

# Solving a National Problem

## McAfee® Critical Infrastructure Protection

The risk of cyberattacks on critical infrastructures is no longer theoretical. Grid operators are investing aggressively in both physical and information security systems, and there is accumulating guidance from governments worldwide on measures that should, and, in some cases, must be taken to secure the supply and delivery of electricity.



## SOLUTION BRIEF

Building security into the grid can be challenging. Infrastructure elements can be very long-lived, and it might not be practical to replace equipment and applications with new versions that have security designed into them—which is optimum. In addition, availability of service is paramount for the grid, so common IT security measures, such as patching and rebooting, are inappropriate. Security for critical infrastructure needs to be non-invasive but simultaneously extremely robust.

### **An End-to-End Defense for Critical Infrastructures**

Against this backdrop, McAfee, along with Intel and its subsidiary Wind River, have been designing a solution to secure not only new, but also legacy infrastructures. Working with the Center for the Commercialization of Electric Technology (CCET) and the Electric Power Group (EPG), McAfee has come up with a breakthrough solution: McAfee Critical Infrastructure Protection (McAfee CIP). The solution works by separating the security management functions of the platform from the operational applications so that the operational layer can be robustly secured.

The beauty of the McAfee CIP approach is that it works for both new and existing infrastructures, and implementing it with existing systems is not only

feasible, but also cost effective. This is a huge benefit—the solution can be applied without requiring any changes to business processes or application software, and it can be retrofitted onto existing systems. McAfee CIP takes full advantage of hardware-based security fundamentals and a robust set of software technologies to monitor and protect critical systems end-to-end.

### **Field Trial: Protecting Synchrophasor Applications Is Critical**

Since December 2013, the McAfee CIP has been in a field trial at Texas Tech University (TTU), where it is demonstrating protection of EPG's synchrophasor applications, which analyze in real time power delivery failures such as those that would be caused by a cyberattack. By protecting the synchrophasor analytics, the heart and health of the system is protected from malicious cyberattacks and infrastructure attacks.

This solution also has undergone extensive and independent penetration testing by the university's computer science department engineers. Since the time it has been installed, the Heartbleed vulnerability and Havex attacks have further increased awareness of grid vulnerabilities. Since delivering panoramic situational awareness is key to the solution, engineers were able to prove how McAfee CIP protects against these recent vulnerabilities.

## SOLUTION BRIEF

### Robust Security for New and Legacy Infrastructures

While the TTU field trial deploys the solution for securing synchrophasor analytics, the McAfee CIP can be applied to many other critical infrastructure systems that need robust managed security. It would be equally effective for military applications, the oil and gas industry, and medical applications, to name just a few. McAfee CIP addresses the fundamental security building blocks of device identity, malware protection, data protection, and resiliency—all tailored for today's machine-to-machine environments. And because this sophisticated and extensive solution can secure both new and existing infrastructures, it holds tremendous promise for securing the grid.

### Learn More

---

For additional information on how McAfee helps protect your critical infrastructure security, visit our embedded security software and solutions website ([mcafee.com/embedded](https://mcafee.com/embedded)).



2821 Mission College Boulevard  
Santa Clara, CA 95054  
888 847 8766  
[www.mcafee.com](http://www.mcafee.com)

McAfee and the McAfee logo are trademarks or registered trademarks of McAfee, LLC or its subsidiaries in the US and other countries. Other marks and brands may be claimed as the property of others. Copyright © 2017 McAfee, LLC. 62074brf\_natl-prob-cip\_0915  
SEPTEMBER 2015