Liebert® Nform Monitoring Software And Interface Products
Maximizing IT System Availability

EMERSON™
Network Power

Infrastructure Monitoring That Makes Sense For Your Business

Getting the information you need to know about critical support equipment for IT systems has never been easier or more cost-efficient.

What You Don't Know Can Hurt You

A small problem in a data center or communications facility can quickly escalate into a disaster. Knowing what is happening with power and cooling equipment can keep that protective "envelope" at peak operating efficiency, vital to system reliability.

Today's Data Centers Require Flexible Monitoring Solutions

Only Emerson Network Power can deliver full-scale monitoring and control of these critical support systems by providing the ability to gather operating information from each piece of equipment and pull it together in one central location.

The Liebert family of monitoring products meets the varying requirements of critical space applications. From leak detection to discrete monitoring, unattended orderly computer shutdown to enterprise-wide monitoring, there is a Liebert hardware or software solution that fits.

By utilizing a network infrastructure approach to monitoring, Liebert solutions align a customer's needs for real-time knowledge and system flexibility with critical system uptime and capital allocation constraints. This type of system can provide the information you need to manage your critical equipment, giving you a variety of ways to receive and manage this data — through computers at your site or even on the web via standard browser software. From the traditional centralized data center to constantly evolving distributed network topologies, there is a Liebert solution that provides just the right amount of control, monitoring, and protection for your critical space requirements

Getting The Right Information To The Right People

Business runs on information. That information, however, must be managed and protected. Emerson Network Power offers the tools to keep the people on the front line — such as IT, network, data center and facility managers — informed as to the status of their critical systems.

To maintain the high level of availability that users expect, your monitoring system must be able to keep your people up-to-date on any changes in the condition of your network infrastructure.

Liebert® Nform™ Meets These Needs

Liebert Nform is a network communications system that will enable you to leverage the distributed monitoring capabilities of your network connected equipment. This software solution combines full-scale monitoring with cost-effective deployment through the use of the existing network infrastructure. It is both scalable and adaptable so it can grow as your systems expand and business needs change.

Liebert Nform is available in three editions - **Express, Standard and Enterprise** – each offering the features and options designed to meet specific application requirements based on business size and needs.

Liebert Nform Offers:

Flexibility:

- Forward specific alarms to network managers
- Discover new devices across multiple networks

Higher Availability:

- Detailed status reports of notifications removes redundant alarms

Lowest Total Cost Of Ownership:

- Eliminates the need for expensive third-party monitoring applications
- Simplified installation and configuration reduces overall start-up, reducing costs

Ideally Suited For:

- IT Managers
- Multiple Data Centers across many locations
- Network Management
- System Integration
- Shutdown of servers and workstations on environmental and power conditions

When Systems Are Critical, Monitoring Is Crucial

The reliability of your computing and communications systems is a direct result of the reliability of the power and cooling systems that help maintain their proper operation. That's why Emerson Network Power is so firmly committed to providing monitoring capability in our products. No one knows more about what it takes to collect and deliver the vital information you need to manage your critical support systems.

Power Conditioning Units

A grounding problem in your power conditioning system causes small voltage disturbances which are reflected in the trend graphing of the Liebert vEM-14 controller. After further analysis, facility engineers discovered and corrected the problem.

UPS Systems

Liebert Nform receives a warning of a failed UPS battery test and forwards the conditions to the Liebert Services Response Center, dispatching a service technician for a battery replacement site visit.

Water Leaks

Your data cabling is lying in a growing puddle of water under the raised floor because of a plumbing leak. It is just a matter of time before that affects your operation. With installed leak detection products, a water-detected summary alarm was transmitted to Liebert Nform by the Liebert vEM-14 controller. The facility engineer was notified and corrected the faulty plumbing.

Power Distribution

IT recently installed Liebert MP Advanced Power Strips inside their rows of rack enclosures. Now, with the control of each receptacle, overloading of circuits is prevented. Liebert Nform users can easily control access to which outlet circuits are enabled or disabled.
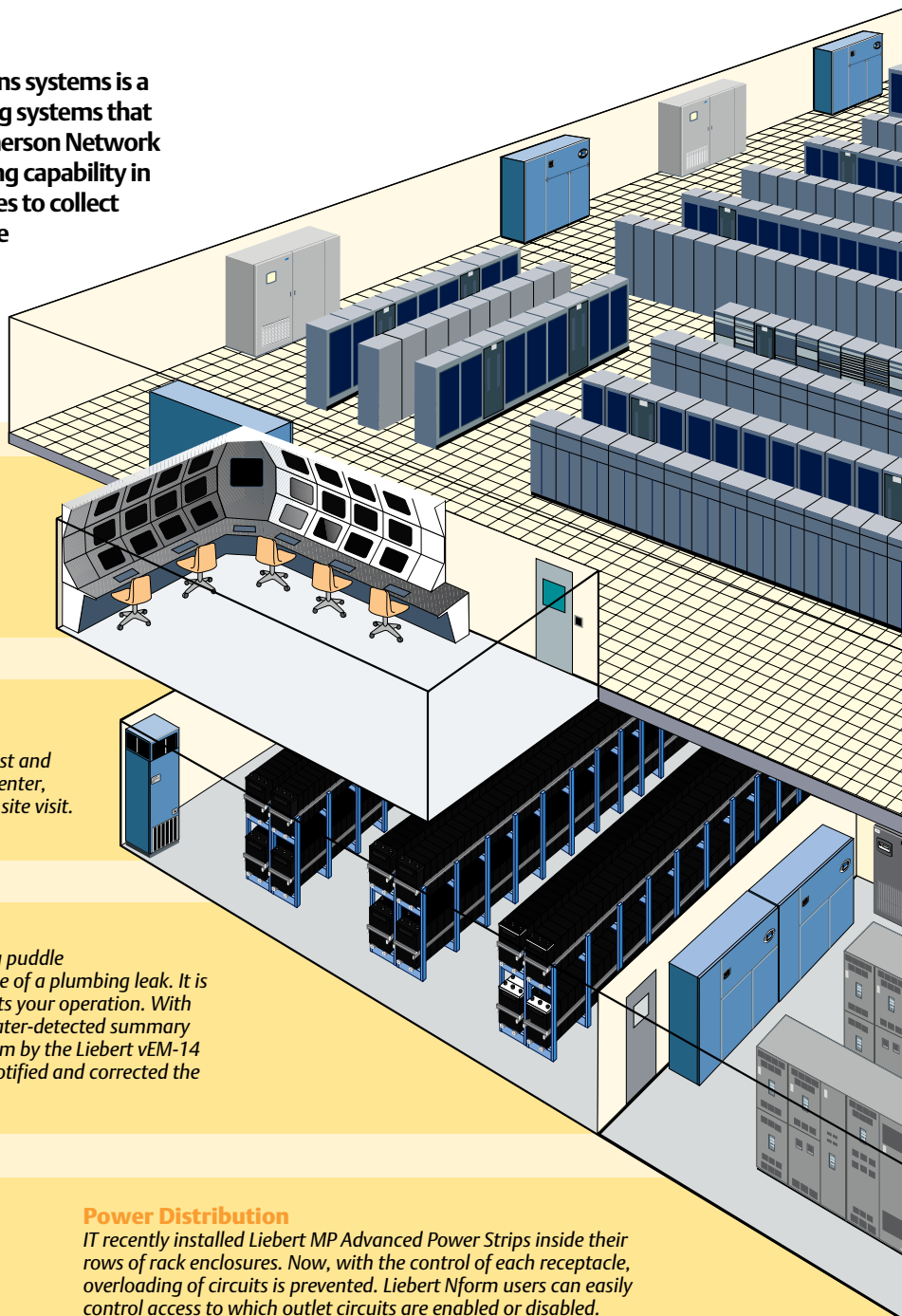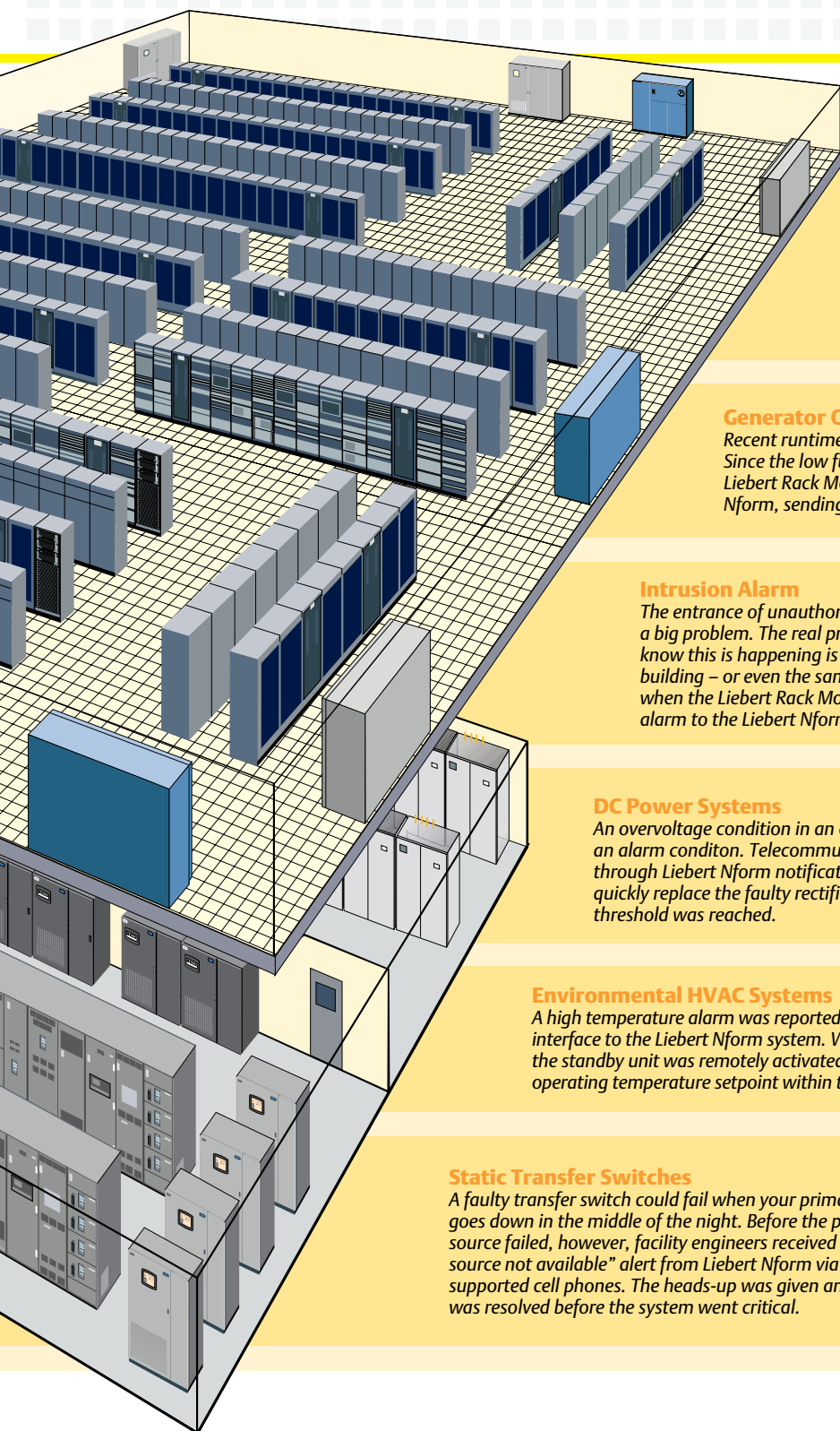
Surge Protection

A surge protector has safeguarded your site through many thunderstorms. Unfortunately it self-destructed protecting you from that last surge and you don't know that it needs to be replaced. Since Liebert Nform was monitoring the TVSS summary alarm, maintenance was notified to incorporate testing of the surge suppression device due to its recent heavy usage.

Generator Operation

Recent runtime on the generator has consumed most of its fuel. Since the low fuel summary alarm was being monitored by the Liebert Rack Monitoring controller, an event triggered in Liebert Nform, sending a request for refueling to the local fuel supplier.

Intrusion Alarm

The entrance of unauthorized personnel into a remote shelter is a big problem. The real problem is that the person who needs to know this is happening is unaware and possibly isn't in the same building – or even the same state. Security personnel were alerted when the Liebert Rack Monitoring controller reported a door ajar alarm to the Liebert Nform system.

DC Power Systems

An overvoltage condition in an essential DC power system causes an alarm conditon. Telecommunications engineers are dispatched through Liebert Nform notifications, allowing the engineer to quickly replace the faulty rectifier before the critical overvoltage threshold was reached.

Environmental HVAC Systems

A high temperature alarm was reported through the Web interface to the Liebert Nform system. With advance notification, the standby unit was remotely activated, maintaining the desired operating temperature setpoint within the data center.

Static Transfer Switches

A faulty transfer switch could fail when your primary power feed goes down in the middle of the night. Before the primary power source failed, however, facility engineers received a "secondary source not available" alert from Liebert Nform via SMTP supported cell phones. The heads-up was given and the problem was resolved before the system went critical.

The Liebert Nform Dashboard Provides:

a complete view of the entire critical system, allowing immediate response to changes, ensuring higher availability and reducing downtime.

The Total Number Of Equipment:

Not Responding   Normal   In Alarm
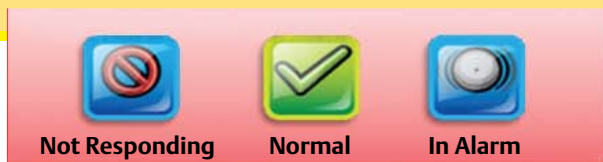
Total System View
Allows user to create graphs and charts that provide "At-a-Glance" System views.

View Equipment Type
Provides a listing of equipment by a specific type; Power, UPS, Precision Cooling and Rack PDU.

License Scalability   Device Management   Authentication and Authorization

System Administration   Notifications and Intelligent Automation

Critical Infrastructure Management Made Easy

Resolve System-Affecting Events Before They Happen

Advanced Graphics Allow You To See More And React Quickly

Navigating through the system allows quick trouble-shooting and gives an understanding to system impact.

Detachable Windows

Network operations center monitoring is made easy with detachable windows, allowing access to more information and taking advantage of systems with multiple desktop monitors.

Emphasize Alarms

Detaching the "Alarms" window ensures alarms-events have the appropriate visibility to operators and users.


Software That Is Hardware Autonomous

Reduce IT Costs With Improved Flexibilty

Liebert Nform software can run within your virtual IT environment regardless of the underlying hardware configuration. Leveraging the existing network and IT infrastructure, Liebert Nform eliminates the need for expensive 3rd party server hardware.

Virtual Manager

Virtualized Servers

Liebert Nform

Virtualized Servers
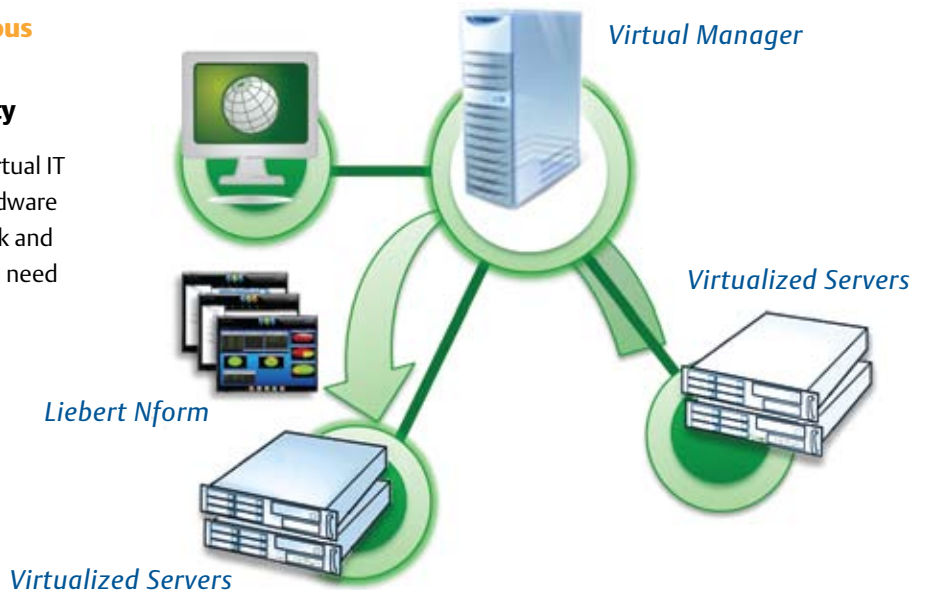
Provides Real-Time Monitoring And Centralized Management Of Your Critical Infrastructure
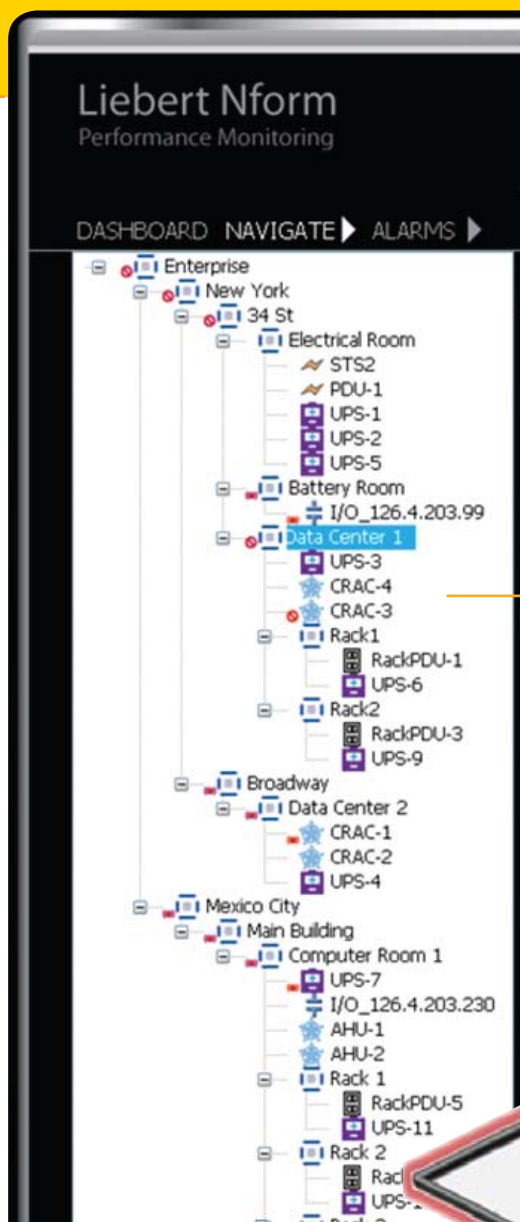
Device Surveillance

The status of managed equipment propagates up through the customized navigation view.
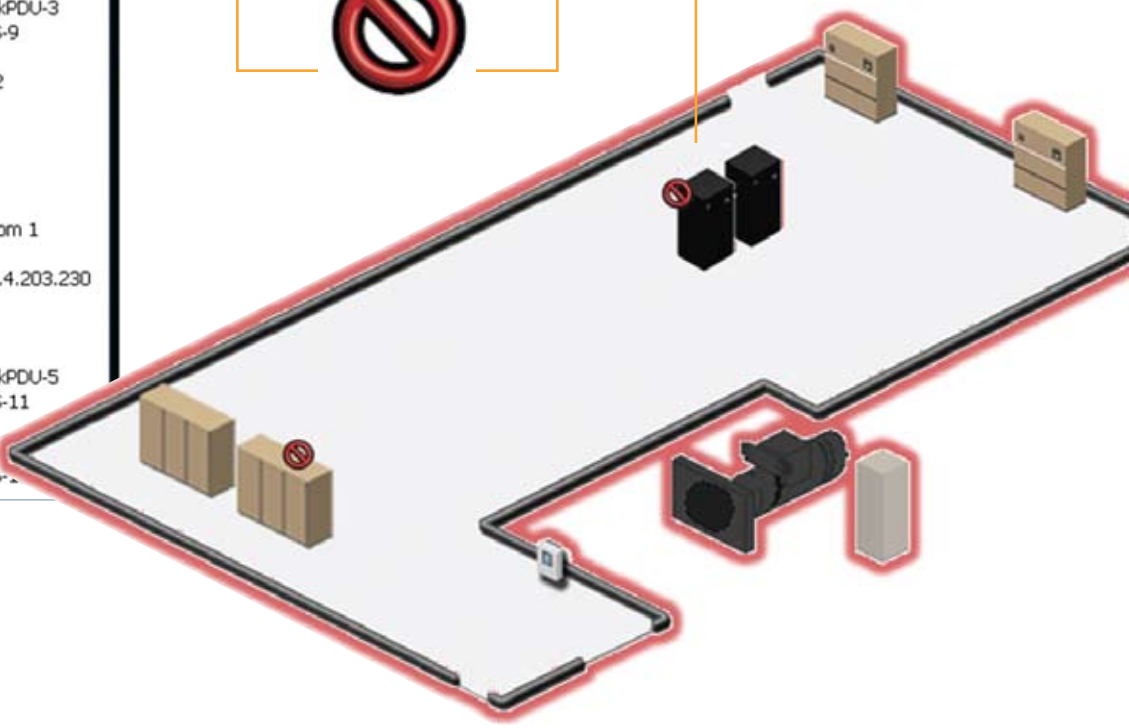
Navigational Graphics

Incorporates standard graphic image files that allow for quick equipment location, status and navigation via floor-plans or area maps.

In Alarm

Not Responding

Leveraging The Existing IT Infrastructure

Vendor neutral monitoring delivered utilizing the SNMP and Web Technologies built into the critical infrastructure.

View in Local Browser

Launch the default browser to lock onto a specific device.

Web Integration

The web interface from managed devices is integrated directly within the software.

Parametrics and Live Telemetry

Devices can be managed directly through their native SNMP interfaces.

Gaining Real-Time Visibility And Control

## Alarm-Event Management And Notifications

Automated Shutdown — Protect critical systems from costly damage and data loss that can result from power failure and high density heat conditions.

File Write Action — To maintain extended history of events, the file-write can be used for logging and database collection.

Email and SMS Notifications — Deliver the right information at the right time so IT Managers can respond quickly and track changes within the infrastructure.
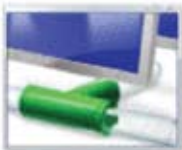
Run External Command — Ping devices on the edge of the network, including routers and switches that represent a network path to resources within your critical business operations.
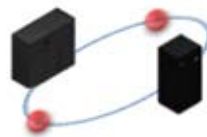
Additional Capabilities Included in Business And Enterprise Editions

SNMP Set Request Action — On alarm-events, the system can turn on stand-by units, reboot Rack PDU receptacles and close relay contacts for external alarming.

SNMP Trap Forwarding — Eliminate the noise by forwarding the most critical events to the Network Management Software System.

Trend Data Action — During critical events, the system can trend and record equipment performance, ensuring design integrity of the IT infrastructure.
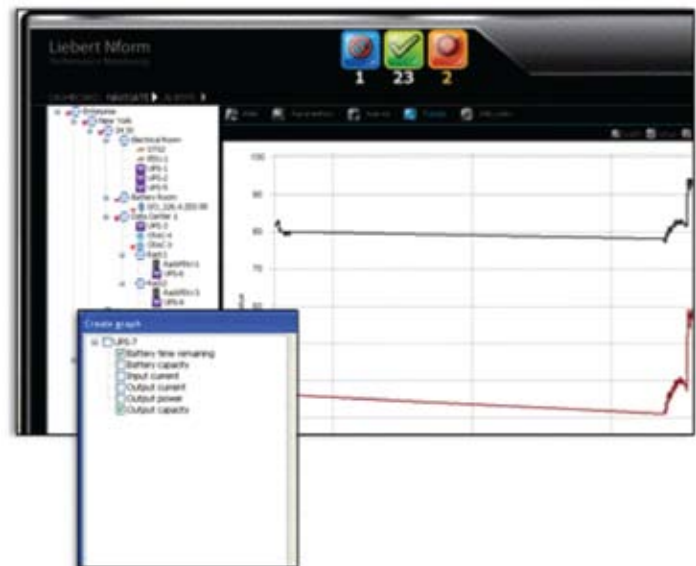
Data Analysis And Trend Reporting

Tracking The Effects Of Consolidation And Virtualization

Tracking The Effects Of Consolidation And Virtualization

Be Prepared For Change

Liebert Nform provides trending of current parametrics and historical analysis of changes to the Data Center. As the demands on the IT Infrastructure increase through consolidation and virtualization Liebert Nform delivers the tools to help track and manage changes.

Trends can dynamically update at operator-defined intervals or on specific alarm-events. This prevents the system from creating unnecessary traffic on the IT Network.

Goes Beyond Just Providing Alarms

The trend analysis and reporting capability can help you detect changes in your equipment's performance by graphically illustrating its history operation. This provides the information you need to prevent system down-time by responding in a time of non-duress.

Liebert Nform has the ability to easily export current and historical data to external sources that create reports to help understand the efficiency and capacity of the data center.
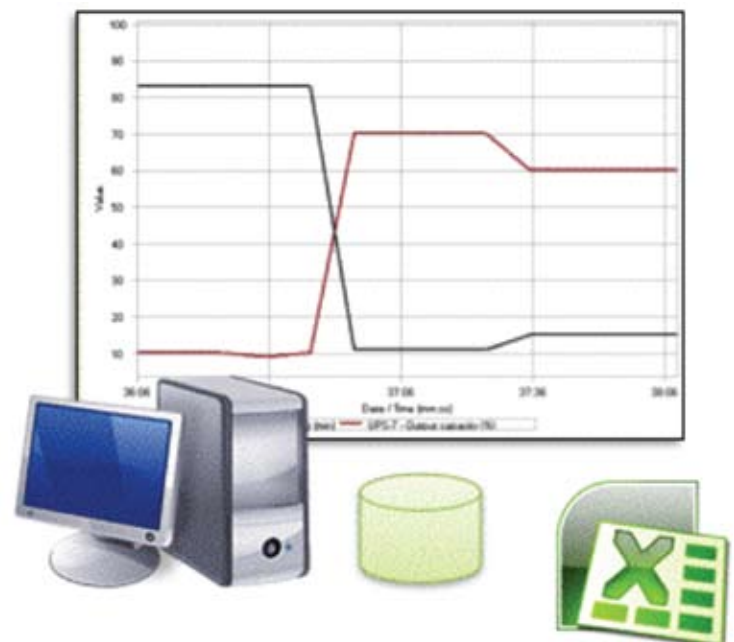
On Demand Auto-Discovery

Liebert Nform can discover equipment across multiple networks, simplifying the deployment of new equipment within your Data Center.
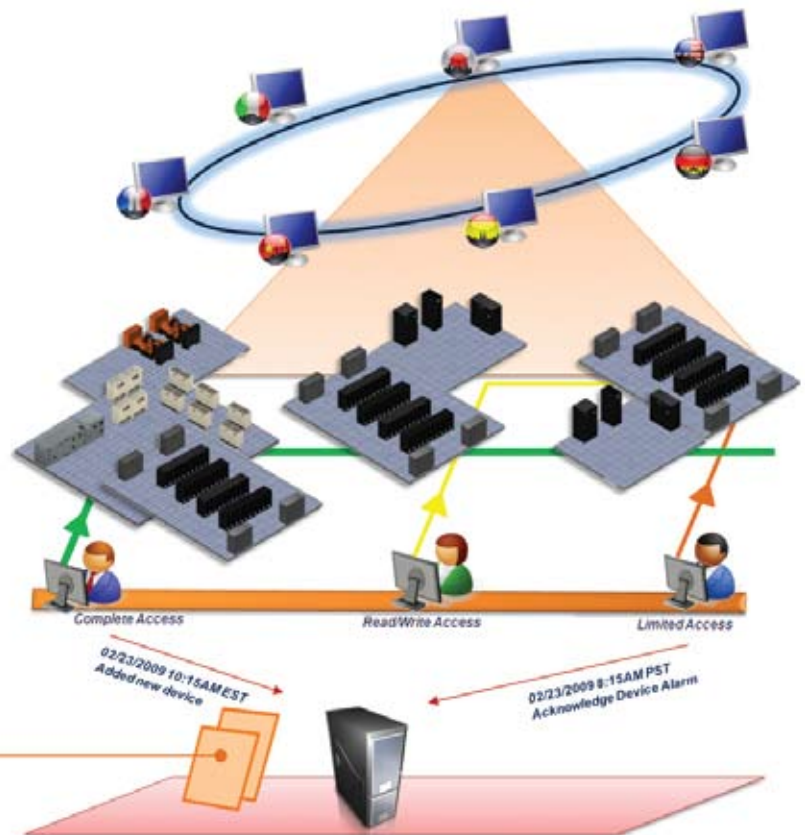

Precision Cooling *Integrated Cooling* *Large UPS Systems*

Discover - Liebert UPS, Power Distribution And Cooling

Rackmount UPS *Battery Monitoring* *Liebert MPX / Liebert MPH*
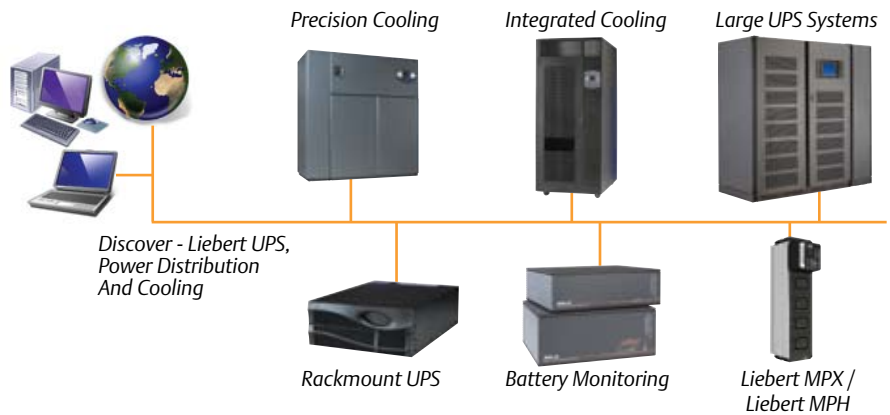
Advanced Integrated System Features

Internationalization — In addition to English, Liebert Nform is designed to simultaneously support French, Italian, Spanish, German, Chinese and Japanese, allowing multiple operators to access the same information at the same time in their respective languages.

Location Independent Views — Using a centralized database, Liebert Nform allows administrators to create user accounts with specific navigation views, and assign policies that define the access and ability of each user.

System Security — System includes three default users groups; Administrator, Power User and User. Additional users and groups can be created and customized. An audit log contains records of user logins, logouts and system configuration changes.

Complete Access   Read/Write Access   Limited Access

02/23/2009 10:15AM EST
Added new device

02/23/2009 8:15AM PST
Acknowledge Device Alarm

Liebert MultiLink® Automated Shutdown Control For Maximum Data Protection

Meeting The Increased Demands For Consolidation And Virtualization

The Right Strategy: Are You Ready?

Server consolidation and virtualization create opportunities to reduce IT costs, enhance computing performance and improve data center space utilization. But this also changes the power and cooling profile of the data center.

Liebert Nform integration with Liebert MultiLink automated shutdown software allows you to actively protect data on servers supported by the Liebert UPS equipment you are monitoring, using the same Liebert IntelliSlot Web Cards. Liebert MultiLink initiates proper shutdown commands to your servers when power and/ or cooling exceed user-defined thresholds.

Stay In Control

Because today's critical business applications are often virtualized and consolidated between several computers or servers, there is a need for shutdown software capable of protecting information on multiple machines.

Liebert Nform with Liebert MultiLink performs the critical task of protecting your business from costly damage and data loss as a result of extended power failures and extreme environmental conditions that often exist with higher density servers.
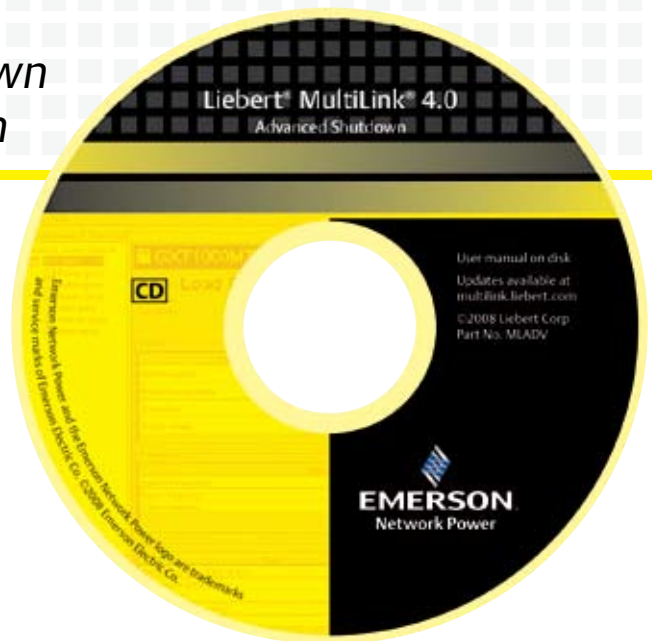
Advantages of Liebert Nform integration with Liebert MultiLink automated shutdown software:

- Automated and Orderly Shutdown on Environmental, UPS and Power conditions
- Scalable
- Network Based
- Suitable for Single Workstation or Network of Servers
- Wide Operating System Capabilities
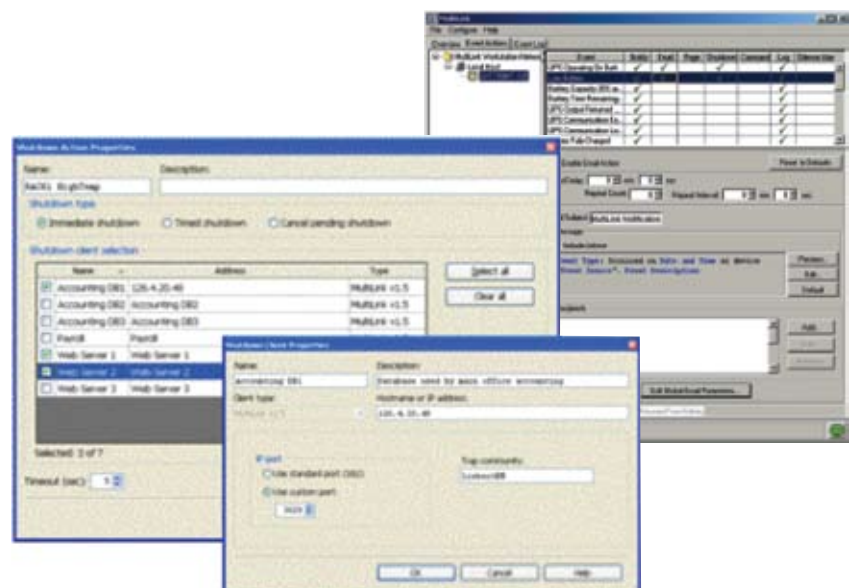
Liebert Nform Software Options

System Features	Express Edition	Standard Edition	Enterprise Edition
Remote Concurrent Clients	Unlimited	Unlimited	Unlimited
Users and Groups	Unlimited	Unlimited	Unlimited
Supporting Operating Systems	Windows XP, Windows 2003/2008 Server, Windows Vista	Windows XP, Windows 2003/2008 Server, Windows Vista	Windows XP, Windows 2003/2008 Server, Windows Vista
Internalization	Yes	Yes	Yes
Auto Discovery	Yes	Yes	Yes
SQL Database	Embedded Only	Embedded Only	Embedded and Microsoft SQL
Customizable Dashboard	Yes	Yes	Yes
Export Data and Alarm Events	Yes	Yes	Yes
Online Help	Yes	Yes	Yes
Real-Time Monitoring Control			
Device Status Polling	Yes	Yes	Yes
Device License Included	30	30	100
Web Card Integration	Yes	Yes	Yes
Maximum Devices Supported	30	480	Unlimited
Open Architecture- Monitoring of 3rd Party SNMP	Yes	Yes	Yes
Devices Support	All UPS, Power and Cooling systems that support SNMP	All UPS, Power and Cooling systems that support SNMP	All UPS, Power and Cooling systems that support SNMP
Parametric Data Logging	Yes	Yes	Yes
Set point Control	Yes	Yes	Yes
Notifications and Actions			
Propagate Viewer to foreground	Yes	Yes	Yes
Play Sound Wave	Yes	Yes	Yes
Standard Actions			
E-Mail Notifications	Yes	Yes	Yes
Run External Command	Yes	Yes	Yes
File Write	Yes	Yes	Yes
MultiLink Shutdown Clients	Sold Separately	Sold Separately	Unlimited Included
Set Data on Event			Yes
Get Graph on Event			Yes
SNMP Trap Forwarding			Yes

Nform Additional Licenses			
PART NUMBERS	**NFORM ADDITIONAL MANAGED DEVICE LICENSES**		
NFORM-30D	30 Device License	1 Year 3 Years 5 Years	NFORM-30D-SA1Y NFORM-30D-SA3Y NFORM-30D-SA5Y
NFORM-100D	100 Device License	1 Year 3 Years 5 Years	NFORM-100D-SA1Y NFORM-100D-SA3Y NFORM-100D-SA5Y
NFORM-500D	500 Device License	1 Year 3 Years 5 Years	NFORM-500D-SA1Y NFORM-500D-SA3Y NFORM-500D-SA5Y
	MULTILINK® NETWORK SHUTDOWN LICENSE, UNRESTRICTED		
MLLKU	MultiLink Network Shutdown License allows you to efficiently shutdown workstations and servers running MultiLink throughout the network via Event-Alarm conditions from OpenComms Nform		

Professional Services
The Ultimate In Customer Service
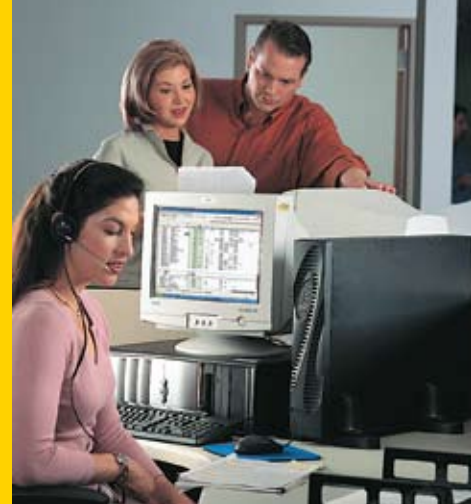
Standard Services

Applications Engineering Services

This service provides all Liebert customers, at no charge, ultimate product support with direct access to factory-trained Monitoring Engineers. Our engineers receive in-depth instruction and hands-on experience in providing support for monitoring software and hardware.

- Instant Phone Assistance - 24 X 7 X 365
  1.800.222.5877
  614.841.6755 (Outside U.S.)
- Email an Engineer - M-F 8:00a.m. - 5:00p.m.
  monitoring@liebert.com

Liebert Nform Software Assurance Web Site.

Liebert Nform Software Assurance provides a full range of benefits in a single program, including access to the latest software, tools and resources that help you get the most out of your critical infrastructure software investment.

Benefits include:

- Technical resources
- Software Support Site Access
- Around-the-clock phone support
- Latest software updates
- Tools for device deployment

These value-added benefits help you manage costs, take advantage of the latest enhancements and minimize system downtime.

Software Assurance is available for the Nform Express, Standard and Enterprise editions, as well as node licenses. This subscription plan is available in 1, 3 and 5 year programs.

Software Assurance Activation

Activating Software Assurance is done on-line by the customer at the Liebert Nform Support Site.
The Liebert Nform System Administrator must register within 90-days on the web site with a valid email address and the license keys provided with the system. All customers that have active accounts are guaranteed access to updates and all major upgrades free of charge.

Optional Services
Software Integration Services (SIS)

The further your resources are stretched, the less time you have to quickly deploy your monitoring products. Sotware Integration Services is designed to help implement and verify the Liebert software and hardware in a timely efficient manner.
A Monitoring Engineer will assist with the deployment of your monitoring solution on-site.

- Installation and Start-up
- Configuration and Verification
- On-Site Training and Education
- On-Line Support Overview and Web Site Registration

Remote Monitoring Service: When You Need To Know — But Can't Do It Yourself

The key to providing proper service for critical support systems is being aware of that equipment's operating status at any given time. That's why Emerson Network Power is so firmly committed to providing monitoring capability in our products. Our Remote Monitoring Service, provided by Emerson Network Power's Liebert Services, is designed to maximize the capabilities of your Liebert equipment by maximizing the effectiveness of your monitoring systems.

Ensuring The High Availability Of Mission-Critical Data And Applications.

Emerson Network Power, the global leader in enabling business-critical continuity, ensures network resiliency and adaptability through a family of technologies — including Liebert power and cooling technologies — that protect and support business-critical systems. Liebert solutions employ an adaptive architecture that responds to changes in criticality, density and capacity. Enterprises benefit from greater IT system availability, operational flexibility, and reduced capital equipment and operating costs.

Emerson Network Power.
The global leader in enabling *Business-Critical Continuity™*.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- **Monitoring**
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection