Unofficial Comment Form

Project 2016-02 Modifications to CIP Standards

Virtualization and Future Technologies: Case for Change White Paper

**Do not** use this form for submitting comments. Use the [Standards Balloting and Commenting System (SBS)](https://sbs.nerc.net/) to submit comments on the **Virtualization and Future Technologies – Case for Change White Paper**. Comments must be submitted by **8 p.m. Eastern, Friday, June 28, 2019**.  **m. Eastern, Thursday, August 20, 2015**

Additional information is available on the [project page](http://www.nerc.com/pa/Stand/Pages/Project%202016-02%20Modifications%20to%20CIP%20Standards.aspx). If you have questions, contact Standards Developer, Jordan Mallory (via email) or at (404) 446-2589.

## Background Information

Many entities in the Electricity Sector have implemented virtualization as part of their CIP programs. Many of these same entities, however, have implemented this new technology without taking full advantage of virtualization’s advanced capabilities. There are a number of reasons for this, from the constraints of the current NERC CIP standards architecture to the ongoing ambiguity around how new virtualization technology applies to CIP compliance. Some of those who are implementing virtualization are experiencing a great deal of uncertainty and difficulty around developing implementation strategies that will support compliance and achieve greater reliability and security. The Project 2016-02 Standard Drafting Team (SDT) was assigned the task to address the technological innovation in virtualization within the CIP standards.

This paper presents the SDT’s case for change to the NERC CIP standards. It discusses what is needed to allow for the innovative security techniques and new concepts brought about by virtualization. It outlines several technical areas where either prescriptive network topology in the standards or ambiguity around how to handle new security capabilities create issues. The paper then describes a high level way forward using new definitions for the virtualized environment. It also changes some requirements to technical security objectives, stating what security objective to achieve, but allowing the entity to choose the technology to accomplish it.

The SDT is interested in any comments you may have on the white paper.

## Questions

1. Do you agree with the case for change based on the virtualization issues discussed in the white paper? Please provide comments.

[ ]  Yes

[ ]  No

Comments:

1. Do you agree with the proposed path forward as discussed in the white paper? Please provide comments.

[ ]  Yes

[ ]  No

Comments: