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FOCUS Network Energy Efficiency

Power, Environment, and Physical Security
From Your Datacenters to the Network Edge

Aug, 2025

→ Experience - We Know Your Network

We have years of experience delivering network monitoring solutions to global telecom operators with complex networks. We've delivered hundreds of projects with thousands of sites, all over the world. We know power, environmental, and security equipment.

→ Where Do We Work?

Our solutions work in any telecom site:

- Datacenters
- Central Office Sites
- Fiber Repeater Sites
- Wireless Radio Sites
- Cell/Tower Sites

→ Who Is It For?

- Mobile Network Operators
- Datacenter Operators
- TowerCo's
- Fiber/Cable Network Providers
- Utilities/Transportation/Public Safety
- Radio & TV Broadcast
- Specialized Telecom Networks
- RTU Vendors
- NMS/OSS/Other Software Vendors
- Power Equipment Vendors

We've delivered telecom network management solutions for 20 years.

There is a new and better way

Unlock the Hidden Computing Power in your Network

Telecom networks today have underutilized intelligence in:

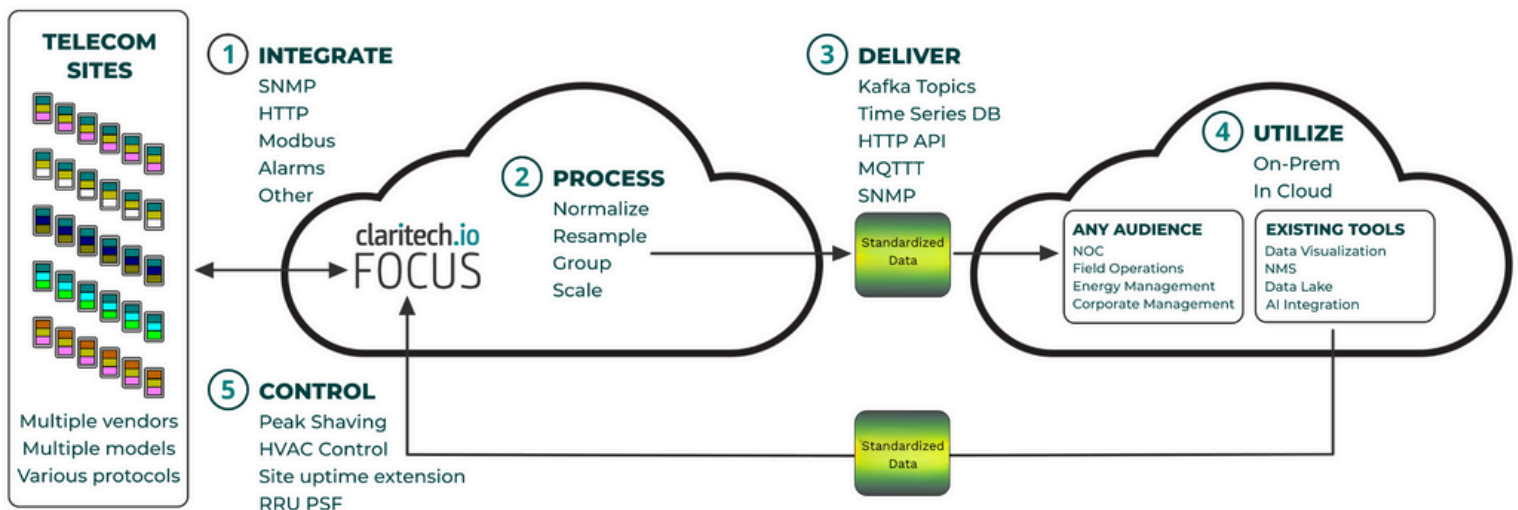
- **Smart Controllers** - DC plant, power distribution units (PDU's), Back-up Generators & ATS, HVAC, existing IoT or remote terminal units (RTU's)
- **Power Measurement Tools** - AC/DC meters, diesel or propane fuel probes
- **Physical Security** - Access Control, IP Cameras, Fire Suppression.
- **Environmental Sensors** - Temp, Humidity, Water

Data from this equipment is vastly underutilized, providing only a small number of simple alarms.

Add FOCUS

FOCUS **integrates** to the existing intelligent equipment in your network. The gathered data is **processed** to normalize data across different classes of equipment. FOCUS **delivers** the data to existing software tools or new data visualization software in your network. The data can be **utilized** by multiple audiences to solve different problems. FOCUS also enables normalized commands to be sent to **control** equipment in the field.

Lack of standardized data is preventing fully managed reliable and efficient telecom networks. **FOCUS solves the problem of standardizing data from these resources, opening new ways to improve your network.**



FOCUS is Better By Design

What is FOCUS?

Focus is built with open-source software tools, combined with many years of direct experience on how to use them to solve problems in YOUR network.

FOCUS:

- **Is Industry Standard/Open Source** - Real-time, fault-tolerant, and able to scale vertically or horizontally to fit any network.
- **Doesn't Add or Replace Existing Site Hardware or Disrupt Your NOC** - Focus doesn't require you add or replace hardware at your telecom sites and doesn't require that you add or replace software at your NOC or elsewhere. FOCUS allows your existing processes to work without disruption.
- **Works on Any Network** - Since FOCUS doesn't disrupt your existing network, it can easily be added to ANY network and is FAST to deploy and the economics work for networks in every part of the world.
- **Runs Anywhere** - FOCUS can run on public cloud networks (AWS, Azure, or Google Cloud), as well as hybrid or private cloud infrastructure. Focus can also run on dedicated servers if that is preferred.
- **Manages Anything** - If site equipment is smart enough to provide data about itself, Focus can work with it. This includes overlaying FOCUS on existing networks of underutilized RTU or IoT devices already in your network, including normalizing data across multiple RTU types in a single network.

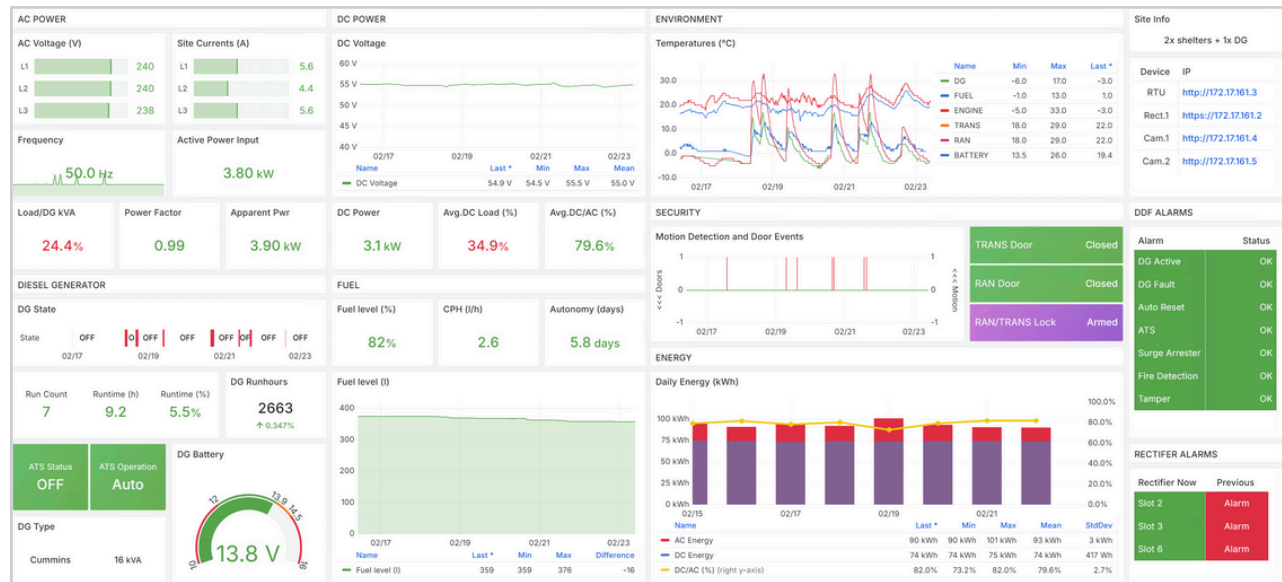
Open Data is Better

Open normalized data can be viewed in new dashboards created using **open-source data visualization** tools. Using standard open-source tools allows users to help support the project, and even take over maintenance if they wish. We can teach you how. Dashboards are a great way to give data to new audiences that may reside outside the NOC and often data visualization tools are already available and in use inside organizations.

Data is better than proprietary solutions. If your organization changes plans in the future, FOCUS moves easily to new architectures, including coming advancements of AI.

Individual Site Dashboards

Single site dashboards are useful for in preparing for a site visit, or NOC personnel troubleshooting a site problem at a smaller location like a cell site. Single-site dashboards improve network reliability by identifying problems at individual sites, and help with forensics in determining why a problem occurred. Multiple data sources can be correlated by time in a single view, correlating a 3rd party contractor visit with a power problem, for example. The example below allows direct IP access to smart devices via their own web interfaces, and presents data on AC/DC power, generators, fuel levels, alarms, physical security and energy usage all in a single view.



Site Dashboard Example #1 - Real-time and historical site operation telemetry & alarms

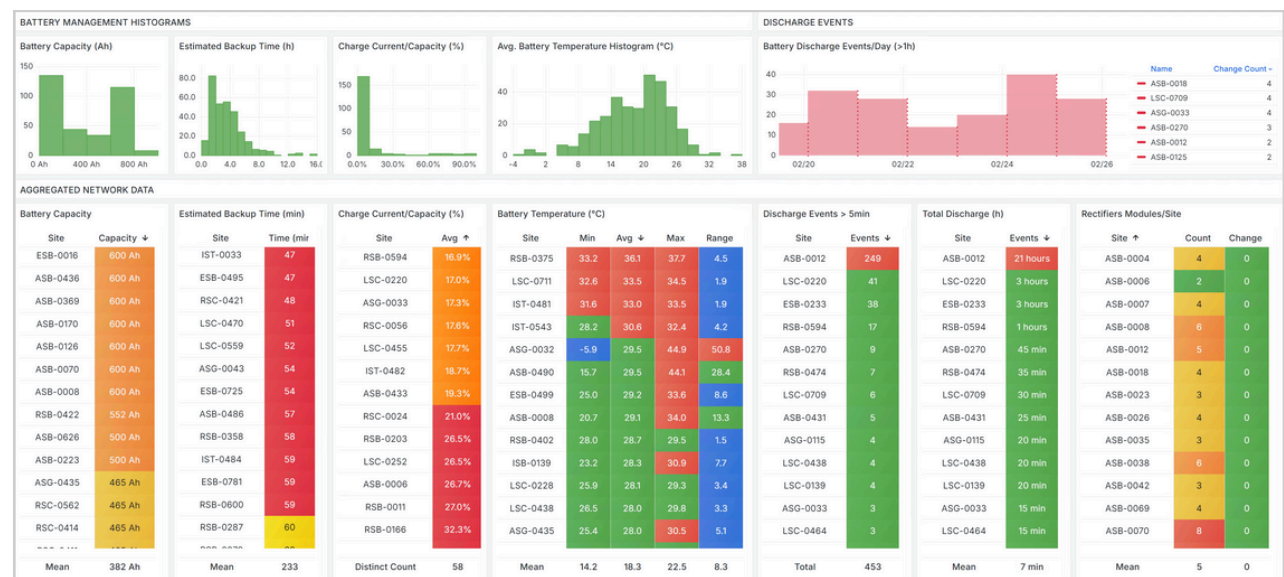
Network Wide Dashboards

Network-wide dashboards aggregate data across sites. Different audiences may use these dashboards to support both **reliability AND efficiency efforts**. Specific dashboards can show **network-wide alarms, AC or DC power, environmental issues, diesel generators, or site hardware inventories**. Dashboard below shows aggregated network alarms that can be filtered based on tags. Individual site dashboards can be reached by clicking on the site on the map or in the tables. Data can be exported for reporting.



DC Power & Battery Management

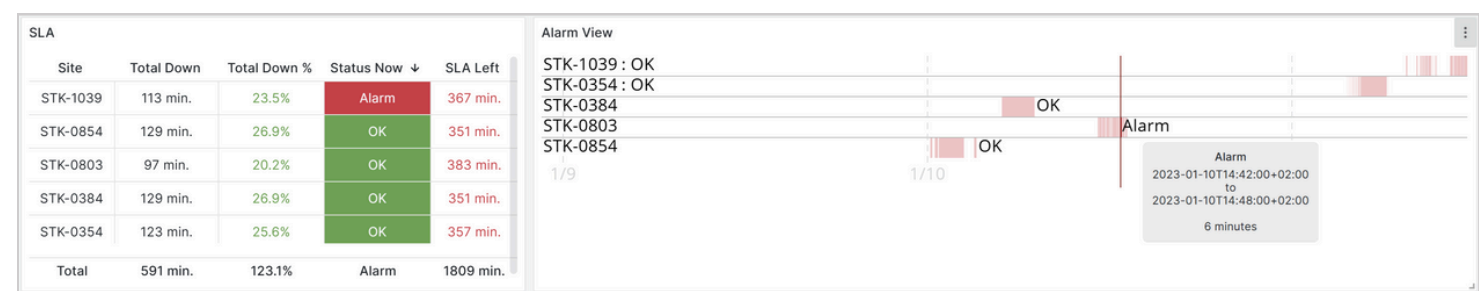
The network-wide dashboard below shows aggregated network-wide parameters from various battery and DC plant manufacturers as well as battery temperature in a large cell network. This data might be used by one audience to determine sites that are susceptible to failing and by another audience to determine over or under-capacity of DC plants for efficiency purposes.



Battery Management Network View

Dashboard Examples with Focus-Generated Data

One of the most powerful features of FOCUS is the ability to use data queried from site equipment and use this data to create new metrics for many purposes. The example below shows new metrics, generated by FOCUS, showing SLA adherence for a towerco in ranked priority order for sites with a particular alarm severity. Other examples include PUE calculations or creation of metrics indicating overall health of a site.



Dashboard - SLA Compliance

Dashboard - DataCenter Power

Smart meter integration in a datacenter enables detailed power analytics, in addition to temperature, humidity and other equipment monitoring. The dashboard represents temperatures of a small datacenter, including its floorplan.

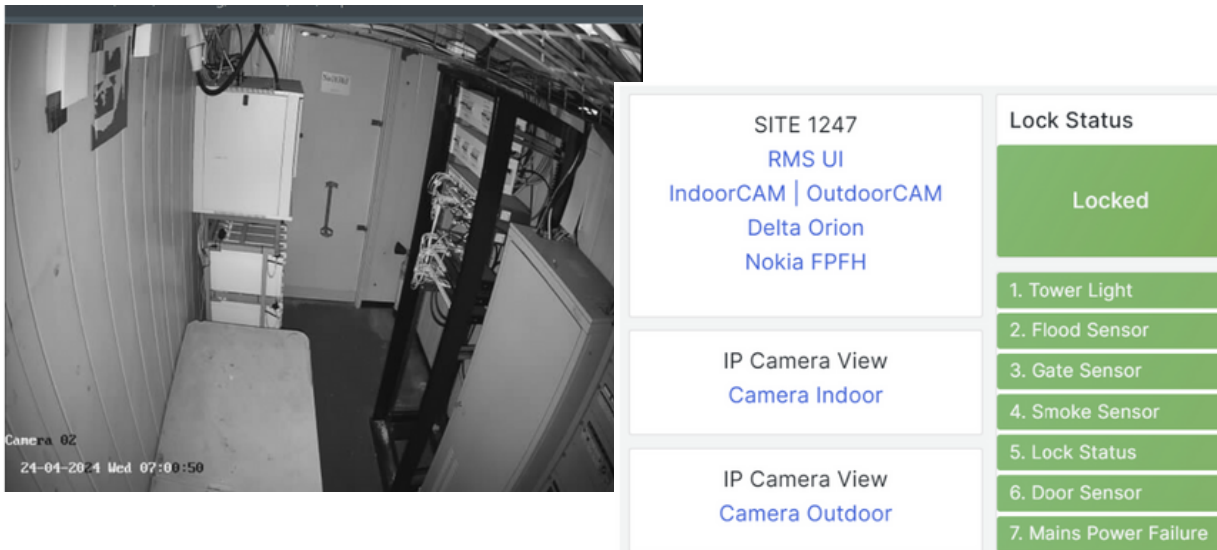


Dashboard - DataCenter UPS or Smart PDU Monitoring

Dashboards can be created to monitor the larger and more sophisticated architectures in a datacenter. Similarly to the the cooling dashboard above, dashboards can be created to show detailed data on larger UPS systems, or show aggregated views of smart PDU's, including the ability to drill down to the individual PDU level.

Dashboard - Physical Site Security

Dashboards can allow for access directly through a link to the user interfaces. Cameras and access control systems can be integrated, and the powerful features inherent in inexpensive and powerful cameras can be integrated. It is possible to take advantage of camera facial recognition and other advanced features and represent data in data visualization tools. You can correlate access control records with camera snapshots to identify "tailgating" for example, where an authorized person allows in an unauthorized person. These records can be used to meet regulatory requirements, particularly in datacenter environments.



Dashboard - Site Security

Dashboard - Integrated Control Functions

FOCUS also supports control functions where different ATS or HVAC can be controlled by a button in the data visualization tool. FOCUS takes care of knowing what command needs to be sent on the site side to control the ATS or HVAC, regardless of make or model. These controls may be fully automated and not controlled manually.

Demos and Trials

Contact us to see a live demonstration. We have many different examples of data generated from real networks that we've made anonymous and can show. A short 20-30 minute meeting is enough to understand FOCUS. FOCUS is also easy to trial. As FOCUS doesn't disrupt your existing network processes, we can quickly show how FOCUS works in your network. Generally it only takes a few days to give an initial trial instance of FOCUS, that can also be scaled from a trial to a full installation by doing nothing other than adding additional sites to the trial. Contact us! We'd love to hear from you.

Contact Us :

If you'd like to learn more, would like to see a live demo, or are interested in a trial, please contact us via the email below.



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