**NICE Working Group**

**Meeting Agenda**

**Date: July 22, 2020 Time: 3:30 p.m. ET**

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

1. **Introduction and Ground Rules**
2. Danielle Santos, NICE Program Manager, welcomed participants to the meeting. The NICE Working Group (NICEWG) is set up to provide a mechanism for collaboration among academia, government, and industry as well as to discuss strategies and actions to aid in workforce development.
3. Danielle encouraged participants to use the Adobe Connect chat box feature to provide feedback and ask questions.
4. Danielle urged all participants to collaborate and share information. The NICE Working Group [mailing list](mailto:nicewg@list.nist.gov) is a convenient way to disseminate information. The [SharePoint site](https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG/Pages/home.aspx) stores meeting agendas and minutes, documents, and member information.
5. Danielle noted that NICE Working Group mailing lists and meeting teleconferences are not intended for promotional announcements, advertising, product-related press releases, or other commercial use.
6. **Opening Remarks**
7. Industry Co-Chair, Jon Brickey, Senior Vice President, Mastercard, welcomed members to this month’s call. It’s a busy time yet Jon encouraged people to take vacation now that adjustments to work schedules have been made. Jon looks forward to Black Hat DEF CON coming up in early August. It will be interesting to see how the virtual event works out.
8. Government Co-Chair, Rodney Petersen, Director of NICE, spoke about how things are heating up in the education workspace. Online learning is challenging, and he encouraged members to think about the opportunities to increase effectiveness and maximize efficiencies.
9. Organizations are addressing how to think about employment. Many agencies who frown on telework are rethinking their processes and policies for hiring and recruiting students across the U.S. Perhaps this is an opportunity to reach into rural and other diverse areas to think differently and creatively.
10. Last week the Program Office announced the revised draft of the [NICE Framework](https://www.nist.gov/itl/applied-cybersecurity/nice/nice-framework-resource-center/nice-framework-draft-revision). Highlights will be provided later in the meeting. There is a forty-five-day comment period.
11. NICE Subgroups used time during July meetings to review the [Draft NICE Strategic Plan](https://nistgov.sharepoint.com/:w:/r/sites/NICEProgram/NICEWG/_layouts/15/doc2.aspx?sourcedoc=%7B2ACAD940-184F-4E68-B217-9DD7578AC4A4%7D&file=NICE%20Strategic%20Plan%20Draft%20Outline%20-%20June%208%2C%202020.docx&action=default&mobileredirect=true&cid=43f24bf6-90d7-492e-81e4-8e7d38b0213a). The goal is to have a final plan in August. Members who wish to provide feedback can send comments to the [Program Office](mailto:nice.nist@nist.gov) through early August.
12. The Program Office transitioned the summer interns from in-person to virtual. NICE welcomed three students from CA, TX and OH. Two students are enrolled in Scholarship for Service (SFS) Community College Cyber Pilot (3CP). Another is a rising junior at California State University, San Bernardino. More information from the interns will be highlighted in the upcoming [NICE eNewsletter](https://www.nist.gov/itl/applied-cybersecurity/nice/news-0/enewsletter).
13. NICE and OPM jointly hosted a virtual [Federal Cybersecurity Workforce Summit webinar](https://www.nist.gov/itl/applied-cybersecurity/nice/events/federal-cybersecurity-workforce-summit-and-webinar-series). OPM is following up with [monthly webinars](https://www.eventbrite.com/e/federal-cybersecurity-workforce-four-part-webinar-series-registration-109857843768).
14. **Standing Items**
15. **Report Roundup – Learning from Good Ideas**

Kevin Nolten, Director of Academic Outreach, CYBER.ORG, presented on the “State of K-12 Cybersecurity Education.”

* As of July 1, 2020, [CYBER.org](https://cyber.org/) was born from NICERC. The rebranding has several key initiative projects including an exciting research component to publish with partners in this space.
* CYBER.org is a workforce development organization supported by funding from CISA and DHS.
* They observed a lack of data around the scope and scale of K12 cybersecurity education in the U.S. They worked with EdWeek Research Center on a report that focused on the state of cybersecurity education in order to survey and provide a better understanding of the landscape. They surveyed more than 1,000 teachers and administrators from across the country. The survey opened at the beginning of this year and closed in March (prior to the pandemic).
* Key findings are intended to help guide efforts in closing the gap in the cybersecurity workforce.
* Less than half of educators surveyed say students are taught cybersecurity. Kevin asked is it ok for 45% of students to receive health or reading education? There is a tremendous gap from the cybersecurity education standpoint. Also, actions are not consistent across communities, educational settings, and between socioeconomic regions. There are several cybersecurity ‘deserts’ across the country.
* Most students know little to nothing about cybersecurity education. Educators who know nothing about cybersecurity say none of their students know a lot about the topic.
* The actions of this report show and offer a perspective on where the focus should be. They did an internal study that correlates the high impact areas and how our call to action must focus in on those cybersecurity deserts and pockets of the country that may not have a cybersecurity organization or educational programs.
* In short, there are five recommendations the report put forth. It’s clear that K12 cybersecurity opportunities need to be dramatically expanded.

1. Ensuring access to cybersecurity education in cybersecurity deserts;
2. Raising basic levels of knowledge about cybersecurity education;
3. Increasing the number of schools offering cybersecurity education;
4. Enhancing educational offerings;
5. Informing students about cybersecurity careers.

* This research did not cover state cybersecurity standards. They are paying attention to that, but this report is about classroom discussion.
* When asked if the results measure the effectiveness of cybersecurity offered to students, Kevin responded that they will be publishing some of those results on the website soon.
* The NICE Program office is hosting a webinar titled “Educating Youth for a Cybersecurity Future.” Kevin will be a presenter. Find out more [here](https://www.nist.gov/news-events/events/2020/09/nice-webinar-educating-youth-cybersecurity-future).
* Reach out to [Kevin](mailto:kevin.nolten@cyber.org) if you wish to talk about the research and the report.
* See presentation and find out more [here](https://cyber.org/news/state-cybersecurity-education-k-12-schools).

1. **Strategy Stories – New Developments that Align to NICE Strategy**

Safa Shahwan, Associate Director, Cyber Statecraft Initiative, spoke about the “Cyber 9/12 Strategy Challenge.” This topic aligns to the NICE Strategic Plan Goal #2: Nurture a Diverse Learning Community.

* The Cyber 9/12 Strategy Challenge Competition takes place over two days. Competitors respond to a realistic crisis by developing policy recommendations. Students simulate crisis situations, so they know how to react. Collaboration is facilitated while engaging stakeholders in the community, coordinating across the ecosystem, and fostering interactive learning.
* To address diversity, there is no prerequisite to compete. Backgrounds of competitors include business law, finance, and more.
* To diversify challenges, they’ve expanded competitions in five countries. The first virtual competition was in D.C. and the second in Geneva.
* They work to continue accessibility to underrepresented students. The goal is to provide travel and lodging grants to competitors and connect teams with coaches, mentors, and educational opportunities to perform at their best. They seek to increase diversity in the workforce by targeting the younger set who’ve not made up their mind as to what they want to major in.
* Rodney said we spend a lot of time focusing on competitions. It’s nice to hear a focus on multi-disciplinary. He asked if the notion of inclusion equates to more gender diversity and how about people of color? Does this open the doors? Safa sees more ethnic diversity in their competitors and wishes to do more. They’ve targeted grants to HBCU’s, for example, to ensure that students from all backgrounds have access to education and training events like this.
* See presentation and find out more [here](https://www.atlanticcouncil.org/programs/scowcroft-center-for-strategy-and-security/cyber-statecraft-initiative/cyber-912/).

1. **Metric Moment – What Gets Measured Gets Done**

Nancy Limauro, Cyber Defense Education and Training, Cybersecurity and Infrastructure Security Agency, presented on “NICCS Education and Training Catalog Metrics.”

* The NICCS Education and Training Catalog contains tools and resources for current and future cybersecurity professionals. The site went live in 2013 and has three main sections to geographically explore options, including training, formal education, and workforce development.
* The workforce development section has an online interactive version of the NICE Framework tool mapping courses to specialty areas. This also allows hiring managers to evaluate and map positions.
* The education section includes resources for K12 and information on CAEs.
* The catalog receives over 30,000 visits each month. The interactive version of the Workforce Framework receives the most traffic.
* Top resources downloaded in June 2020 are:

1. FedVTE Veterans Cybersecurity Guide\_20190531
2. Cybersecurity Workforce Development Toolkit
3. Using the NICE Framework
4. Vulnerability Assessment Analyst
5. FedVTE Championcommsmanual

* Top specialty areas and work roles searched are:

1. Cyber Defense Analyst
2. Cyber Defense Forensics Analyst
3. Cyber Defense Incident Responder
4. Information Systems Security Manager
5. Vulnerability Assessment Analyst

* The training catalog can access over 5,000 cybersecurity-focused courses. Each course is mapped to the NICE Framework. The catalog provides users with a centralized location. There were over 5,400 page views on the landing page in June 2020. Prospective students can look at a map of the U.S. and see what’s offered geographically. Training catalogs have current providers and approved providers who haven’t submitted the content yet.
* In FY2020 the total training providers decreased but current providers increased. There are 185 training providers and many waiting to approve. New training providers are reviewed regularly.
* The tops 5 training courses viewed are:

1. Certified in Open Source Intelligence (C|OSINT) (McAfee Institute) ​
2. Certified Digital Forensics Examiner (CDFE) (Mile2)​
3. Cybersecurity Fundamentals Online Course (ISACA)​
4. HIPAA Compliance Officer Training Certified
5. HIPPA Privacy Security Expert (Supremus Group)

* NICCS will preview a new tool to be released the first week of August. The Cyber Career Pathways tool presents a new and interactive way to explore work roles within the NICE Cybersecurity Workforce Framework.
* See presentation and find out more [here](https://niccs.us-cert.gov/training/search).

1. **Project Spotlight**

Karen Jensen, Saaby Consulting, NICE Workforce Management Co-chair, presented on the “Human Resources One Pager.”

* The Workforce Management Subgroup has been working on a one pager to help hiring professionals dive into hiring cybersecurity professionals. They felt the common language was the problem and decided to develop this document.
* The current version speaks to the shortage of up to 1.4 million openings in the workforce, globally, which continues to grow. A main point is trying to understand what the workforce needs will be.
* The one pager talks to the shortage in the workforce and the importance of bringing in new skills into the field.
* The one pager addresses looking at your existing environment. This subgroup previously developed a guide titled “[Cybersecurity is Everyone’s Job](https://www.nist.gov/itl/applied-cybersecurity/nice/workforce-management-guidebook).” Some organizations miss the mark on this. Cybersecurity awareness is not just for those in IT. This is a good reference document that encourages organizations to engage everyone to apply cybersecurity principles to mitigate risk.
* The NICE Framework is important to develop job descriptions. The structure can be used so that descriptions do not differ depending on your industry. There should be a common lexicon to identify skillsets.
* When looking at job requirements, how do education and years of experience fit in? This creates confusion, especially during the interview process. Some people who interview are not familiar enough with the language of cybersecurity. The one pager aims to help this conversation along and make it less frustrating.
* Standardized job titles are another factor. We’re not telling people what to use, but to use tools like the NICE Framework, [O\*NET](https://www.onetonline.org/), and [CyberSeek](https://www.cyberseek.org/) to more easily identify.
* The one pager includes information about some of the tools from SHRM. It talks about stripping out information on resumes that may indicate gender, age, or other criteria that may hide a bias, making the interview process candidate centric, and pushing for critical thinking and soft skills. There are qualities, especially in entry level, that will benefit from this process.
* Unicorns define a laundry list of skills that a person should have. Organizations see certifications and requirements and mash them together. We want people to be aware of this. The [Aspen cybersecurity group](https://www.aspeninstitute.org/team/aspen-cyber-group/) talks about not making education mandatory, especially for entry level. There are a lot of companies taking their recommendations and working with them.
* Karen will be talking about this document at the upcoming [SANS summit](https://www.sans.org/webcasts/women-cybersecurity-forum-presented-summits-115800). They’ve received a lot of value from those that have seen this document.
* Karen hopes members will review the document and provide feedback. Find out more [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/workforce-management-subgroup).

1. **Subgroup Updates**
2. **Apprenticeship**

Co-chair Jennifer Oddo, Program Manager, External Workforce and Apprenticeship Initiatives, IBM, provided the update:

* The primary focus of this subgroup has been getting project areas setup for three projects. The subgroup has gained new members with a continuous flow of new companies coming in.
* The next Apprenticeship Subgroup meeting is scheduled for August 28 at 11:00 a.m. ET.
* Visit the Apprenticeship Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/apprenticeship-sub-working-group).

1. **Collegiate – no update.**
2. **Competitions**

### Co-chair Brad Wolfenden, EmberSec provided the update.

* During the last meeting, several interns working at NICE and NCCoE spoke about their experiences in competitions, their academic careers, and how they ended up where they are. Many students are just getting started and members asked about resources and activities that the subgroup could take on to help them.
* Dan Manson uploaded four new podcasts to [CyberFed YouTube](https://www.youtube.com/cyberfed).
* The next Competitions Subgroup meeting is scheduled for August 18 at 3:00 p.m. ET.
* Visit the Competitions Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/competitions-sub-working-group).

1. **K12**

### Co-chair Terrance Campbell, CCTE Cybersecurity Teacher, provided the update.

* K12 subgroup members are preparing for October Cybersecurity Awareness Month and the virtual K12 conference.
* Terrance will be wrapping up an externship for teachers with ServiceMaster. He emphasized that we cannot overlook state standards because it drives performance. Teachers are measured on teaching to the standards. Terrance encourages all members to look for opportunities for partnerships with teachers.
* The next K12 Subgroup meeting is scheduled for August 12 at 3:30 p.m. ET.
* Visit the K12 Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/k12-sub-working-group).

1. **Training and Certifications**

### Co-chair John McCumber provided the update.

* While there was no meeting last month, project work is ongoing. The Cyber Range project team developed a draft paper. They have received many comments that will assist in finalizing the document.
* Another project team is working to catalog training, exercises, and challenges. They intend to follow-on with best practices and use cases.
* The next T&C Subgroup meeting is scheduled for August 5 at 2:30 p.m. ET.
* Visit the T&C Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/training-and-certifications-sub-working-group).

1. **Workforce Management**

### Co-chair Karen Jensen, Saaby Consulting, provided the update.

* Karen let members know they are seeking comments on their one page “Success Strategies for Cybersecurity Hiring for Human Resources and Hiring Professionals” through August 14. They’ve also reached out to the SHRM community. They plan to have a final on pager by the NICE Conference in November.
* Find out more [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/workforce-management-subgroup).
* The next Workforce Management Subgroup meeting will be rescheduled. Updates will be posted to the SharePoint site.
* Visit the Workforce Management Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/workforce-management-sub-working-group).

1. **Project Progress Reports**
2. **NICE Annual Conference**

Randy Pestana, Florida International University, provided the update

* This year’s NICE Conference is moving to a virtual environment. The program committee is working on an innovative and accessible experience. The schedule moved to four days over four weeks ending November 16. Details will be provided as soon as possible. Subscribe to email for updates.
* They are in the midst of finalizing proposals and notifications will be sent to submitters within the next few weeks.
* A new package will be available for exhibitors and sponsors. A digital exhibit booth to interact with conference attendees and a space for the NICEWG and subgroups will be established.
* Find out more [here](https://niceconference.org/).

1. **NICE K12 Cybersecurity Education Conference**

Felicia Rateliff, Director of Operations and Programs, iKeepSafe, provided the update.

* This year’s NICE Conference is moving to a virtual environment. The active group of committee members are working on engaging and networking activities to make it exciting. The committee is in the process of ranking proposals and working on a roster to direct the agenda. Notification to presenters will be sent in a few weeks.
* Presenters will be live and on demand. They’ve narrowed down the platforms to two candidates. The content will be available for up to a year after the conference.
* Early bird registration is tentatively scheduled for Aug 18. The cost for attendance has been cut in half ($150 for early bird and $175 after). They are reworking the sponsorship package. Virtual exhibitor sessions and videos to upload will be included. The amount of people able to attend can go up to 1,000 or possibly more. Find out new information by joining the email list.
* See presentation and find out more [here](https://www.k12cybersecurityconference.org/).

1. **CAE Community**

Tony Coulson, Executive Director, Cybersecurity Center, California State University, San Bernardino, provided the update.

* The 2020 CAE symposium will be virtual. They are working with FIU to develop the event.
* The community will undergo an expansion moving to five regional hubs in the upcoming month. The regional hubs are aligned with ten FEMA districts. Regional hubs will be announced in next few weeks.
* They are launching three communities of practice, aligning universities and colleges to coordinate activities and get measurable outcomes.
* Find out more [here](https://www.caecommunity.org/).

1. **CyberSeek**

Randi Parker, Senior Director, Partner Engagement, CompTIA, provided the update.

* The data behind CyberSeek has been updated. The data gave us the first look at workforce demand across the U.S. during the pandemic. During this period the data shows more than 9,000 workers employed in cybersecurity. They are hoping to see a focus on people getting the skills they need. The heat map now includes information on 19 private industries. The Cybersecurity engineer shows the highest need.
* Links have been added to get more information on cybersecurity jobs.
* Find out more [here](https://www.cyberseek.org/).

1. **Featured Topic**

Presenter: Rodney Petersen, Director, National Initiative for Cybersecurity Education (NICE), spoke about the “NICE Framework Draft for Public Comment.”

* The NICE Program Office held a [webinar](https://www.nist.gov/news-events/events/2020/07/nice-webinar-whats-new-revisions-nice-framework) on July 15 on the NICE Framework. Members can view the video archive to hear form the authors and co-authors.
* The authors looked at O\*Net occupations and collaborated with DOL.
* A few key points were announced.
  + The full title name has changed to speak to the Workforce Framework for Cybersecurity. They believed the previous title was limiting. The Framework is intended to cover other parts of the workforce.
  + Key attributes of the new Framework are to extend application and use to the private sector, training providers, and for the international community to adopt changes.
  + The document is about 14 pages long. The tables and appendices have been moved out of the publication onto the website to be more agile with updates.
  + The update provides more flexibility to allow people to pick and choose to customize accordingly.
  + There is an emphasis on the importance of consistent use of terms across sectors of the economy.
  + They’ve introduced the Framework to be used for other types of work such as privacy, AI, or IoT.
  + Key diagrams describe different perspectives, defined by tasks. KSAs are not addressed since they speak to skills.
  + Competencies have been introduced to help learners develop, to provide an observable group of knowledge and skills statements, and to form teams. They are proposing to eliminate specialty areas to organize work roles how organizations see fit.
  + There is the notion of building blocks to allow employers, educators, and trainers to use components of the Framework.
* Commentary on existing work roles are not included in this draft. A list of competencies will be provided later in August.
* Kicking off in late October will be a more detailed analysis of KSAs to recalibrate to make sure they reflect this new structure.
* There is a 45-day comment period. Comments are due by Aug 28.
* Find out more [here](https://www.nist.gov/itl/applied-cybersecurity/nice/nice-cybersecurity-workforce-framework-resource-center).

1. **Summary of Action Items**

* Instructions to provide feedback on the draft paper - Success Strategies for Cybersecurity Hiring for Human Resources and Hiring Professionals can be found [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/workforce-management-subgroup).
* Information on the NICE Framework comment period can be found [here](https://www.nist.gov/itl/applied-cybersecurity/nice/nice-framework-resource-center/nice-framework-draft-revision).

1. **Next Meeting Reminder**

The Next NICE Working Group meeting is scheduled for Wednesday, September 23, 2020.