**NICE Working Group**

**Meeting Minutes**

**Date: June 24, 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 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. Government Co-Chair, Rodney Petersen, Director of NICE, spoke about the virtual Federal Cybersecurity Workforce Summit. NICE hosted this event on June 23, 2020. The Summit brought together those in the federal government focused on workforce development. A four-part webinar series will follow. Find out more [here](https://www.nist.gov/itl/applied-cybersecurity/nice/events/federal-cybersecurity-workforce-summit-and-webinar-series).

Reviews and updates to the [NICE Cybersecurity Workforce Framework](https://www.nist.gov/itl/applied-cybersecurity/nice/nice-cybersecurity-workforce-framework-resource-center) are ongoing. A draft is expected in July followed by a [webinar](https://www.nist.gov/news-events/events/2020/07/nice-webinar-whats-new-revisions-nice-framework) on July 15, 2020 to address this topic.

The NICE Program office is very interested in pursuing internships. This summer, there are three students working virtually with NICE. They are:

* Joseph Mercado, 2020 NICE Undergraduate Fellow, California State University, San Bernardino
* Matthew Scarborough, 2020 C3P Summer Experience, Clark State College
* Frauke Steinmeier, 2020 C3P Summer Experience, San Antonio College

The students are sitting in on the NICE events and are working on an article for the upcoming summer [NICE eNewsletter](https://www.nist.gov/itl/applied-cybersecurity/nice/news-0/enewsletter). We look forward to their participation.

1. Industry Co-Chair, Jon Brickey, Senior Vice President, Mastercard said that adversaries are not slowing down. Many companies are moving to the Cloud and are seeing a lot of attacks. Chrome users have been hit by a recent attack secretly downloading malicious extensions. Organizations must have plans to thwart attackers.
2. **Standing Items**
3. **Report Roundup – Learning from Good Ideas**

Bill Newhouse, Deputy Director, National Initiative for Cybersecurity Education (NICE), presented on the “CIO Council Future of the Federal IT Workforce.”

* The report released on June 9, 2020, is a follow-up to a report that came out in January 2017. The purpose is to understand demands, risks, and changes in the federal IT workforce. The update is organized around five primary issue areas which form the essential actions required to build an IT workforce for the future. They are recruit and hire, retain, reskill, augment, and measure.
* Characteristics of the future IT workforce include attracting new IT workers who come from a larger and more diverse talent pool and bringing in younger workers to fill open positions.
* The report includes ten recommendations on how to harness these changes and the drivers to prepare. There is a map depicting the best locations for the federal IT workforce including strength indicators that are color coded.
* Bill encourages members to read the report and to think about what the federal government is doing and decide if it will work for your sector as well.
* See presentation and find out more [here](https://www.cio.gov/assets/resources/Future_of_Federal_IT_Workforce_Update_Public_Version.pdf).
1. **Strategy Stories – New Developments that Align to NICE Strategy**

Tony Coulson, Executive Director, Cybersecurity Center, California State University, San Bernardino, presented on the “Information Security Research and Education (InSURE) Project.” This effort aligns with NICE Strategic Plan Goal 2.1: Improve education programs, co-curricular experiences, and training and certifications.

* Years ago, the CAE community got together to develop a program to provide students with research skills and experience. Assisted by technical directors in government and industry, student researchers applied cybersecurity issues with real-world context.
* Technical directors volunteered and created a listing of problems where students bid to work on.
* At Cal State, they’ve participated in automotive research with Argonne National Laboratory. They stripped a 2008 Hyundai Sonata and performed injection attacks, evaluating vehicle security.
* They have long-term funding for the project. By spring 2020 they had 102 students, 18 problems, 15 technical directors, 9 universities, and 8 labs.
* The program will become a focus of CAE research. This is a great opportunity for student research working under technical directors.
* Directors are from critical infrastructures and some industry partners. They are always welcoming new people into the fold.
* Universities can get involved by becoming eligible under CAE designation. Technical directors can reach out to Tony Coulson.
* Most of the labs involved are Federally funded research and development centers such as Argonne, Idaho, and Los Alamos.
* See presentation and find out more [here](http://www.insurehub.org/).
1. **Metric Moment – What Gets Measured Gets Done**

Donna Milgram, Executive Director – National Institute for Women in Trades, Technology & Science, presented on “Increasing female enrollment in cybersecurity education using a data-driven system: Case Studies of Broward and Fayetteville Technical Community Colleges.”

* Donna is a Principle Investigator and has worked on 5 National Science Foundation Grants.
* The first case study was done in Fayetteville Technical Community College, NC, and focused specifically on their cybersecurity program. The baseline number of students averaged over 3 semesters was 12. They participated in a WomenTech Training and Coaching program. They set a goal for doubling the number of students. By the fall semester, there were 32 females in program, 20 more than baseline. Male participation almost doubled as well.
* The second case study was done in Broward College in Florida. They initially focused on the computer science and IT program which includes cybersecurity. They participated in the WomenTech online training and coaching bootcamp. The retention rate increased from 80 to 100 percent.
* How did they do it? They identified a data dashboard for the introductory courses they would be recruited into. They set a numerical goal and the recruitment strategies are mapped to four introductory courses. The target audience was who would enroll in the next semester.
* They calculated the number of students needed in the pipeline; completion rates were also part of the plan is to improve this.
* Schools looked at recruitment outside of the college as well as those inside who are unsure of their major.
* The recruitment funnel, with an external 2% rate, meant 190 persons needed to be touched by publicity (email, fliers, referrals), then 25 may come to a meet and greet session, and then 7 may actually pursue. This is all part of targeted data-driven approach along with content strategies.
* The WomenTech Educators Training & Coaching System has been online since 2010. There is an upcoming session in July.
* When asked about reaching those in middle school, Donna believes this is more career awareness as opposed to recruitment but does add value. Examples are in the case studies.
* See presentation and find out more [here](https://www.iwitts.org/) and [here](https://www.youtube.com/watch?v=8hMD-lR1SLg&feature=youtu.be).
1. **NICE Subgroup Project Spotlight**

Joshua M. Snavely, Dean, School of Business, Langston University, presented on the “NICE Training and Certifications Cyber Range Project.”

* Rodney let members know that each month, NICE Subgroups will have the opportunity to provide a deeper dive into subgroup projects.
* Joshua is typically focused on building and integrating cybersecurity curriculum. He has been leading the pandemic response on behalf of the university over the last several months.
* The Cyber Range guide is a special working project under the NICE Training and Certifications Subgroup. During the last NICE conference, discussions on the value of cyber ranges led to the development of creating a guidance document for this group and larger audiences.
* Members are aware of the talent shortage. A recent survey says 86% of employers state new employees came in without enough skills. Many of us are focused on ranges and their value. Ranges can be an engine and catalyst for change in cybersecurity education and training.
* The project team tried to narrow in on how to create a document that helps people in the cybersecurity space.
* They developed five use cases.
	+ Educators seeking hands-on courses and curricula
	+ Organizations seeking training and continuing education
	+ Organizations seeking “situational operations” testing
	+ Individuals or organizations seeking skills validation
	+ Individuals seeking skills and training
* The Cyber Range Guide breaks down components such as technical, realism and fidelity, accessibility and usability, scalability and elasticity, curriculum and learning outcomes (are ranges aligned with CAE standards?), types of ranges, and the checklist (that users can use as they try to make up their mind about what product to select). The guide also seeks to be vendor-neutral.
* The guide seeks to serve someone who wants to know the most important aspects of cyber ranges including learning outcomes and ties to standards.
* Joshua stated his goal is to get feedback from members of this working group. They’ve solicited feedback with the Training and Certifications Subgroup and others who have expressed interest.
* When asked how many ranges are needed, Joshua said it depends on the stakeholders and use cases. There is a broad difference in what K12, universities, the military, small businesses etc. all need. There are many uses for ranges, including training, competitions, skill assessments, building simulated networks, and more.
* Joshua and his team hope to solicit feedback over the next month in order to finalize the guide by the July meeting and then host a webinar targeted for stakeholders. The guide will be available to download on the NICE website.
* See presentation and find out how to provide feedback [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/training-and-certifications-subgroup).
1. **Subgroup Updates**
2. **Apprenticeship**

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

* The subgroup continues to focus on projects such as ROI, the apprenticeship ecosystem, and comparative analysis of work-enhanced learning models.
* The next Apprenticeship Subgroup meeting is scheduled for July 24 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**

### Co-chair Denise Ferebee, LeMoyne-Owen College, provided the update:

* During the last meeting members discussed goals and objectives for the draft NICE Strategic Plan. They also talked about a new project on mapping samples of curriculum to the NICE Framework work roles into an example of courseware. Denise is working on the proposal document.
* The next Collegiate Subgroup meeting is scheduled for August 11 at 2:00 p.m. ET.
* Visit the Collegiate Subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/collegiate-sub-working-group).
1. **Competitions**

### Co-chair Amelia Phillips, Highline College, provided the update:

* Subgroup members reviewed the NICE Strategic Plan, providing comments such as noting the defense sector’s use of multiple frameworks. It’d be nice to try to get more following on the NICE Framework.
* There was a presentation from four students. In past years students would create scenarios and a virtual network for Pacific Rim Collegiate Cyber Defense Competition (PRCCDC) and cyber defense invitations. Instead, they developed questions and interviewed the national and regional directors. They found differences and similarities in how they score, get sponsors, and more. They ended with recommendations such as increasing industry support and developing an international competition.
* The next Competitions Subgroup meeting is scheduled for July 21 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 Laurin Buchanan, Secure Decisions, provided the update.

* In order to comprehend membership representation, the co-chairs held a poll asking members if they are employed by a K12 local educational agency. The poll showed that the subgroup is made up of a lot of individuals interested in promoting K12 but not a lot of K12 teachers.
* The subgroup kicked off a new project on K12 Cybersecurity Educational, Instructional, Professional Development led by Patrick Schultz and Donna Woods. They are planning a series of monthly webinars and developing a list of professional opportunities.
* Members are reviewing a large list of K12 materials collected over several years. Understanding, categorizing, and making them searchable are a few of the goals.
* 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 Jim Boardman, Academy Training Engineer, Cybersecurity Academy, Palo Alto Networks, provided the update.

* Key comments when discussing the draft NICE Strategic Plan include needing more detailed cybersecurity career pathways, blending workplace training with certifications, modernizing the talent management process, and more.
* Jim recapped the National Collegiate Cyber Defense Competition Finals. There were nine regional winners plus one wild card team that went on to compete in the finals online. Teams were tasked to defend a business network from the red team. The competition highlighted soft and technical skills. The University of Virginia won the competition.
* Updates on the Cyber Range Project and the Training and Best Practices Project were provided.
* 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 spoke about the *How to Guide for HR Professionals* document. The goal is to give targeted ideas and provide concrete direction for those responsible for hiring for the cybersecurity workforce. Members recognize the difficulty that HR and others have in getting the right person into the right job. Reviewing job requirements that match business needs, standardizing job titles, addressing bias in descriptions and the hiring process, and more candidate-friendly descriptions are topics.
* The members value input from others. They hope to have the document finalized by November if not sooner. Review the document [here](https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG/WorkforceManagement/Shared%20Documents/Forms/AllItems.aspx?viewid=0a74db77-d5c6-402d-a109-5cd20422ecec&id=%2Fsites%2FNICEProgram%2FNICEWG%2FWorkforceManagement%2FShared%20Documents%2FHuman%20Resources%20One%20Pager). Comments can be sent to Karen Jensen.
* The next Workforce Management Subgroup meeting is scheduled for July 16 at 1:00 p.m. ET.
* 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 will move to a virtual environment. They are working with the Cal State team to move to a virtual platform. The virtual environment will provide the opportunity to expand across communities and make the content more accessible.
* They’ve received over 120 proposals that are under review. The plan is to finalize the agenda in July. A formal email will go to all past attendees, and those who have subscribed to the email list will be notified. The registration cost will come down. Follow updates on Twitter at #NICECYBERCON, and keep up-to-date [here](https://niceconference.org/).
1. **NICE K12 Cybersecurity Education Conference**

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

* The NICE K12 Conference organizers recently decided to move to a virtual event. The decision was made in order to be mindful of the environment and most importantly that all potential attendees can attend.
* The committee is reimagining the event over the coming month. The call for proposals is open until June 30th. There will be live and pre-recorded presentations. Proposal reviews will take place throughout July and in late July, the committee will announce chosen presenters. The target is to have an agenda in late August.
* Rodney acknowledged FIU and iKeepSafe and the responsibility that falls on them and thanked them for considering this difficult decision. Inclusion concerns, such as budget cuts, restraints, and travel bans, factored into the decision to move both conferences to a virtual environment. Organizers are committed to carrying on the spirit of each conference. Safety and health for all of us, and the uncertainty of the environment during the later months, were factors in making these decisions.
* The program office looks at this as an opportunity to innovate and engage effectively.
* See presentation and find out more [here](https://www.k12cybersecurityconference.org/).
1. **CAE Community**

Anastacia Webster, California State University, San Bernardino, provided the update.

* The [CAE Virtual Career Fair](https://www.caecommunity.org/event/cae-virtual-career-fair-2020-0) is scheduled for September 4, 2020 from 9 a.m. to 1:00 p.m.PT. CAE designated institutions are invited. Registration will open soon.
* The CAE in Cybersecurity Symposium follows the NICE conference. Planning is done jointly, which means the Symposium will move to a virtual environment. Stay tuned for updates. Registration and the call for proposals are open.
* Rodney asked members their thoughts on hybrid events in the future. He expects many are experiencing and hosting virtual events. Feedback on what to do and not to do are welcome.
* Find out more [here](https://www.caecommunity.org/).
1. **Summary of Action Items**
* NICEWG members can provide feedback on the Workforce Management [*How to Guide for HR Professionals* document](https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG/WorkforceManagement/Shared%20Documents/Forms/AllItems.aspx?viewid=0a74db77-d5c6-402d-a109-5cd20422ecec&id=%2Fsites%2FNICEProgram%2FNICEWG%2FWorkforceManagement%2FShared%20Documents%2FHuman%20Resources%20One%20Pager). Comments can be sent to Karen Jensen.
* Instructions to provide feedback on the Cyber Range Guide can be found [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/training-and-certifications-subgroup).
1. **Next Meeting Reminder**

The Next NICE Working Group meeting is scheduled for Wednesday, July 22, 2020