



Solution: Remote Management
Country: USA
Company: VRTX Technologies

Benefits

- Instant and real-time access to all systems all over the world
- Possibility to change system settings without the need to call the customer or send out a technician
- Technicians can better prepare for onsite visits and always bring the appropriate parts



“The ability to get more frequent information, led to us changing some of the treatment system’s operation leading to better treatment and a more consistent VRTX offering.”

Carl Steffen
Engineering Services Manager, VRTX Technologies.

Netbiter improves VRTX’s offering to customers

VRTX Technologies in San Antonio, Texas delivers world-class treatment systems for cooling water used in HVAC, process cooling, and refrigeration systems.

Since their solutions are installed all over the world, VRTX needs to remotely access their Programmable Logic Controllers (PLCs) in order to monitor the performance of each system. However, getting access to the PLC through the customers’ IT systems is often a challenge.

When VRTX did the numbers, they realized that only 5% of their customers allowed them access to information about their systems. Carl Steffen, Engineering Services Manager at VRTX Technologies decided that something needed to be done. “With direct access to our PLC, we felt that we could monitor the operation of our system. We would be able to get alarms and see detrimental system operation, and thus be able to offer even better and more informed technical support,” says Carl Steffen.

After discussing with several customers, VRTX realized that they needed a cellular-based monitoring system for their treatment skids. This would enable them to monitor their systems and give customers access to the information without having to pass through their IT system. Consequently, VRTX created a detailed Systems Requirement Specification and started looking for a solution.

Finding the right system

Carl Steffen investigated systems from India, Germany, Brazil, USA as well as Europe. Most offerings appeared to meet many of the requirements but only one met them all – the Netbiter solution from HMS Industrial Networks.

“The initial reason we chose the Netbiter solution was that the gateway – Netbiter EC220 – offered the RS485 interfaces in a small, well-built device,” says Carl Steffen. “It also offered pre-programmed GSM cards that would immediately work in many of our desired countries without the need to negotiate with local cellular carriers. Although

the EC220 offered many standard IO connections, we initially only interfaced with our PLC via the Modbus interface." When it came to the web-based remote monitoring system – Netbiter Argos – VRTX spent several weeks customizing to meet their needs.

"We initially wanted to capture system information only once or twice a day. However, when we saw that we could get information on a more frequent interval, we realized the power of information and started seeing benefits for our customers that we did not first realize. The ability to get more frequent information, led to us changing some of the treatment system's operation leading to better treatment and a more consistent VRTX offering," explains Carl Steffen.

VRTX's list of system requirements:

1. Communication

We need a modem that can talk to our current PLCs. We want Modbus RTU RS485 or Ethernet communications as a standard. We also want a program that allows two-way communication.

2. Ease of initialization

We want an off-the-shelf system. Not one that requires us to work with a local cellular carrier each time we send a unit out into the field.

3. Web-based monitoring

We want a complete remote monitoring system that will not require us to purchase and then develop additional software platforms to poll our systems.

4. Pre-constructed templates

We want a solution that is easy to configure to meet our, and our customers' needs.

5. Information Flexibility

We want a system that allows live as well as historical information processing. The system should allow us to change which information that is gathered and at what rate.

6. Alarm Handling

We want a system that can identify alarm conditions, and send RSS and email feeds.

7. User Levels

We want system that allows several levels of users with different access rights and permissions.

8. Historical Information Downloads

We want a system that can export information in a format that can easily be used by our customers.

9. Information safety

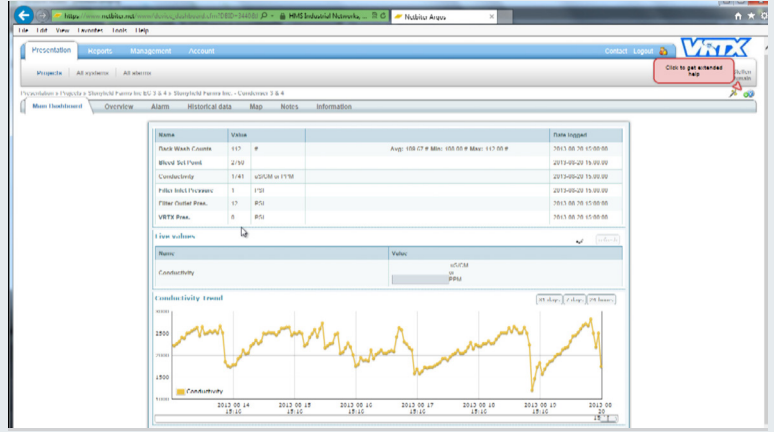
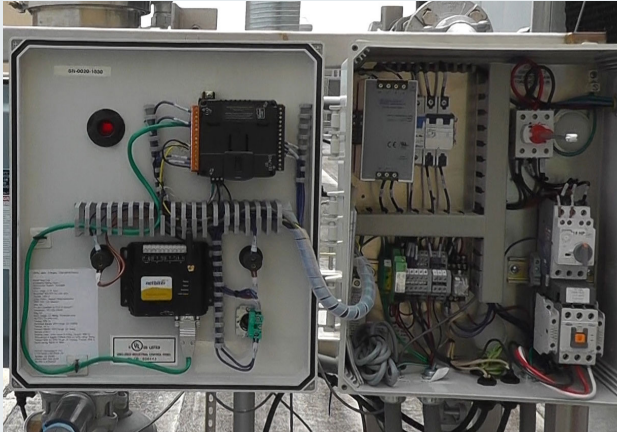
We want a system that is encrypted and well-prepared for any hacker attacks.

10. Growth Potential

We want a system that allows us to define the monitored parameters for each customer. Some of our customers measure parameters that were not used by other customers, so we need to be able to define what is captured for each treatment system.

11. Acceptable Costs

Since many of the systems in the field are owned by VRTX, it is important to find a monitoring system that will not break the bank.



VRTX's systems for cooling water are controlled by a PLC. A Netbiter gateway is connected to the PLC and sends data via the mobile network to Netbiter Argos. By logging into www.netbiter.net, VRTX and their customers can monitor and control their systems.

Rolling out the system

Since VRTX's initial rollout of the Argos system, they have continued to develop and refine the offering into a system that has been well-accepted by their customers. They have added their logos to the web dashboards and set up customer-specific solutions without having to pay HMS for customizing.

They have also been able to create levels of user control that allow onsite customer personnel to access their treatment system's information. The fact that corporate personnel is able to see information from several locations is also much appreciated. "Whenever there has been issues with the system, HMS's support system and personnel have been very good and have helped us in a timely manner," says Carl Steffen.

Constant improvements

To new users of Netbiter, Carl Steffen offers the following piece of advice: "Since this is a new product on the market, I would suggest that your system developers keep up with the latest manuals and instructions from Argos. Initially, we downloaded the instructions and manuals when we started the process, and I have learned that the Netbiter manuals and instructions have continued to be updated and freshened to keep up with their current offering."

Enabling improved customer offering

"As a user and developer, I would highly recommend the Netbiter solution," says Carl Steffen. "I have learned that our requirements continue to advance with our understanding of the power of information. It is extremely important to find a flexible system that will meet, not only your current requirements, but can grow as your requirements grow.

The ability to monitor our systems remotely was a decision that has saved us time and money and has increased the value of our treatment systems offerings."

The results

Carl Steffen summarizes the benefits of remote management in the following way: "Remote monitoring has increased the value of our treatment skids. It has enabled us to change system settings without the need to call the customer or send out a technician. It has enabled us to troubleshoot failures and have the appropriate repair parts on site as our technicians arrive. It has also given us an insight into the operation of our systems on a minute-by-minute basis, whereas in the past we only saw changes over long periods."

In fact, VRTX has decided to offer remote management not only with new systems, they have also started to look into how to retrofit remote monitoring onto existing systems. "Actually, I now have a hard time seeing even one of our systems operating without the use of a Netbiter remote monitoring system," concludes Carl Steffen.