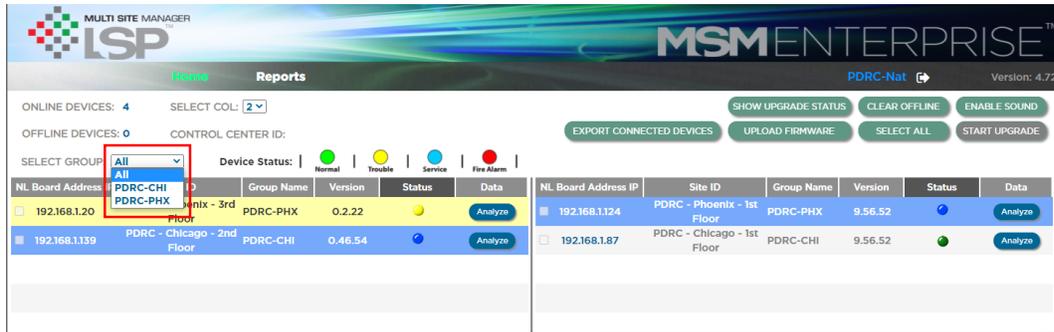
Group selection restricts view to only the desired systems
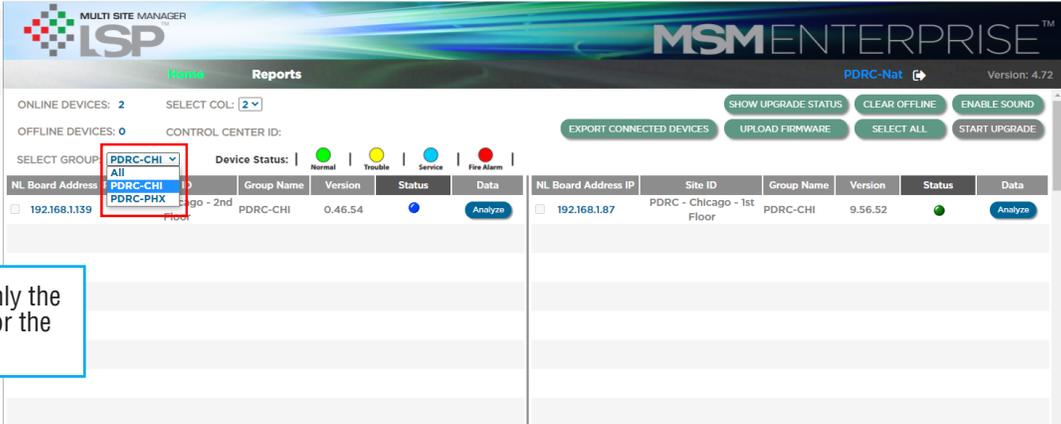
View is restricted to only the systems authorized for the user

Free MSM demo download instructions

To download software use the following steps:

1) Log into https://lifesafetypower.com/products/network-management/msm-enterprise-monitoring

2) Click **Free Demo**

lifesafetypower.com

(888) 577-2898
info1@lifesafetypower.com

Specifications subject to change without notice.

LifeSafety Power
10027 S. 51st Street, Suite 102
Phoenix, AZ 85044 USA