

## **Information Assurance Network Assessment**

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The purpose of my AIAD at Army Research labs was to aid in the construction of the IANA (Information Assurance Network Assessment), a computer program that will help the Survivability/Lethality Analysis Directorate (SLAD) determine the vulnerability of Army networks. My focus while at White Sands was to research the various names of operating system and network exploits, the methods used by hackers to enter or manipulate a network, their purpose, and determine if there was an existing correlating attack in the current IANA set of tests. The IANA itself allows the user to execute their choice of exploit on a targeted system to mimic a true hacker incursion. I also found and retrieved circulating exploit code for use in the IANA. This code often had syntactical errors, and required considerable debugging due to the secretive nature of the black hat community. Overall, I achieved a greater level of understanding of network vulnerabilities and the current methods to exploit them, as well as a practical knowledge of several commonly used programming languages (Perl, Python, C), and I contributed to ARL SLAD by increasing their knowledge base of exploits and the effectiveness of the exploits to be used in the system.