NICE Community Coordinating Council
Meeting
June 22, 2022 | 3:30-5:00 p.m. ET

I. **Introduction and Ground Rules**

Danielle Santos, Manager of Communications and Operations, NICE
- The NICE Community Coordinating Council was established to provide a mechanism in which public and private sector participants can develop concepts, design strategies, and pursue actions that advance cybersecurity education, training, and workforce development.
- Members are encouraged to participate in the meeting via the platform chat space and the Q&A space.
- Reminder: The meeting it is not intended for marketing or other commercial purposes.

II. **Opening Remarks**

a. Academic Co-Chair – Marni Baker-Stein, Chief Academic Officer and Provost, Western Governors University
- We are still seeing declines nationally in students enrolling in 4-year degree programs – across disciplinary areas and particularly among young males.
- There is an uptick in demand for short-form credentials for adult working students. They are looking for industry-recognized credentials.
- We are seeing a lot of action related to Pell Grants for short-form credentials. Congress decided that the grants would not be available for online credentials. They are working to help Congress better understand the demand for short-form credentials, particularly around IT-related skills.

b. Industry Co-Chair – Bridgett Paradise, Chief People & Culture Officer, Tenable
- Like so many companies, they have struggled to find cyber talent at all levels.
- The pandemic has changed the [recruitment/hiring/work] environment. [AUDIO NOT WORKING]

c. Government Co-Chair - Rodney Petersen, Director of NICE
- The community welcomes Bridgett, the newest co-chair of the NICE Community.
- The community expresses its appreciation to past co-chair Jon Brickey for his great contributions.
- The NICE Conference emphasized demystifying cybersecurity and the ways people can discover cybersecurity careers – these themes reflect much of the work and initiatives around cybersecurity right now.
- Career Pathways Metaphor – GPS: When you get in your vehicle, you enter your destination. Similarly, tThe NICE Framework is helpful in providing career destinations. However, GPS also asks you to pick a starting location, and NICE could think about this more seriously. At the conference, there was a lot of discussion about aptitude tests for new employees or knowledge/skills assessments for

determining a student's learning path. The pathway starting point will vary depending on the individual.

- The Department of Labor and the Department of Commerce will launch a cybersecurity apprenticeship campaign this summer.
- NICE has announced planning for a Notice of Funding Opportunity for the Regional Alliances and Multi-stakeholder Partnerships to Stimulate (RAMPS) cybersecurity education and workforce development. Further appropriations are expected.

III. **Standing Items**

a. Report Roundup – Learning from Good Ideas
Workforce Development Agenda for the National Cyber Director
Presented by Mark Montgomery, Cyberspace Solarium Commission
URL: https://cybersolarium.org/wp-content/uploads/2022/05/CSC2.0_Report_WorkforceDevelopmentAgenda_FullText.pdf

- Challenges to the current federal cyber workforce development environment
  - While many previous recommendations have been passed into law, and many were advanced in executive orders, the persistent challenge is personnel. We see many of the same problems and the same recommendations being made over and over again. People are in roles for which they are not properly trained.
  - Diversity: Women make up only about 24 percent of the cybersecurity workforce.
  - Coordination: Strategic leadership with crosscutting authority for the federal government is lacking.
  - Data: This is the most important challenge – we need good data. CyberSeek provides high-level insight into the national cybersecurity hiring landscape, but more data is needed.
  - Talent Management Capabilities and Capacity: More agencies need systems to create greater agility in hiring.
  - Limited Hiring and Personnel Management Staff: Personnel management teams are too small. This is true across the government
  - Structural Constraints: Conventional assumptions about hiring, pay, and advancement limit flexibility and may create systems that disadvantage already underserved communities. The refresh rate for cybersecurity training is low, and you end up with an unhappy, undertrained workforce.
- Efforts in Motion
  - NICE – This is one of the shining stars. It is overdue for an increase in funding.
  - Federal Cyber Workforce Management Coordinating Working Group
  - CyberCorps: Scholarship for Service
  - Cybersecurity Education and Training Assistance Program
  - Regional Alliances and Multi-stakeholder Partnerships
  - National Centers of Academic Excellence in Cybersecurity
- Recommendations for the National Cyber Director
  - Establish a Process for Ongoing Cyber Workforce Data Collection and Evaluation
  - Establish Leadership and Coordination Structures
  - Review and Align Cyber Workforce Budgets
  - Create a Cyber Workforce Development Strategy for the Federal Government

- o Revamp Cyber Hiring Authorities and Pay Flexibilities Government-Wide
- Recommendations for Congress:
  - o Amend the Federal Cybersecurity Workforce Assessment Act of 2015
  - o Increase Support for the CyberCorps: Scholarship for Service Program
  - o Provide Incentives to Develop Entry-Level Employees Into Mid-Career Talent
  - o Strive for Clarity in Roles and Responsibilities for Cyber Workforce Development
  - o Exercise Oversight of Federal Cyber Workforce Development in Each Department and Agency
  - o Establish Cyber Excepted Service Authorities Government-Wide
  - o Expand Appropriations for Existing Efforts in Cyber Workforce Development
- Recommendations for Private Sector:
  - o Increase investment in the cybersecurity workforce
  - o Develop shared resources

b. Strategy Story - New Developments that align to NICE Strategic Plan
Teach Cyber Awards
Presented by Sabrina Smiley, DARK Enterprises
URL: https://www.superuscareers.com/cyber-career-exchange/

- Teach Cyber: A nonprofit subsidiary of DARK Enterprises dedicated to cybersecurity education at the secondary level.
  - o Mission: Provide resources, training, and support to high school cybersecurity educators.
  - o Over 4,6000 downloads of cybersecurity content since October 2020
  - o Over 22,054 visits to their website this year (67% increase over last year)
  - o They offer scholarships to teachers for access to US Cyber Range, NCTA courses, and other opportunities, such as competitions and PD.
  - o Supported 25 teachers from 13 states
- Teach Cyber Awards:
  - o Passport Award: Alex Brightman, Janet Hartkopf
  - o Pathways Award: Kyle Kuhlers, Sharona Thompson
  - o Platform Award: Marc Chabot, Ben Crenshaw

c. Research Review - Driving Research on Effective Practices
Signature Pedagogy in Cybersecurity: An Emerging Perspective
Presented by Dr. Ashley Gess and Dr. Michael Nowatkowski, Augusta University
URL: https://www.augusta.edu/ccs/bs-it-cybersecurity.php

- The Question: How do we attract more students into the pipeline to fill entry-level positions?
- The Study: How to best teach cybersecurity - What is the best signature pedagogy unique to cybersecurity?
- Skills Desired vs. Teaching Methods Used
  Skills Desired: adapting; analytical thinking; critical thinking; curiosity; persistence; problem solving
  Teaching Methods Used: class discussion; lecture; interactive lecture/discussion; stories.

- Finding: There is a deep mismatch between skills desired and teaching methods used.
- Conclusions
  - The lively mind is unique and persuasive in cybersecurity.
  - Cybersecurity professionals are *bricoleurs* – jacks of all trades. They have a wide span of interests and knowledge, and they are willing to bring it together to solve problems.
  - We need to train the lively minds and give them practice at coming bricoleurs.
  - The pipeline is waning. Engage the lively mind by using interactive methods, puzzles, opportunities for failure.
- Implications for Overall Education
  - Don't bore students.
  - Intentional hands-on, minds-on must be planned where demonstrating skills.
  - Experiential learning.
  - Guided externship (you can start in middle school), internship, apprenticeship.
  - Adopt an integrative STEAM educational approach.

IV. **Working Group Updates**

a. Promote Career Discovery
Co-chair: Roland Varriale II, Argonne National Laboratory
- Cyber Ambassador Program: The working group is looking at core tenets of an ambassador program. They aim to create a wide network of people who are knowledgeable about cybersecurity careers. They are looking at a potential credentialing process so that ambassadors can show they are leaders in this community.
- For more information, contact Roland: rvarriale@anl.gov
- Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/promote-career-discovery
- Next Meeting: July 20, 2022, at 3:30 p.m. ET

b. Transform Learning Process
Co-chair: Dr. Donna Schaeffer, Marymount University
- At the last meeting, they heard reports from the two current project teams. The *Improve the Quality and Availability of Cybersecurity Credentials Project* team will release a one-pager by the end of June. The *Incorporating Cybersecurity Into A Public Service Education Project* team is working over the summer on background research. They are supported by a professor and his students at Carnegie Mellon University.
- The next project team might look at proven learning methods.
- Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/transform-learning-process
- Next Meeting: July 13, 2022, at 3 p.m. ET

c. Modernize Talent Management
Co-chair: Kevin Perry
- The working group met at the NICE Conference, where project teams leads presented updates on the group's projects.

- Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/modernize-talent-management
- Next Meeting: July 21, 2022, at 1 p.m. ET

V. Community of Interest Updates

a. Apprenticeships in Cybersecurity
   Co-chair: Debbie McLeod, McLeod Information Systems
   - The group's session at the NICE Conference included a robust conversation around how to define apprenticeships.
   - At the next meeting, they will hear an update from the Department of Labor and also review material from the NICE Conference.
   - Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/apprenticeships
   - Next Meeting: July 22, 2022, at 11 a.m. ET

b. Cybersecurity Skills Competitions
   Co-chair: David Zeichick, California State University, Chico
   - The inaugural International Cybersecurity Challenge took place in Athens, Greece, June 14-17, 2022. The US Team took third place. Next year, the challenge will be hosted in the United States.
   - At the group's session at NICE Conference, they discussed: 1) diversity in competitions; 2) employers' value of competitions (They are looking for a one pager on why employers should value and engage in competitions); 3) challenges to competitions; 4) list of needed online resources; 5) list and brief overview of all cyber competitions; 6) the need for coaches who can point to existing coaching manuals; and 7) the need for Discord.
   - Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/cybersecurity-skills
   - Next Meeting: July 21, 2022, at 3:30 p.m. ET

c. K12 Cybersecurity Education
   Co-chairs: Terrance Campbell, Shelby County Schools
   - The group conducted a hybrid meeting from the NICE Conference. They discussed: 1) the audience that their outreach should focus on; 2) the kind of research they should focus on; and 3) engaging support staff and administrators in addition to teachers.
   - Site: https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/k12-cybersecurity-education
   - Next Meeting: July 13, 2022, at 3:30 p.m. ET

d. NICE Framework Users
   Danielle Santos, NICE Manager of Communications and Operations (Standing in for Karen Wetzel, Manager of the NICE Framework)
   - At the NICE Conference, the group met for the first time. There was a good turnout. The discussion centered on promoting use of NICE Framework, starting with what executives need to know. A common theme was a focus on HR professionals and ways to engage with them. Attendees wrote down ideas for future discussion topics.

Other themes included the need for more integration of the NICE Framework, more story-telling to communicate the benefits of the Framework, and the need for additional resources. A summary of the meeting will be sent to the users group.

- If interested in joining, go to: https://www.nist.gov/itl/applied-cybersecurity/nice/resources/nice-framework-users
- For more information, email Karen Wetzel at karen.wetzel@nist.gov

VI. **Project Progress Reports**

a. NICE K12 Cybersecurity Education Conference – December 5-6, 2022, St. Louis, MO
Presented by Susana Barraza, NICE
URL: https://www.k12cybersecurityconference.org/

- Deadline for the Call for Proposals is extended to July 8, 2022. Both in-person and virtual speaking opportunities are available.
https://www.k12cybersecurityconference.org/present
- Closing Session Keynote: Susan Warner, VP, Talent and Community Engagement, Mastercard
- Cybear: Will appear for photo opportunities around the conference and at Cyber Signing Day.
- Sponsorship and Exhibiting Opportunities Available. For more information, email k12cybercon@ikeepsafe.org

b. NICE Conference & Expo – June 5-7, 2023, Seattle, WA
Presented by Randy Pestana, Florida International University
URL: https://niceconference.org/

- Overview of the 2022 Conference:
  o They received 201 proposals and accepted 24. For the next conference, they are thinking of ways to engage more of the work that is being done.
  o Prices were maintained from the 2019 conference. They are looking at new ways to reduce the cost of registration and will implement processes to bring in more students.
  o The conference drew a sell-out crowd of 517 attendees. They expect the numbers to rise at future events.
  o Industry participation rose, percentage wise, from 2019, but there was a strong reduction in student participation, which was probably a cost issue.
  o Recordings will be available soon.
  o Conference photos are available on the conference website here.
  o A big thank you to sponsors, which allow for the cheapest cybersecurity workforce training conference around. Affordability increases accessibility.
- NICE Conference & Expo 2023
  o Save the Date: June 5-7, 2023
  o The Westin Seattle, Seattle, Washington

c. US Cyber Games
Presented by Bradley Wolfenden, Director, Cyber Sports, Katzcy
URL: https://www.uscybergames.com/

- International Cybersecurity Challenge, June 14-17, Athens, Greece
    o US Team took third place. (Europe-12961; Asia-10724; US-7765)
    o There were 64 countries represented across 7 teams
- Season II
    o June 30 – US Cyber Open Kick-off Event
    o July 10 – US Cyber Open
    o July 28 – US Cyber Combine Kick-off Event
    o August 5-Sept 5 – US Cyber Combine
    o October 7 – US Cyber Team Draft Day
    o US will host ICC 2023 in early August
    o Sponsorship opportunities are available.
    o Register to compete by July 4.

VII.   **Featured Topic**

CyberSeek Updates
Presented by Tim Herbert, CompTIA
URL: https://www.cyberseek.org/

- Background: CyberSeek, a joint initiative between NICE, CompTIA and Emsi Burning Glass, launched in 2016. It is in its seventh year of operation.
- The site has attracted more than 2.2 million unique visitors.
- Latest data refresh
    o 715,000 US job listings over 12 month period. This is a record-setting level, probably due to pent-up demand and the ongoing trend of digital transformation.
    o Some of the sectors experiencing the highest percentage growth rate in job postings are outside the expected ones. Global events are creating new vulnerabilities, and there are many other factors at play.
    o Mapping to the NICE Framework: They are continuing to enhance the mapping to the NICE Framework, in part due to greater specialization. For example, pen testing is now a dedicated job role. They want to make sure data is actionable to small businesses. A few years ago, they introduced the concept of feeder roles to help individuals understand the steps to various positions. They are looking at introducing ways to help employers understand what is viable and what will help them expand their talent pipeline.
    o Training Module: Provide a connection between understanding the cybersecurity landscape, the career pathway, and training. They will continue to refine the training module – they probably missed some training providers, so contact them if you think something should be added.
- The next refresh will provide new ways to present the data.
- Send comments to: feedback@cyberseek.org

VIII.   Closing Remarks and Next Meeting Reminder

- NICE Webinar, June 29, 2022*: Creating the Infrastructure Needed for Scalable Learning and Employment Records -* https://www.nist.gov/news-events/events/2022/06/nice-webinar-creating-infrastructure-needed-scalable-learning-and
- Next NICE Community Coordinating Council Meeting: **July 27**, **2022** at 3:30 p.m. ET.
- There will be no NICE Community Coordinating Council meeting in August.