**NICE Working Group**

**Meeting Minutes**

**Date: July 27, 2016 Time: 3:30 PM EST**

**SharePoint Page:** [https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG](https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG/)

1. **Roll Call and Ground Rules**

* Danielle Santos, NICE Program Manager, welcomed members to the meeting and stated that the Adobe Connect chat box feature should be utilized to provide feedback and ask questions.
* Danielle also noted that participation in the NICE Working Group (NICEWG) is not intended for advertising and promotional purposes and to keep this in mind when participating and using the chat feature.

1. NICE Program Office Updates

* Rodney Petersen, NICE Program Director, introduced two new NICE program office staff members under NIST. Marian Merritt is the liaison for industry engagement and the Career Development and Workforce Planning subgroup. Marian’s background includes a lengthy tenure at Symantec. Please reach out to Marian, especially for-profit and industry folks seeking to develop the cybersecurity workforce. Clarence Williams is the NICE government engagement liaison, and the liaison for the Training and Certifications subgroup. Clarence’s background includes work at DHS Immigrations and Customs Enforcement. His interest is in not only the federal government but also state, local, and international.
* The Regional Alliances and Multistakeholder Partnerships to Stimulate (RAMPS) Cybersecurity Education and Workforce Development Grant application period has closed. Many applications were received and are under the review and approval process. The program office appreciates the interest and a final award announcement is expected mid to late September.
* The NICE staff has been present during this busy conference season, attending a series of academic related conferences such as the National Cyber Summit, The Colloquium for Information Systems Security Education (CISSE), and 3CS. NICE staff seeks to expand the network and share what we’re doing. NICE also has the ability to do exhibits and displays. On a limited basis, NICE may be able to attend your events. The NICE staff continues working towards implementing the values, mission, goals, and objectives in the strategic plan.
* One pagers have been developed to promote the following:
  + Cybersecurity Workforce Demand
  + National Centers of Academic Excellence in Cyber Defense (CAE-CD)
  + Advanced Technological Education Program (ATE)
  + CyberCorps: Scholarship for Service (SFS)

There are plans to develop more one pagers in upcoming months.

1. Opening Remarks

* President Kathi Hiyane-Brown, NICEWG Academic Co-Chair, welcomed members to the meeting and offered thanks to the consistent meeting participants. The information on activities and initiatives provides a great benefit to members. As an example, the cyber camp currently taking place at Whatcom Community College, allows exposure to careers and opportunities as well as builds awareness for participating students.
* Andre Thornton, NICEWG Industry Co-Chair, reminded the group to use the chat log for comments and questions.

1. Standing Items
   1. **Fun Facts – creating a culture of evidence**
      * Clarence Williams presented on the CSIS Report on the international shortage in cybersecurity skills. Facts from the Center for Strategic and InternationalStudies (CSIS) emphasizes the need for cyber workforce development.
      * The data results show an increased need for cyber education. From a risk management point of view we ask how this can be mitigated. Direct and measurable damage is done to an organizations reputation through data loss and cyber-attacks. Three out of four respondents believe the government is not investing enough funds in building cybersecurity talent. Finally, there is a high interest in the thought that technology could help compensate for skills shortages.
      * Global education rankings are available and show how much countries are investing in their education capital. The top tiers invest a higher amount of capital.
      * The study as a whole emphasizes a need for increased cyber education, workforce development, and an increase in cybersecurity professionals. Improvements in education, workforce diversity, training opportunities, security technology, and data collection will support the efforts.
      * Find out more here: <http://www.mcafee.com/us/resources/reports/rp-hacking-skills-shortage.pdf>
   2. **Report Roundup – learning from good ideas**
      * Rita Heimes, Research Director, International Association of Privacy Professionals (IAPP), spoke about How IT and InfoSec Value Privacy.
      * The IAPP is a non-profit policy neutral company supporting people to be responsible privacy professionals. The IAPP performs research and marketing. The members consist of about 40% lawyers and the other 60% from a variety of background in business, marketing, and cyber. The goal is to take an active look at how privacy and security relate to one another.
      * Privacy and security are different. To many, privacy means to not be observed or controlled, to retain anonymity, and have the ability to choose. Privacy encompasses rights and responsibilities.
      * This study set out to ask companies how they define privacy risk and what concerns those regarding cyber-attacks, intrusions, and unauthorized access of data. The findings show a high concern, especially with regard to the harm it can bring, to their reputation and brand when personal information is leaked. Protecting PII is of the upmost importance. This study shows that privacy roles can reduce risk.
      * Reportedly, investments in privacy have increased for the use of privacy tools, while streamlining data collections, data mapping, inventory, policy implementation and vendor management rank high in importance.
      * Takeaways include the importance of privacy knowledge and developing skillsets for professionals to communicate within the organization. These skillsets should be seeded at an academic level offering privacy components in their coursework. Law and business schools offer privacy in cybersecurity. Building a network of academic contribution, syllabi, and coursework has a way to go.
      * Please contact Rita If you’d like to contribute and help grow the network. [rheimes@iapp.org](mailto:rheimes@iapp.org)
      * Find out more here: <https://iapp.org/media/pdf/resource_center/IAPP_Truste_2016_final.pdf>
   3. **Event Engagement – highlights from recent events and upcoming events**
      * Danielle Santos spoke about yearly events that correlate with cybersecurity-related themes. See the attached themes.pdf for more information.
   4. **Strategy Stories – new developments that align to NICE Strategy**
      * Lou Piazza, Director, BATEC Grant, University of Massachusetts, spoke about the BATECH Cybersecurity Workforce Report. This report aligns with the NICE Strategic Plan, objective 3.1: Identify and analyze data sources that support projecting present and future demand and supply of qualified cybersecurity workers.
      * BATEC has a broad scope and works across the country with public academic institutions to create curriculum for 2 and 4 year colleges. Colleges and universities are finding out they need to have elements of cyber and security in their curriculum. BATEC tries to bring data to the forefront to help faculty understand what and why they need to include cyber and security in their curriculum.
      * Much of the data analyzed is from Burning Glass who provides real time labor market statistics. The internet was also perused for online job reporting. There is artificial intelligence that hones in on key fields in opportunities within online job requisitions.
      * The cybersecurity domain breaks down into seven broad categories. We asked questions on the dimensions, growth, and average salary? What is the job posting? How do I get into this field and where do I go?
      * Find out more here: [www.batec.org](file:///C:/Users/lhatzes/Documents/NICE/Working%20Groups/WG%20Minutes/July%2027/www.batec.org)
      * The final report will be posted by the end of this week (7/29/16). Also, see attached presentation.
   5. **Metric Moment – what gets measured gets done**
      * Marian Merritt spoke about employee retention metrics. While filling the needed demand in the work force, a key point is retaining qualified workers. Measuring and analyzing worker retention data may help retain workers. According to the “Blood on HR’s Floor” report, some key reasons people stay in a job are if they are happy and content. People will also will stay if it’s convenient. Salary is the third reason. Reasons why people leave include getting more challenging work, receiving recognition, the need for flexible work conditions and also pay. We know there is a need to grow cybersecurity professionals but what are the right metrics that businesses can control to hire and retain cybersecurity workers? According to the data provided, engagement, good management, feedback, and work life balance are important to workers and critical to retention rates.
      * Find out more here: <https://www.alienvault.com/docs/whitepapers/blood-on-hrs-floor.pdf> and here: <https://www.fedview.opm.gov/>
2. **Subgroup Updates**
   * **K-12** - Carlos Garcia, co-chair, stated that many members are currently on summer break. Davina Pruitt-Mentle, NICE K-12 Lead, let members know this subgroup developed a one page document on the connection between cybersecurity and computer science that is currently under final review. Members have also been working on collecting input on CTE and POS then cross-mapping the content. An inventory of informal and active programs and giving input to the computer science framework in addition to the refresh of the computer science standards is another task K-12 members have been working on.
   * **Collegiate** – Casey O’Brien, co-chair, revealed that this subgroup is on a break and will pick back up in September, Casey also mentioned that the 3CS conference held in Pittsburgh just concluded. There were over 350 information security educators. Materials from the conference can be found here: <https://drive.google.com/drive/folders/0BxO9KCU3tKjbUjhsSGtJQ0Z5N2s>
   * **Training and Certifications** – Linda Montgomery, co-chair, provided an update on subgroup activities.
     1. The cyber range team discussed content for the development of a one pager on cyber ranges. This project team also discussed the MI cyber range and how this model may fit into NICE and developing the talent pipeline.
     2. The skills based training project team has a new member (Kevin Garvey) from Time Warner. They have put together vendor agnostic descriptions of skills based activities.
     3. The supply & demand team has analyzed data to try to determine what employers are looking for in cyber professionals. Ken Slaght from the San Diego Cyber Center of Excellence has contributed to the development of a white paper documenting its program as a model.
   * **Career Development and Workforce Planning** - Kristin Judge, co-chair, spoke about this groups work in creating a vision, mission, and scope to focus on. There is a draft document on the CDWP SharePoint site. One key item is the integration of the human element to enterprise risk and the potential to map to the NICE framework. There are also about 8-10 new members to introduce.
   * **Competitions**
     1. Dan Manson, co-chair, let members know this subgroup will be creating content for a competitions one pager under NICE. Regarding the status of the white paper on professionalizing competitions, the interview process is complete and the document is under production. The draft should be ready in about a month.
     2. There is an upcoming White House event that will be recognizing winners of the cybersecurity competitions for the National Collegiate Cyber Defense Competition, CyberPatriot and US Cyber Challenge. It was mentioned that Michael Danielle’s, Tony Scott, Jeff Moss, Alex Levin, etc. will be there. A press release is expected after the event.
     3. The DARPA Cyber Grand Challenge invested in gamification and is trying to move in the direction similar to that of a video game competition. This event will also be broadcasted next Thursday August 4, from 5-8 PM Pac time. Here is a link to the Dark Reading Story on the Cyber Grand Challenge: [http://www.darkreading.com/vulnerabilities---threats/meet-the-teams-in-darpas-all-machine-hacking-tournament/d/d-id/1326277?image\_number=1](http://www.darkreading.com/vulnerabilities---threats/meet-the-teams-in-darpas-all-machine-hacking-tournament/d/d-id/1326277?image_number=1%20%20)
     4. Part of the intent of these competitions is to inspire those that want to join in competitions. Animation and play by play can show competitions at a professional level which is a step toward making it a spectator sport.
3. **Project Progress Reports**
   * **National K-12 Cybersecurity Education Conference**

URL: <http://csrc.nist.gov/nice/k-12conference/index.html>

* + **NICE Annual Conference** – Danielle Santos noted that while registration is not open, that announcement will be made very soon. A notification to working group members will be distributed encouraging registration. The program committee is finalizing speakers and topics in the agenda. Find out more at: [www.fbcinc.com/nice](http://www.fbcinc.com/nice)
  + **NICE Challenge Project** – James Ashley, Project Manager, just returned from the from 3CS conference where the NICE Challenge Project was presented. There are over sixty institutions using this project and/or preparing to use in a club or classes. Find out more at: <https://www.nice-challenge.com/>

1. **New Business**
   * Josh Moses, OMB, presented the OMB Human Capital Strategy.
   * This time last year the government released a report addressing vulnerabilities across the federal government. A workforce shortage was acute in all agencies and a broader strategy was needed. During the fall of last year, we worked with OPM to identify workforce shortages and gaps. The results yielded a 10,000 person gap government wide.
   * Work began with several agencies to develop a series of actions to increase the workforce pipeline such as funding for programs like SFS and CAE and also seeking talent from within. OPM lead efforts to identify “recruit and retention” strategies and then detailed twenty near-term actions. Bringing in hiring solutions from the public sector and focusing on cybersecurity career paths will be implemented over the next twelve months. Supporting these efforts are working groups that are assisting new hires, making sure they have the resources to develop and transition.
   * Within the 62 million dollar funding level the hope is to increase funding for SFS. For FY17, this funding does not include plans for education and the full cost of training existing employees.
   * Roger Callahan inquired about benchmark studies on cybersecurity workforce development. Burning Glass provides information. In addition, internal government surveys show that valuable work is found in certain career paths. Other information can be found through RAND and CSIS intelligence reports.
   * Regarding the length of time it takes to hire government employees, Josh stated there are government groups such as U.S. Digital Service that have reduced the time to 37 days. They’ve had success streamlining the application process and have recruiters working with them. We want to look at this model and look at solutions to streamlining the USA jobs hiring process. Brand management and advertising may also add value.
   * Another important reason to look at industry hiring practices are the educational requirements. Two year candidates should be deemed appropriate due to their technical knowledge.
   * Find out more here: <https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-15.pdf>
2. **Other**
3. **Summary of Action Items** – Meeting minutes along with presentations and URL’s will be sent to members.
4. **Next Meeting Reminder** – The next NICEWG meeting is scheduled for August 24, 2016.