



COMPLETE TRACKING AND EVALUATION SOLUTIONS FOR NERC PRC-027 COMPLIANCE

NERC PRC-027 Compliance

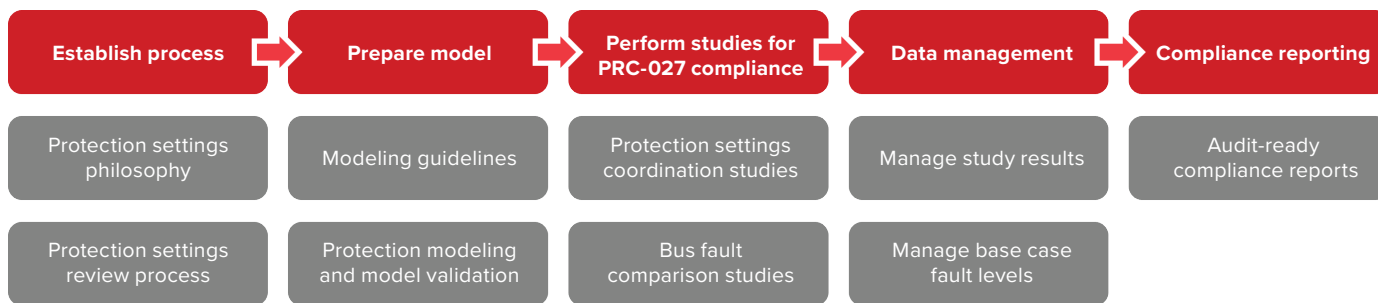
Quanta Technology offers complete solutions for meeting the requirements of the PRC-027 compliance standard, assisting utilities in all aspects from process definitions to tools for tracking, coordination evaluation, and documentation.

These solutions leverage software automation and powerful protection simulation capabilities to enable efficient and comprehensive evaluation of protection coordination performance and compilation of audit-ready reports for proof-of-compliance.

The PRC-027 standard is intended to maintain the coordination of protection systems installed to detect and isolate faults on the Bulk Electric System (BES). It requires transmission owners, generation owners, and distribution providers to perform periodic review of the coordination of these protection systems to ensure that the protection systems operate in the intended sequence during faults. The scope of elements that must be studied is determined based on criteria defined in the standard, requiring applicable entities to track elements and metrics in addition to performing reviews. PRC-027 compliance covers many different aspects, some requiring significant effort for preparation and execution. Therefore, it is important to plan ahead and adopt an approach that is comprehensive and provides long-term efficiency.

Quanta Technology provides automation-based solutions that can assist utilities with all aspects of PRC-027 compliance, such as establishing processes, preparing the protection model for coordination studies, performing the studies, data management, and compliance reporting. By combining our expertise in protection systems analysis with innovative automation tools, our solutions leverage advanced protection modeling and simulation capabilities to offer a comprehensive and efficient approach to meeting PRC-027 requirements.

Solutions for all aspects of PRC-027-1 compliance

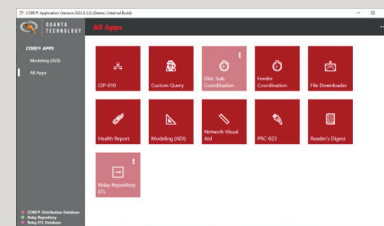


PICTURED: Quanta Technology can assist with every step of meeting PRC-027 requirements, from process development through to performing the studies and compiling proof-of-compliance.

CORE Suite

The PRC-027 Compliance tool is a module within the CORE (Compliance, Operations, Reliability, Engineering) Suite of automation tools. CORE is Quanta Technology’s platform for automation-based solutions to address data, simulation, evaluation, digital transformation, and reporting needs.

The CORE platform enables seamless sharing of data and integration of processes across modules and applications. For compliance with this standard, the PRC-027 module integrates with the Wide-Area Protection Coordination module to provide users with an efficient and comprehensive solution to compliance evaluation.



PICTURED: CORE is a unified platform for digital transformation applications

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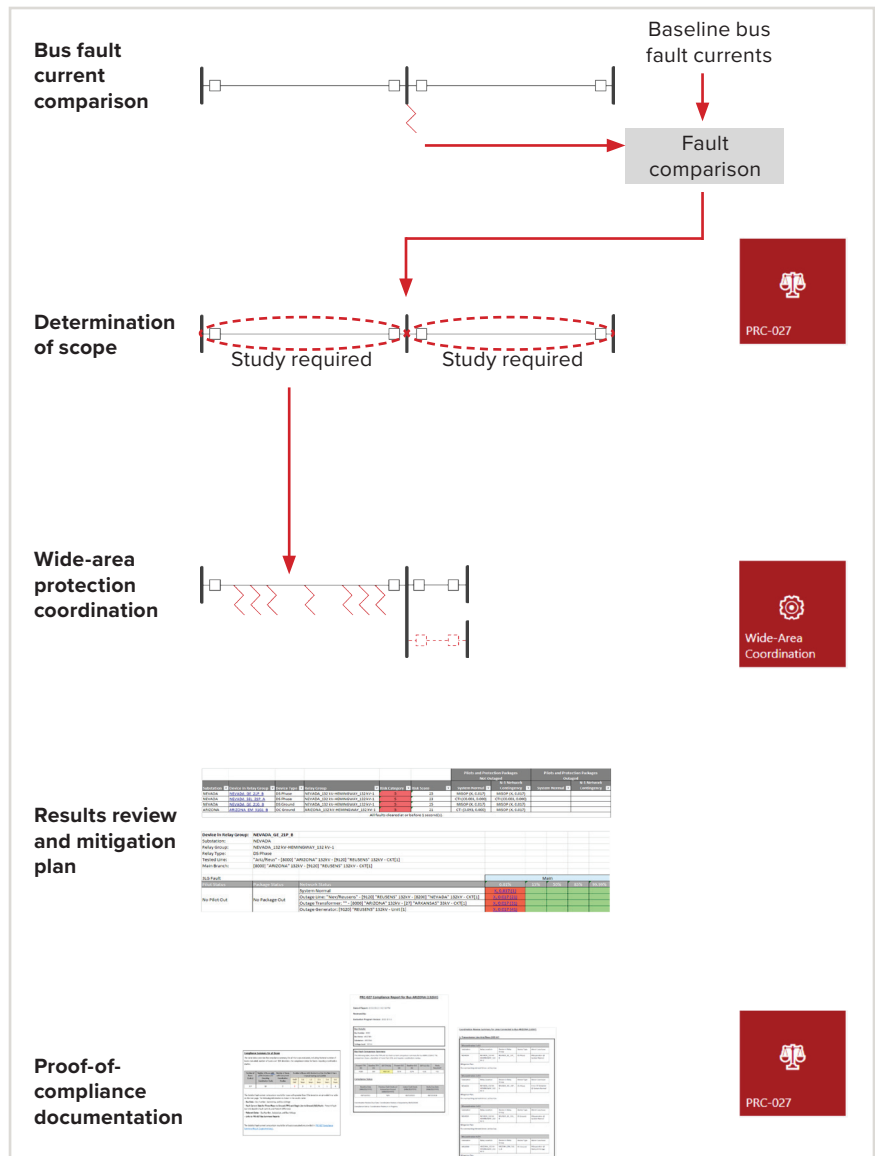
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PRC-027 Requirement R2

Requirement R2 represents the primary actionable component of the PRC-027 standard, calling for periodic review of protection coordination on the BES system to ensure proper order of operations are maintained. The scope of which BES elements (lines and transformers) need to be studied is determined based on criteria provided in the standard. Although some options, such as bus fault comparisons, may enable fewer coordination studies to be run, they may introduce additional complications such as baseline tracking and comparison mechanisms. Effective compliance with PRC-027 requires processes and tools for all aspects of the standard in addition to the coordination studies. Quanta Technology can assist utilities with every stage of a PRC-027 compliance program, utilizing automation-based tools to efficiently perform tracking and management, comparisons, simulations, information post-processing, and documentation generation.

- **The CORE™ PRC-027 Module** performs the baseline tracking and bus fault current studies and comparison to determine the scope of the coordination studies, and to take the reviewed study results and generate audit-ready documentation.
- **The CORE™ Wide Area Coordination Module** performs the coordination studies themselves on the BES elements determined to be within scope. The study results are post-processed to provide users with a better view and organization of the output data.



PICTURED: Quanta Technology's PRC-027 and Wide-Area Coordination module work in concert to provide users with a complete solution for PRC-027 compliance.

Further Information

For more information, please see our website, conference publications, and demonstration video of our solutions for PRC-027 compliance.



[Website](#)



[Automated Approach for Compliance with NERC PRC-027-1 Requirements for Protection System Coordination of BES Elements \(2019 Texas A&M Conference for Protective Relay Engineers\)](#)



[Demonstration of our tools for PRC-027 compliance](#)

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