

NAES leverages NP-View to help optimize the security and compliance of networks at more than two hundred energy generation facilities in all six NERC regions.

Background

NAES is an independent services provider dedicated to optimizing the compliance of energy facilities across the power generation landscape. More than four thousand NAES team members with extensive experience in operations, maintenance, construction, engineering, and technical support build, operate, and maintain both traditional and renewable resources.

NAES is a Registered Entity with experience in all six North American Electric Reliability Corporation (NERC) regions. The organization’s capabilities and experience in NERC compliance are born out of a mandate to comply with NERC regulations at the fleet of power plants that NAES operates. With more than two hundred Generation Entities, forty-nine are NERC Registered Entities.

Case Study

Industrial Control Systems are made up of multiple control networks supplied by various vendors, such as Siemens, GE, Emerson, and Rockwell. Some of these vendors require interactive remote access for services, maintenance, tuning, and patch deployment.

Contractors and vendors accessing these networks provide a much-needed function for operational continuity. However, by doing so, they pose a risk when they access the network. Ensuring that vendor accesses respect the principle of least privilege and keep a manageable attack surface to protect is a critical priority for both NAES and its customers. Modeling and understanding network connectivity are key steps to verifying the exposure of critical assets.



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NP-View

NP-View is designed to determine connectivity offline and to conduct a thorough examination of firewall, router, and switch configurations. It flags any breaches of security regulations, guidelines, or best practices. Anyone may easily comprehend concerns thanks to the network visualization. The automated analysis results can be easily converted into actionable security and compliance reports, reducing the likelihood of human error and cutting time spent auditing firewalls by 50 percent on average.

Additionally, NP-View delivers a **continuous network access monitoring solution** that operates in the background and automatically warns stakeholders when a network configuration change impacting compliance or security happens.

The application automatically constructs the topology of the network and then verifies connectivity paths to ensure compliance with Critical Infrastructure Protection (CIP) criteria by parsing configuration files from firewalls and routers related to Electronic Security Perimeters.

NAES Network Security Before and After NP-View

Previously, evaluating and fortifying NAES’s network security was a challenge.

“It was brutal,” said Michiko Sell, NERC CIP Services Supervisor. “Back then, we would have to take the raw file and parse it manually. I simply did not have the capacity to handle the work quickly and efficiently. Thankfully, we now use NP-View.”

NP-View allows Michiko’s team to review all their external facing Operational Technology (OT) firewalls for misconfigurations, discover all overly permissive rules that are allowing access into the control environment, and uncover any unintended open paths that can increase the attack surface.

Best-In-Class Customer Service

NAES is fully dependent upon the reliable operations and output generated by NP-View.

“We value that the support we receive is best in class regarding responsiveness, timeliness, thoroughness, and reliability,” said Michiko. “These things are very important to our operations.”

Michiko is so pleased with how NP-View supports the work of her team that she has suggested that Network Perception start a user group. “There’s a lot of learning and feedback to be gleaned from the superusers,” she said.

“NP-View is truly a saving grace.”

I can’t say enough about what Network Perception is doing for the industry. I don’t know of any other product that comes close to doing what NP-View does.”



Michiko Sell
NERC CIP
SERVICES SUPERVISOR,
NAES

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How NAES Leverages NP-View



Network Security Configuration Analysis

NAES uses NP-View to conduct network security configuration analysis. Michiko’s team looks at the applicable scope of a Registered Entity’s network to identify weaknesses. The Registered Entity receives a clear actionable report to make the appropriate changes and better secure the network. Learn more about [Network Risk Assessment](#).



Access Control Rules (ACL) Analysis

ACL is a part of NAES’s evidence and compliance process. “We’re not only looking at the topology from a connectivity standpoint,” said Michiko. “We’re also looking at the rules themselves and checking those rules to make sure that sources and destinations are well defined and ports and services are justified. If there’s anything that gives us pause, we bring that to the attention of the responsible entity.”

With NP-View, NAES has been able to audit a facility’s networks, including those that require third-party vendor remote access. When working with one of NAES’s customers that had requested an audit, NAES uncovered an undocumented and overly permissive vendor’s remote access, which was promptly fixed. Learn more about [Policy Review](#).



Education and Decision Making

NAES also works directly with plants, and “during team meetings at plants, we have NP-View open and running to show meeting participants the active paths,” said Michiko. “For some entities that have workers in the field who understand NP-View’s reports, I encourage them to adopt NP-View. That way, they can monitor their networks continuously to ensure that configuration changes they’re making are working as intended without having to wait for us to conduct an analysis.” Learn more about [Architecture Review](#).



Evidencing Compliance

When Michiko’s team thinks about evidencing compliance, safety comes first, and it’s impacted by physical security controls, electronic security controls, and cybersecurity incident response processes. According to Michiko, “NP-View is the perfect solution for collecting evidence of compliance and ensuring safety.” Learn more about [Audit Assistance](#).

NP-View helped NAES reduce the time spent on electronic access reviews by

50%