

**Efficient EMS Management with
IT Foundation Management**



Challenges

Monitor and manage EMS systems with up-to-date technology and protect the flow of power to PacifiCorp customers by:

- Providing management capabilities, support, and early event alerts across the EMS
- Managing a mix of hardware systems and software applications, including legacy systems, from a single-pane-of-glass
- Enabling secure remote access to monitor and manage EMS servers located in Oregon, Wyoming, and Utah
- Automating as many daily work functions as possible

Solutions

This customer uses IT Foundation Management because it:

- Provides support for software and systems in an easy-to-monitor centralized management system, including legacy systems
- Eliminates the need to staff remote sites, allowing greater staff productivity
- Provides a single view of all nodes on the network, rather than requiring a unique login to monitor each one

Benefits

With IT Foundation Management, PacifiCorp is able to:

- Manage their EMS efficiently, to maintain an even, uninterrupted flow of energy throughout their service area
- Customize alerts and event notifications – the types of incidents that become major crises quickly if they are not addressed
- Manage the entire system across multiple states from a single screen at a single location
- Meet regulatory compliance requirements for NERC-CIP

QUICK FACTS

- Industry:** Utilities
- Annual Revenue:** \$4.4 billion
- Subscribers:** 1.6 Million
- Website:** www.pacificorp.com
- Product:** IT Foundation Management

PacifiCorp, one of the largest energy providers in the western United States, supplies electricity to approximately 1.6 million customers in five states. Its Energy Management System (EMS) controls the company's entire power grid, and must be monitored 24-7 to maintain an uninterrupted flow of energy throughout PacifiCorp's service area. PacifiCorp requires an effective warning system to alert it to events before they become problematic. Unnoticed events that lead to failures within the system could result in power outages across broad areas, affecting residents, businesses, and local government.



Efficient EMS Management with IT Foundation Management

“With IT Foundation Management, we can manage the entire system across multiple states from a single screen at a single location, and we know instantly if there is a problem.”
Ed Lim, IT Unix Specialist

Dated Technology Leads to Inefficient Processes and Systems

For many years PacifiCorp relied on the Polycenter Console Manager (PCM*) product to monitor its EMS (Energy Management System). The EMS is a crucial component in the company’s entire operation because it protects the flow of power to PacifiCorp customers. However, as PacifiCorp’s needs evolved to require early event detection and management, along with more efficient support of IT operations, the PCM product was not able to meet PacifiCorp’s needs.

Ed Lim, IT Unix Specialist at PacifiCorp, began looking at alternative software monitoring tools that would provide the managing capabilities, support, and early event alerts the company needs. He was concerned because PacifiCorp’s EMS included a series of older hardware systems and software applications, operating on an OpenVMS platform. These legacy hardware systems, including VAX 6000 and DEC hardware and legacy software applications, were more than 10 years old and needed to be covered by the monitoring and management solution. An added complication was the need to monitor and manage EMS servers located in Oregon, Wyoming, and Utah. Ed needed to find a solution that would automate as many functions as possible, allow remote secure access to the servers, and centralize the management functions.

Deploying IT Foundation Management to Centralize Management and Increase Efficiency

After researching available alternatives to PCM, Ed determined that the IT Foundation Management Solution from TDI Technologies would best meet all of his needs. He was further impressed with the company’s level of responsiveness and depth of knowledge over this problem space. This was particularly noticed regarding legacy infrastructure. “They had a comprehensive understanding of the OpenVMS platform, and honestly understood our operating environment,” he said. TDI Technologies sent a team of specialists out to PacifiCorp for a three-day installation and amazed Ed with their ability to assess the company’s needs and install the system quickly and effectively. “I couldn’t believe it,” Ed said. “When they said *three day installation*, I thought I’ll believe it when I see it. Well, they had it up and running in one day, with no problems.”

*Polycenter Console Manager (PCM) is a legacy product developed by Digital Equipment Company (DEC), later acquired by Computer Associates (CA)

Dramatic Improvements in Efficiency, Effectiveness, and Ease-of-Use

With the old system a separate login was required to monitor each network node and the system could only support a total of 15 network nodes. This made operations complex, time-consuming, and error prone. With IT Foundation Management, PacifiCorp now manages all 33 nodes on their network in a single view, with highly optimized processes across all nodes.

“Obviously that was very slow and time consuming. Now we have a single snapshot of the network,” he said. “We can manage the entire system across multiple states from a single screen at a single location, and we know instantly if there is a problem. The entire system is much faster and easier to operate and so much more effective.”

With IT Foundation Management work is completed faster, it costs less, and fewer errors are made—and when the occasional mistake does happen, PacifiCorp is able to catch those mistakes before any real harm can be caused.

Greater Productivity and Flexibility

By providing secure remote access and centralized management, IT Foundation Management eliminates the need to staff remote sites, and allows greater productivity for Ed and his team. “We don’t have the time and budget to travel to our out-of-state servers, sometimes just to push a button,” he said. “Our team is freed up to expand our responsibilities and contribute more to the company and our customers.”

IT Foundation Management is flexible and allows PacifiCorp to customize alerts and event notifications—the types of incidents that become major crises quickly if they are not addressed. Because it provides for secure remote access, Ed can monitor and manage the EMS from virtually anywhere. IT Foundation Management also accommodates PacifiCorp’s growth. Already the network has more than doubled from 15 to 33 nodes, and there are plans to add 30 more in the coming months.

The Advantage of Compliance

Now that PacifiCorp is managing and monitoring its EMS with IT Foundation Management the change records required to prove compliance with NERC-CIP are automatically captured, digitally signed, and stored for them. They no longer have to manually document changes and create audit trail change documentation—it is done automatically for them by the ConsoleWorks IT Foundation Management solution.