

FACT SHEET

Foresight: Data Center Monitoring Software from Green Revolution Cooling (GRC)

“A watched pot never boils”

Managing data center infrastructure can be a daunting task, especially given the mission critical nature and, often, remote location of these facilities. Whether you're running an AI or high-frequency trading operation, computing on the edge or on premise, ensuring that your infrastructure is operating reliably and efficiently is critical to managing costs and uptime.

GRC understands how important your data centers are to your business and are committed to doing everything it takes to help you not just achieve but go beyond 'five nines' of uptime. Hence, we developed the Foresight monitoring system to help you get there.

All of GRC's products come prepackaged with a plethora of sensors, control systems, and the Foresight monitoring platform. While the onboard sensors and control systems optimize the performance, efficiency, and reliability of the system, the Foresight web-app allows you to remotely and securely monitor the real-time and historical performance of your data center infrastructure.

Key Features:

- **Web-app:** allows for simple, secure, remote monitoring of your data center's performance, health, and efficiency.
- **Early Fault Detection:** regular system health checks look for early indications of potential issues. The diagnostic system looks into everything from filter life, to pump performance, heat exchanger efficiency, and more. Helping you be proactive in avoiding potential service events.
- **Configurable Email Alerts:** The Foresight web-app allows you to configure email alerts based on trigger events, giving you the peace of mind that you will never miss a thing.
- **Backed by 24/7 Remote Monitoring From GRC:** all GRC products are backed by a limited one-year warranty that come with 24/7 remote monitoring by GRC support staff and technicians, giving you an additional set of eyes, and an added layer of protection. *Extended warranty and maintenance contracts also include remote monitoring and diagnostics, beyond the one-year warranty period.*
- **Integration with BMS & DCIM Systems:** Already have a BMS or DCIM system that you like? No problem, Foresight can easily integrate with almost any DCIM or BMS out there, using industry standard protocols such as Bacnet & SNMP.

Informative Web-Based Dash Board & Reporting

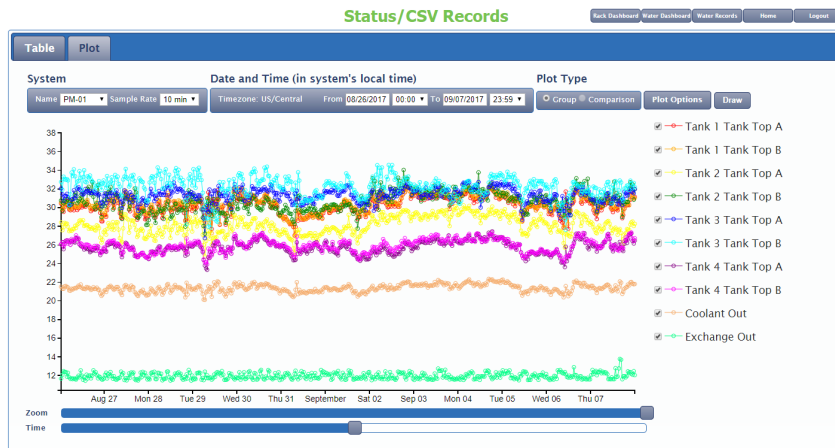


Fig 1. Visualize trends and historical data with Foresight's plotting feature.

GRC Rack Dashboard

Table

	System Status	Set Point	Coolant Pump Speed / Status	CT Fan Speed / Status	Water Pump Speed / Status	Tank Top A 1	Tank Top B 1	Tank Top A 2	Tank Top B 2	Tank Top A 3	Tank Top B 3	Tank Top A 4	Tank Top B 4	Heat Dissipation	Water In	Water Out	Primary Current	Backup System Active	Time Elapsed Since Last Update
In-House		35.0	3.0	N/A	N/A	21.0	21.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24.8	24.5	0.0	OFF	0:00:07
PM-01		33.0	3.0	N/A	N/A	30.2	29.8	29.8	31.6	31.6	33.0	25.6	25.6	N/A	N/A	11.3	6.3	OFF	0:00:10
PM-02		30.0	3.0	N/A	N/A	24.5	24.0	25.1	24.8	23.6	24.3	25.0	24.1	61251	13.9	17.0	6.9	OFF	0:00:05
PM-03		33.0	4.2	N/A	N/A	31.6	32.4	30.4	29.7	33.0	32.9	30.2	30.7	69655	10.6	15.6	6.4	OFF	0:00:09
PM-04		33.0	3.0	N/A	N/A	30.6	32.0	27.4	28.8	28.6	28.8	27.4	28.1	57269	14.0	14.0	3.8	OFF	0:00:07
PM-05		33.0	3.0	N/A	N/A	30.5	31.1	27.0	26.6	28.2	28.6	26.5	26.5	48572	12.2	15.1	4.8	OFF	0:00:11
PM-06		33.0	3.0	N/A	N/A	24.0	23.9	24.1	24.0	24.5	24.6	23.2	23.7	37161	11.2	13.5	4.9	OFF	0:00:08
PM-07		30.0	4.0	2.3	N/A	25.2	25.2	29.8	30.7	27.7	28.5	25.0	25.1	55954	12.8	16.5	5.4	OFF	0:00:05
PM-08		30.0	3.4	N/A	N/A	29.8	30.3	29.5	29.6	28.1	27.9	28.4	28.4	62152	37.4	14.6	5.9	OFF	0:00:10
PM-09		30.0	4.0	N/A	N/A	30.9	29.0	27.8	28.6	29.0	27.0	27.8	28.1	42783	11.0	17.8	7.3	OFF	0:00:09

Fig 2. See real-time status and data from each one of your racks in a simple table view.

Status/CSV Records

Back Dashboard

Water Dashboard

Water Records

Home

Logout

TablePlot

System

Date and Time (in system's local time)

NamePM-01

Sample Rate10 min

Timezone: US/Central

From08/27/2017 00:00

To09/01/2017 23:59

Query

Export to CSV

Show / hide columns: ☒ Tank ☒ Component ☒ Temperature ☒ Pressure ☒ Power ☐ Miscellaneous

Show 8 entries

Basic	Tank								Component	Pressure				
System Local Timestamp	Set Value	Tank Top A 1	Tank Top B 1	Tank Top A 2	Tank Top B 2	Tank Top A 3	Tank Top B 3	Tank Top A 4	Tank Top B 4	Coolant Pump Speed	Backup System Active	Pump Float Switch	Coolant Pressure	Filter Pressure
2017-08-27 00:02:16	33.0	29.2	29.5	27.6	30.6	31.5	33.2	25.6	25.8	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 00:12:23	33.0	29.2	29.5	27.5	29.9	31.5	32.2	25.6	25.9	3.0	OFF	NORMAL	7.7	5.4
2017-08-27 00:22:30	33.0	29.2	29.4	27.6	30.2	31.5	32.5	25.4	25.7	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 00:32:37	33.0	29.2	29.4	27.3	30.7	30.9	32.8	25.2	25.4	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 00:42:44	33.0	29.2	29.3	27.3	31.5	30.5	32.7	25.1	25.3	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 00:52:51	33.0	29.1	29.1	27.1	31.4	31.0	32.5	25.1	25.2	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 01:02:57	33.0	29.0	29.2	27.1	31.5	30.5	32.1	25.3	25.4	3.0	OFF	NORMAL	7.6	5.4
2017-08-27 01:13:04	33.0	29.2	29.6	27.3	30.9	31.0	32.4	25.5	25.6	3.0	OFF	NORMAL	7.6	5.4

Showing 1 to 8 of 855 entries

Fig 3. Drill down to individual CDUs to track historical trends in a tabular or graphical form.

All in all, Foresight is a virtual, relentless employee on your data center team, that's obsessed with performance and uptime. Foresight allows you to focus on bigger better things, with the peace of mind of knowing that everything is running smoothly and efficiently.

To Learn More About Foresight and GRC's Patented Immersion Cooling Technology
Call 512.692.8003 • Email info@grcooling.com • Visit grcooling.com