Real Jobs RI Cybersecurity Roundtable

NOTES FROM 30 APRIL 2018 MEETING

Attendees

Academia

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Industry

Stuart Bryan, IM Technology
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After introductions, the employees in industry discussed disciplines, knowledge, skills, and abilities they currently need in job seekers and future needs.

Naval Undersea Warfare Center (NUWC): Merging cyber and engineering so that cyber is built in from design to testing to production. LINUX operating system experience needed. Students need to understand policy and planning: why we are doing what we're doing, e.g. NIST 800-171. For students interested in civil service, need to understand clearance process and factors that will affect ability to obtain-the earlier the better.

I-M Technology: Need candidates with LINUX and cyber: recent job opening yielded 100+ applicants, 3 with cyber, 1 with LINUX. Like NUWC, see merging of cyber with engineering; also need customer service communications-ability to relay information in non-technical terms. Required reading at I-M Technology is the "Phoenix Project: A Novel about IT, DevOps, and Helping Your Business Win." Factor in clearance is personal finance risk so students carrying heavy or bad debt may not be able to obtain; need to be educated early about it.

McLaughlin Research Corp. & NeQter Labs LLC: Need to educate students about social media footprint and how can affect future job prospects and security clearance if interested in defense sector.

Appropriate language for the business setting, e.g. speaking, writing emails. Affirm need people with LINUX OS experience and skills as well non-technical communication skills.

Rite-Solutions: Need scripting languages such as Java, Python. For cybersecurity, students need to know the fundamentals of what they are trying to secure. Different DoD labor categories require different certifications so can use them as a tool to determine job fit.

SEA Corp.: For CS and cybersecurity students wanting to enter into defense sector, really need to focus on DoD directive 8140 which provides guidance and procedures for the training, certification, and management of any full or part-time military service member, contractor, or local nationals with privileged access to a DoD information system performing information assurance (security) functions -- regardless of job or occupational series. These individuals are required to carry an approved certification for their particular job classification. 90 percent of government systems run on LINUX OS. Need to have networking knowledge. Soft skills include writing and the Risk Management Framework (RMF) process that integrates security and risk management activities into the system development life cycle.

Academia then discussed what each have and are working on for future workforce needs.

Community College of Rhode Island (CCRI): In 2017, stood up Associate in Science Degree in Cybersecurity; includes a required internship with weekly journaling and putting together a portfolio. Submitting application for NSA/DHS designation as a National Center of Academic Excellence in Cyber Defense for Two-Year Education (CAE2Y). Prospective schools are designated after meeting stringent CAE criteria and mapping curricula to a core set of cyber defense knowledge sanctioning. Emphasizing to students they develop a toolbox in school, then build upon it in work and non-school time. Teaching LINUX and Bash capabilities (Bash is a command processor that typically runs in a text window, where the user types commands that cause actions).

New England Institute of Technology (NEIT): Has a bachelor's degree in Cyber Security and Network Engineering; upon completion students are eligible to take recognized certification exams including the CompTIA Security + and Network+ exams; the Cisco Certified Network Associate Certification (CCNA); and the Microsoft Certified System Administrator (MCSA). Focusing on teamwork, business planning, and building in certifications. NEIT is developing a master's in cybersecurity.

Salve Regina University: Offer certificates in cybersecurity and health care administration, cybersecurity and intelligence, and digital forensics; master's in administration of justice and homeland security with a concentration in either cybersecurity and intelligence or digital forensics, which Salve is pushing down into undergraduate level. Bringing back minor in computer science. Soft skills baked in, especially in writing; discrete math and Python are taught in undergraduate as well as theory and policy. A strength at Salve is the global culture competency course, especially as cyber threats are international now.

University of Rhode Island: Cybersecurity coursework is primarily online now, URI pulling undergrads back into classroom since were seeing issues with the soft skills. Offer minor in digital forensics or cyber security; graduate certificate in digital forensics or cyber security, online only; professional science master's degree in cyber security, online only; and master's degree in computer science with a concentration in digital forensics or cyber security.

Takeaways from the roundtable:

- Cybersecurity needs to be included in all IT coursework.
- With the Internet of Things here, cyber must be built/baked in from design onward.
- Clearances are an issue in the defense sector, so students need to be educated early on to mind their social media posts, finances, and international travel.
- Students need exposure to different operating systems, especially LINUX if they want to go into the defense sector.
- Roundtables need to be held early October and early March for changes to happen in curriculum/course work.