

## System Engineering a Scalable Cyber Warfare Test Environment

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*The Test and Evaluation (T&E) community is at the forefront of meeting the challenges presented by the cyber security attacks on U.S. infrastructure, industry and individuals. The Information Sciences Institute of the University of Southern California, along with personnel from the California Air National Guard and a major National Laboratory, have developed a set of simulations and techniques for use by small cyber security units. These new approaches should be directly applicable to the T&E. This paper focuses on our research and development (R&D) efforts, which used HPC to stand up this low-cost fully operable simulated cyberspace environment. The designers recognized the necessity of having effective methods of capturing, logging, archiving and displaying the resultant data. The paper will close with an analysis of the utility of this approach, its extensibility into other areas, and future research requirements.*

**Key Words:** System Engineering, Cyber Security, Scalability, Small Units,

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