

# NICE Community Coordinating Council

## Meeting Agenda

July 28, 2021 | 3:30-5:00 p.m. ET

### I. Introduction and Ground Rules

NICE Program Manager Susana Barraza welcomed everyone to the call and reviewed the purpose of the committee and the ground rules for the meeting. She reminded everyone that the group is not intended for any commercial purposes.

### II. Opening Remarks

#### a. Academic Co-Chair

Dr. Marni Baker-Stein, Chief Academic Officer and Provost, Western Governors University

- Open Skills Network Summit: The Open Skills Network is committed to developing a network and ecosystem of employers and education providers interested in driving skills-based education and training. They aim to help make sure employers have the skills data they need. The network has more than 1,200 members, including 500 that are employers or major educational institutions.
- The first day of the inaugural summit was focused on discussing 14 skills pilots, three of which focused on cyber skills. Pilot teams found synergies in skills maps and identified both opportunities and areas of friction. The NICE Framework is useful in this context as a competencies framework.

#### b. Government Co-Chair - Rodney Petersen, Director of NICE

- Commerce Secretary Gina Raimondo provided the keynote address at the summit, reiterating that she is committed to jobs and improving the nation's cybersecurity.
- Both the Department of Homeland Security and Commerce Department Secretaries have commented on the new National Security Memorandum, "Improving Cybersecurity for Critical Infrastructure Control Systems," which directs DHS to work with the Commerce Department in developing cybersecurity performance goals that will drive adoption of effective practices and controls. NIST will be involved in the collaboration.
- Secretary Raimondo has also talked about \$3 billion in grants as part of the Investing in America's Communities effort to help local economies recover from the pandemic and address new and emerging skills areas. Look for more about this in the weeks and months ahead.
- NICE is uniquely positioned in its work, being part of the Commerce Department and focused on jobs and diversity, equity, and inclusion.

### III. Standing Items

#### a. Strategy Stories – New Developments that align to NICE Strategic Plan

*DoL Funding for Apprenticeship Programs*

Presented by Diana Elliott, Principal Research Associate, Urban Institute

URL: <https://www.urban.org/urban-institute-announces-new-7-million-funding-award-establish-registered-apprenticeship-technical-assistance-center-excellence>

## Urban Institute's Apprenticeship Portfolio

- Existing projects:
  - o Youth Apprenticeship Intermediary (YAI) Project: Goal is to create and expand programs. Last year, the project registered 395 new apprentices across 29 sponsors and 11 new programs.
  - o Apprenticeship Expansion and Modernization Fund (AEMF) Project: Goal is to expand and start new tech apprenticeship programs. 1370 apprentices have been registered by the end of year 2. They are working to connect talent who are under-represented in tech. The Consortium of HBCUs in South Carolina offers a degree-based registered apprenticeship program in software development.
- Newest Project: Apprenticeship Occupations and Standards Center of Excellence
  - o \$7 million award from the Department of Labor
  - o Vision: To build a gold-standard occupational standards infrastructure that increases the transparency, portability, quality, ease of use, and scalability of the US apprenticeship system.
  - o Builds on a prior project, the Competency-Based Occupational Frameworks project, which produced 43 high-quality apprenticeship standards. The cybersecurity support technician standard, based on NICE standards, is one of the most popular.
  - o Benefits: The US system is fragmented and lacks a consistent process to assess quality. With a unified vision to modernize standards, the system benefits from higher quality, greater ease of use, and greater scale.

### b. Report Roundup – Learning from Good Ideas

#### *The Self-Fulfilling Prophecy of the Cybersecurity Skills Shortage*

Presented by Erin McLean, Chief Marketing Officer, eSentire Inc.

URL: <https://www.esentire.com/blog/a-perpetual-problem>

The report, based on a survey, was conducted in collaboration with 451 Research.

- 2022: 1.8 million cybersecurity jobs will go unfilled.
- 2014-2024: Jobs in cyber will increase by 18%.
- 36% of cyber professionals agree that the overwhelming workload is the most stressful part of their job.
- 32% of organizations say it takes 6 months to fill a cyber role.
- 87% of respondents felt staffing levels weren't adequate.
- 78% felt they had a skills/expertise gap.
- 62% felt they could train existing team members to fill the gap.
- Opportunities to Change the Outcome
  - o Organizations aren't connecting the challenges and skills, which has a downstream impact on recruitment and training plans.
  - o Poor pipeline/collaboration between organizations and education institutions: Need to learn how to develop the right cyber talent.
  - o Pace of change is significant: Right training from the onset; ongoing training plans; employer commitments; employer partnerships.
- Best Case Scenario
  - o Improved retention
  - o Improved morale

- Minimized skills gap
- Effective relationships: MSSPs, contractors, educational institutions
- Improved recruitment: skill set vs. job title3s; spamming outreach common; technical aptitude.

c. Framework Feature – Applications and Uses of Workforce Framework for Cybersecurity

*Cyber-CHAMP: Cyber- Competency Health and Maturity Progressing Model, Idaho National Lab*

Presented by Dr. Shane Stailey, Idaho National Lab

It's hard sometimes for an organization to consume all the data in various frameworks and make it practical. How do you get a training plan tailored to an individual?

- Utilizing/Extending Current Frameworks for Maximum Workforce Development Integration
  - 5 phases across workforce development lifecycles
  - Metrics: security maturity/organizational competency health levels
  - Gap analysis, education, and learning paths linked to competency
  - Proven across many regulatory/voluntary frameworks
- Job Task Analysis
  - Task analysis survey: 1005 tasks
  - The result is an analysis that lets individuals see what they're doing across the NICE/NIST roles. Many organizations need to establish accurate job descriptions for cyber positions based on current roles and responsibilities. Many leaders may or may not be aware of all the roles and responsibilities that individuals are performing. Education and training plans can be focused on roles for maximum ROI.
  - Identify Security Competency Function Alignment: Five security competency health functions (Awareness, Support, Maintain, Implement, Design). Education and training plans should focus on competency for maximum ROI.
  - Choose from among recommended training options based on role and competency alignment: Training options are provided from across industry to include education and training providers and academia. Individuals and managers can sit down together and decide the best ROI options for the individual and the organization.

d. Research Review

*(ISC)2 Cybersecurity Career Pursuers Review*

Presented by Clar Rosso, CEO, (ISC)<sup>2</sup>

URL: <https://www.isc2.org/-/media/ISC2/Research/2021/CybersecurityCareerPursuers-Study>

Stop Chasing “All Stars” for Short-Term Gain and Develop Your Team for Years of Success

- Study at a Glance:
  - Inaugural study published April 28, 2021
  - 2,034 respondents

- The survey examined most common activities that cybersecurity professionals are tasked with in first three years of their career.
- The findings show which tech skills are most needed and what motivates job seekers.
- Organizations tend to look for the illusive cybersecurity all-star. They need to look beyond the search for the unicorn candidate and invest in their people for long-term success.
- When we try to speed up the process of bringing qualified professionals into the marketplace, we want to make sure we don't artificially speed people if they don't have the necessary credentials.
- We need to address DEI.
- Participants in research: 66% male/33% female; women are more likely to exit the profession; women entering the profession are more likely to not have an IT background.
- Most recommended skills:
  - Cloud Security
  - Data Analysis
  - Coding and Programming
  - Encryption
  - Risk Assessment/Management
  - Intrusion Detection
  - Access management
  - Malware analysis
  - Administration
  - Backup and storage
- Soft Skills
  - Problem solving
  - Analytical thinking
  - Critical thinking
  - Ability to work independently
  - Ability to work in a team
  - Creativity
  - Data visualization
  - Project management
  - Verbal communication
  - Written communication
  - Leadership
  - Business acumen
- Strategies for Team Building
  - Support organizations looking inward for cybersecurity needs: Cybersecurity roles are often fractional roles within an organization - tis gives someone a chance to dip their toe in the water
  - Take a balanced approach to IT expectations. 50% of individuals in cybersecurity do not come from an IT or computer science background. You can train for the technical skills. Create realistic job descriptions.
  - Foster mentorships: Employees did better in their careers when they had someone they could go to with questions.
  - Embrace diversity within cybersecurity teams.

#### IV. Working Group Updates

a. Promote Career Discovery

Co-chairs: Roland Varriale II, Cybersecurity Analyst, Argonne National Laboratory;  
Monica Gomez, Cisco

- The Career Working Group is searching for a third co-chair.
- They recently solidified objectives that came out of a distillation of their environmental scan. They are preparing to finalize the objectives.
- The working group welcomes anyone interested in joining.

b. Transform Learning Process

Co-chairs: Richard Spires, Instructor, Learning Tree

- The Learning Working Group has looked at appropriate strategies, tactics, and success measures for the group's objectives. They will refine the work in August. Some of the strategies can be synergistic with some of the other working groups' strategies. After the September 10 Community Coordinating Council meeting, the focus will shift to priorities around projects and taking on some of the strategies.
- If you're interested in the learning process, they welcome your participation.

c. Modernize Talent Management

Co-chairs: Karen Jensen, Saaby Consulting; Kevin Perry, Chief Cyber Training, DoD Cyber Crime Center/Cyber Training Academy; Melissa Woo, Executive Vice President for Administration, Michigan State University

- The Talent Working Group is reviewing data – strategies, tactics, success measures – for their implementation plan.
- If you're interested in joining this group, they welcome your participation.

#### V. Community of Interest Updates

a. Apprenticeships in Cybersecurity

Co-chairs: Tony Bryan, Executive Director, CyberUp; Jennifer Oddo Executive Director, Strategic Workforce Education and Innovation, Youngstown State University

- The Apprenticeships COI experienced a pivot this past week. They had been working on an ROI playbook, but in the wake of recent high-profile security issues, they felt there was a great need for a cybersecurity apprenticeship playbook to help guide employers in implementing apprenticeship programs. The ultimate goal is to have a NICE Apprenticeship Playbook finalized by the NICE Conference & Expo in June 2022.
- They still need more participation from businesses and employers.
- If you have a cyber apprenticeship program, they encourage you to attend their meeting and showcase the program.

b. Cybersecurity Skills Competitions

Co-chairs: Amelia Phillips, Highline College; Brad Wolfenden, EmberSec

- The Competitions COI recently discussed the importance of including more cybersecurity competitions in the DoE Games. Other recent topics of discussion include brainstorming topics for panels and additional ideas for Cybersecurity Career Awareness Week.

- c. K12 Cybersecurity Education  
Co-chairs: Terrance Campbell, CCTE Cybersecurity Teacher, Shelby County Schools; Laurin Buchanan, Secure Decisions
  - The K12 Education COI recently talked with some of the 2021 NICE internship participants. Prior to the internship with NICE, the interns did not know how large and diverse the cybersecurity field is. As the COI was brainstorming later, they came up with the idea of developing an ambassador program, where community members can earn badges for getting the word out, among other things.
- d. NICE Framework Users  
Karen Wetzel, Manager of the NICE Framework
  - The NICE Framework Users Group recently discussed different tools that would help with implementation and adoption of the Framework. What other resources might be useful? For example, a sector-specific guide? They want to hear about users' experiences and additional ways the Framework could be useful to them.

## VI. Project Progress Reports

- a. Cybersecurity Career Awareness Week (CCAW) – October 18-23, 2021  
Presented by Davina Pruitt-Mentle, Lead for Academic Engagement, NICE  
URL: <https://www.nist.gov/itl/applied-cybersecurity/nice/events/cybersecurity-career-awareness-week>
  - CCAW aims to promote awareness and exploration of cybersecurity careers. Anyone can contribute by hosting an event, participating in an event, or engaging students with cybersecurity content. Add your activity via the online [commitment portal](#).
- b. NICE K12 Cybersecurity Education Conference (Virtual) – December 6-7, 2021  
Presented by Davina Pruitt-Mentle, NICE  
URL: <https://www.k12cybersecurityconference.org/>
  - Conference speaker selections are being sent out this week.
  - Earlybird registration will be open from September 1 through the end of October.
  - If you plan to host a virtual booth, contact Felicia Rateliff to make sure your logo is displayed: [conference@ikeepsafe.org](mailto:conference@ikeepsafe.org)
- c. NICE Conference and Expo (Atlanta, Georgia) – June 6-8, 2022  
Presented by Paola Hechavarria, Florida International University  
URL: <https://niceconference.org/>
  - The conference will take place in person at the Westin Peachtree Plaza in Atlanta, Georgia. Hotel [registration](#) is now available online.
  - The conference theme is *Demystifying Cybersecurity: Integrated Approaches to Developing Career Pathways*. There will be four tracks:
    - Growth and Development through Lifelong Learning
    - Building a Three-Dimensional Cybersecurity Culture
    - Hybrid Roles to Solve Sector-Specific Needs
    - Emerging Topics in Cybersecurity
  - The Call for Proposals goes live September 7, 2021
  - Other Events

- [Regional Initiative for Cybersecurity Education and Training](#): September 14, 2021
  - [NICE Symposium: A Coordinated Approach to Supply Chain Risks](#), November 6, 2021  
This is a free, half-day virtual symposium. There will be an in-person option for participants in the Washington, DC, region. The symposium will feature Chris English, National Cyber Director.
- d. Centers of Academic Excellence (CAE) in Cybersecurity Community  
Presented by Tony Coulson or Amy Hysell, Cybersecurity Center, California State University, San Bernardino  
URL: <https://www.caecommunity.org/>
- The recently updated website includes improved navigation features and events, news, and resources tabs.
  - CAE Forum offers virtual, non-technical presentations the third Wednesday of every month.
  - CAE Tech Talk is a live, online academic forum featuring technical presentations on cybersecurity-related topics. Tech Talks are usually held the third Thursday of each month during the Fall and Spring semesters.
  - [National Cybersecurity Virtual Career Fair](#), September 17, 2021  
Employers interesting in hosting a free booth space may complete this [pre-registration form](#).
- e. US Cyber Games  
Presented by Danielle Santos, NICE  
URL: <https://www.uscybergames.com/>
- On July 9, just over 60 athletes invited to the training combine were announced. The athletes are now working with coaches and mentors, using Discord to train. Over the next few months, they will work toward building skills, leading up to October 5 when the official US Cyber Team will be announced. They will compete at the International Cybersecurity Competition in December in Athens, Greece.

## VII. Featured Topic

### *K12 Education COI K12 Roadmap*

Presented by Davina Pruitt-Mentle, NICE

URL: [https://www.nist.gov/system/files/documents/2021/04/06/K12Roadmap\\_DRAFT\\_forCOI-508Compliant.pdf](https://www.nist.gov/system/files/documents/2021/04/06/K12Roadmap_DRAFT_forCOI-508Compliant.pdf)

- What: Document establishing a coordinated, coherent portfolio of National K12 Cybersecurity education activities
- Why: Allow efforts and assets to be deployed effectively and efficiently
- How: Encourages a more deliberate focus among new and existing efforts and create synergies among programs and agencies.
- Process started when the new NICE strategic Plan was released. The COI came up with five pillars:
  - Increase cybersecurity career awareness
  - Engage students where disciplines converge
  - Stimulate innovative educational approaches

- Promote cybersecurity career pathways
- Prioritize research
- Crafted actions/activities/curriculum/content for each pillar:
- An evergreen document on the COI Google Drive asks for continued updating of the actions and their measures of success.
- Join the COI in documenting actions/programs you are doing or know about.

**VIII. Closing Remarks and Next Meeting Reminder**

The NICE Community Coordinating Council will not meet in August. The next NICE Community Meeting will be **September 22, 2021**, at 3:30 p.m. ET