

Key Benefits

- Complete network visibility, including hosts, applications, and vulnerabilities
- Accurate measurement of risk over time
- Automation of ongoing compliance assessments
- Enabled PG&E to shift focus to external security intelligence
- Big win for Information Systems Security and for Security Risk Management—making both organizations more effective and efficient

PG&E at a Glance

- One of the largest natural gas and electric utilities in the United States
- 5.1 million electric customer accounts
- 4.2 million natural gas customer accounts
- 123,054 circuit miles of electric distribution lines and 18,610 circuit miles of interconnected transmission lines
- 40,123 miles of natural gas distribution pipelines and 6,136 miles of transportation pipelines

Pacific Gas and Electric Company

Large Utility Implements Metrics Based Security Risk Management System with nCircle

Pacific Gas and Electric Company (PG&E), incorporated in California in 1905, is one of the largest combination natural gas and electric utilities in the United States. The company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. Pacific Gas and Electric Company is highly regulated as a critical infrastructure provider and also as a publicly traded corporation.

Over 76% Risk Reduction Achieved in the First Year

When Seth Bromberger joined Pacific Gas and Electric as manager of the company's Information Systems Security group, his charter was to redefine the information security process by setting policy, centralizing security functions, and applying standardized security practices across the enterprise. There were formalized compliance and risk management programs in place, but the group primarily set policy and worked on implementation of security controls at the invitation of each individual business unit. One issue Bromberger identified was the lack of an objective method to measure and track tactical security risk. The existing risk management program, headed by security risk manager Joyce Pefferman, focused on a strategic view of information security risk as it applied to business processes; there was no program in place to evaluate new and emerging vulnerabilities and threats in real time. During his first year at PG&E, Bromberger implemented processes and systems that helped the company quantify this tactical risk and set an aggressive goal of reducing enterprise network security risk by 40%. By using the newly implemented processes and systems, Bromberger's team overachieved on their goal and delivered actual risk reduction of over 76% in the first year.

Developing High Impact Security Measurements

Bromberger and the Information Systems Security group quickly realized they would need an enterprise-wide tool to consistently measure their security risk and track their progress against goals. Their existing systems did not provide a comprehensive view of vulnerabilities, a process for evaluating susceptibility of systems to new vulnerabilities, or an accurate inventory of network-attached systems. "Just because we never had a problem didn't mean we were secure enough or at a security risk level we wanted for the business," stated Bromberger. As time was of the essence, they used an accelerated selection and deployment process, evaluating nine products and selecting and implementing nCircle IP360™.

The immediate goals for the implementation were to discover all information assets and devices, identify and prioritize systemic vulnerabilities, deliver advanced data analysis and use this information to drive security policy and awareness. "Information Systems Security achieved some immediate benefits with the implementation of nCircle IP360. For the first time we had an unparalleled view of network assets and a system that could deliver an up to date view of security risk with consistent and repeatable results," according to Bromberger. They were able to identify and prioritize all vulnerabilities on their network devices and create the first objective measure of tactical information security risk for the PG&E network. The results were fed back into the strategic risk assessment.



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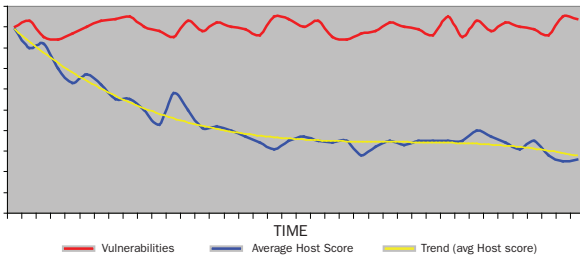
Seth Bromberger Manager, Information Systems Security
Pacific Gas and Electric Company

Before setting their goals and going to work on addressing their areas of highest risk, PG&E conducted their own evaluation of the nCircle vulnerability scoring model to ensure that the product could provide relevant, accurate metrics relating to systemic vulnerabilities. They selected a sample of vulnerabilities and created their own relative scores. After comparing these to the nCircle model and scores, Bromberger’s team concluded that they would accept nCircle’s scoring method to calculate their overall risk profile by device.

Using Actionable Intelligence to Reduce Risk

Bromberger’s team put nCircle’s actionable intelligence to work for PG&E right away. They decided to use the Average Host Score as a key metric to measure and track their progress as an organization. The Average Host Score is the total score of all vulnerabilities averaged across all network devices over a period of time. Comparing host scores over time shows which devices are introducing the most risk to the network. Through this indicator, they found that the top ten systemic vulnerabilities represented almost 70% of their IT security risk. The team then set their first year goal of reducing their average host score by 40%.

For the first time ever, the Information Systems Security Group was able to work with the IT operations teams to prioritize work and remediate the areas of highest risk first. The immediate focus was on systems possessing one or more of the top three systemic vulnerabilities. To further improve the process, they provided detailed remediation tasks for each system using the nCircle IP360 remediation recommendations. The information provided by IP360 offered real time feedback to the operations team to show the effects of their remediation efforts and helped gain their support in adopting the goals set by Bromberger’s team.



High Impact Reporting—A Key to Success

The PG&E Information Systems Security Group began reporting weekly on the overall progress in risk reduction to senior management. To ensure consistency in the quality of data reported, Seth set the benchmark of the minimum number of hosts they would have to scan each week to publish the analysis. This kept the credibility of the work and progress very high.

Using the above report in their security dashboard showed the steady progress that Bromberger’s team made in bringing down PG&E’s overall information security risk.

“nCircle IP360 has delivered in measuring tactical risk.” Bromberger also looked for other ways to add value as the team continued to remediate the highest risk areas and reduce their risk scores. The team won credibility right away with the fast information they were able to produce. “Everyone was working on security—consistently doing the right things—but we did not have a way to measure our progress or success,” stated Bromberger. “Senior management’s complete support of the new vulnerability management program helped ensure that we were able to prioritize and measure all the efforts being put into vulnerability remediation.” With consistent and objective reporting and clear goals, Bromberger’s team was able to dramatically overachieve on their initial goal and exceed a 60% reduction in the first year.

A Real-time Quantitative View of Risk

Bromberger’s innovative approach to security management is based on the foundation that a risk and vulnerability process is iterative. The Information Systems Security Group has developed a unique threat analysis methodology that enables them to map the capabilities of threat agents to vulnerability requirements, delivering another type of tactical risk analysis. New vulnerability information is scored and analyzed against existing priorities as they are detected, resulting in immediate adjustments in the overall risk profile. This real-time quantitative view of network risk allows Bromberger’s team to adjust priorities in PG&E’s changing environment as needed—making the best use of limited resources.



nCircle
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nCircle is the leading provider of Information Risk & Security Performance Management solutions to more than 6,500 businesses and government agencies worldwide. nCircle solutions enable enterprises of all sizes to 1) automate compliance and reduce risk, and 2) measure and compare the performance of their IT security program with their own goals and industry peers. nCircle solutions may be deployed on a customer’s premise, as a cloud-based service, or in combination, for maximum flexibility and value. nCircle has won numerous awards for growth, innovation, customer satisfaction and technology leadership. nCircle is headquartered in San Francisco, CA, with regional offices throughout the United States and in London and Toronto. To learn how you can more effectively protect your company visit us at www.ncircle.com

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