

NICE Community Coordinating Council

Meeting Agenda

September 28, 2022 | 3:15-5:00 p.m. ET

I. Introduction and Ground Rules

Susana Barraza, Program Manager, 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 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
 - Attended an event at [Opportunity @Work](#) in New York city. The event was centered on skilling people through alternative roots or 'STARS'. The event '[Tear the Paper Ceiling](#)' examined 1) how to obtain better skilled based hiring, 2) understanding how to create more uniform approaches toward verification of competencies and development of great job descriptions, and 3) how to optimize the development of individuals who do not have a degree but have experience and ambition.
- b. Government Co-Chair - Rodney Petersen, Director of NICE
 - A blog post is forthcoming written by the three co-chairs of this group on skills-based education and hiring.
 - Last week's webinar, [Overcoming the Entry-Level Job in Cybersecurity Conundrum](#), was focused on overcoming the entry-level job conundrum in cybersecurity with an emphasis on position descriptions and skills-based hiring.
 - [Cybersecurity Apprenticeship Sprint](#): a joint effort between the Department of Commerce and the Department of Labor. Marian Merritt, Deputy Director of NICE, has been the lead for NICE and NIST in the effort.
 - Just past the halfway point with the 120-day sprint culminating during [National Apprenticeship Week](#) (November 14-20, 2022).
 - The effort aims to 1) increase awareness of cybersecurity apprenticeships, 2) get more apprentices engaged and signed up for opportunities and apprenticeships, and 3) spotlight how it can be used to fill employer needs.
 - Additional information: <https://blog.dol.gov/2022/09/19/strengthening-and-diversifying-the-cybersecurity-workforce>
 - Many countries look to NICE and its Workforce Framework site for cybersecurity and the work of the NICE Community Coordinating Council as a model for others to adopt or to align to. Lately, NICE global outreach includes:
 - Participating in the international group [Global Forum on Cyber Expertise](#)

- Danielle Santos, Communications and Operations and Lead for International Engagement, recently attended a conference in the Netherlands.
- Rodney Peterson presented last week as part of a conference in Chile, focused on how the NICE Framework can be used as a model for education and training as well as meeting industry and employer's needs.
- Ongoing partnerships with the [Organization of the American States](#) (OAS). NICE will be conducting an event with FIU called [RICET](#) (Regional Initiative for Cybersecurity Education and Training). There is also an OAS summit being held next week.
- NICE also participates in state government outreach. Congress recently passed a major investment in infrastructure. Funding is now available from the community chest in CISSA specifically to states. States must have a cyber plan which must include alignment to the NICE Workforce Framework for Cybersecurity as a requirement for funding. Great opportunity for NICE to get engaged with states.

III. Standing Items

a. Report Roundup – Learning from Good Ideas

Survey on Diversity in Cybersecurity

Presented by Samantha Katcher, Complex and Cognitive Systems Engineer, MITRE

URL: <https://tsp.cs.tufts.edu/community-survey/>

- Working with Daniel Votipka, Co-Director of Tufts Security and Privacy Lab, investigating computer security professional's community experiences.
- Interviewed people from marginalized populations. Found a big challenge was uncertainty in issues regarding community support.
- Current follow-up study utilizes a 15-minute survey to look at the community support aspect of computer security professionals to help them understand the communities the security professionals interact with and the impact it has on their development and success.
- Looking for Computer Security Professional participants. Click [here](#) to participate.
- Additional info: <https://tsp.cs.tufts.edu/community-survey/>
- Contact: sec_community@cs.tufts.edu with any questions.
- Q&A: None

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

NICE Workforce Framework for Cybersecurity WiCyS Video Album

Presented by Marian Merritt, Deputy Director, NICE

URL: <https://www.wicys.org/resources/nice-workforce-framework-wicys-video-album/>

- WiCyS asked their members to bring the NICE Workforce Framework's 52 work roles to life through videos. The video album promotes awareness of the NICE Community; highlights women who are the underrepresented; showcases knowledge, skills and abilities within each framework as well as features cybersecurity professionals. The videos allow others to understand what its like to be in a particular cybersecurity work role.
- The videos are 3-5 minutes long. Participants describe their job as related to the assigned work role and their experiences within the role. Starts with a brief introduction about themselves and describe what work role their job falls under.

They describe key tasks they have and the knowledge they came to the position with as well as what knowledge they have continued to acquire.

- The application is [online](#). Currently there are 35 open work roles. WyCiS will send applicants a video outline and resources. WiCyS provides final editing and then shares it out among social networks.
- Q&A: None

c. Research Review- Driving Research on Effective Practices

Increasing Cybersecurity Career Interest through Playable Case Studies

Presented by Justin Scott Giboney, Assistant Professor, Brigham Young University

<https://link.springer.com/article/10.1007/s11528-021-00585-w>

- Cybermatics is a playable case study: a virtual related internship where a player assumes a role in the company, as an employee. In the case study they work for a penetration testing company where they work with a client and pen-test the client's website.
- In the playable case study participants get, 1) a list of tasks to do, 2) interact with other co-workers, 3) there is a storyline, 4) to document work, 5) participate in a simulated shell to get technology experience, 6) to participate in slack-like chat and, 7) to work on a fictitious site to pen test
- Findings include, 1) increase in understanding of what a pen-tester does, 2) increases in communication skills, 3) increased confidence in various skills such as programming, 4) ability to learn confidence and communication confidence, 5) did not show an increase of interest from women in a cybersecurity career, and 6) women had less confidence in succeeding in a cybersecurity career.
- Questions or interest please email: dlhansen@byu.edu and justin_giboney@byu.edu
- Q&A:
Q: Are these open resources or are you licensing?
A: Not licensed yet but likely will be in the future. Still within the research stage.
Q: Why are the findings in communication skills and communication confidence listed separately?
A: Participant communication skills were measured through a written report and they had to complete a survey about how confident they were in their communication skills so we could see an increase in their technical writing and their communication skills.
Q: Why don't women show desire for cybersecurity careers?
A: Don't have good answer but there are many working papers on the subject.

IV. Working Group Updates

a. Promote Career Discovery

Co-chair: Keith Davis, Koinonia Family Life, Inc.

- The group has been focused on their two projects as well as on how their work will support the [Cybersecurity Career Awareness Week](#) (CCAW).
- Reviewed the Career's Pathway Report Document and are making final edits. The working document can be found [here](#).
- The Ambassadors Initiative Project team shared a draft of proposed effort. Hope to have the soft launch in October during the CCAW.

- Four examples of ambassador programs were shared during the last meeting.
 - October meeting will be a panel on Career Discovery or Careers in Cybersecurity.
 - Site: [Promote Career Discovery Working Group | NIST](#)
 - Next meeting: October 19, 2022, at 3:30 p.m. ET
- b. Transform Learning Process
Co-chair: Dr. Donna Schaeffer, Marymount University
- Concluded one project team on improving the quality and availability of credentials.
 - Another project team is continuing under Objective 2.2 advocating for **multidisciplinary approaches** that integrate cybersecurity across varied curricula.
 - A project team on public affairs masters' degree program should conclude over the next few months.
 - Draft charters for two additional working groups, 1) diversity and inclusivity, and 2) use of performance-based assessments to measure cybersecurity competencies and the capability to perform NICE Framework Tasks.
 - Looking at the development and recognition of teachers, faculties and instructors since expertise in this area is an in-demand skill as a small project.
 - Site: [Transform Learning Process Working Group | NIST](#)
 - Next meeting: October 12, 2022, at 3:00 p.m. ET
- c. Modernize Talent Management
Co-chair: Kevin Perry, United States Army
- The group has conducted updates and a review of their environmental scan.
 - During their last meeting they had a guest speaker from the Department of Commerce on the [Good Jobs Initiatives](#).
 - The group has begun a new project charter on writing '*An Employers Guide to Writing Effective Cybersecurity Job Descriptions*'. The project Focuses on Goal 3.3 of the NICE Strategic Plan.
 - Site: [Modernize Talent Management Working Group | NIST](#)
 - Next meeting: October 20, 2022, at 1:00 p.m. ET

V. Community of Interest Updates

- a. Apprenticeships in Cybersecurity
Lead: Marian Merritt, NICE
- Looking ahead towards [National Apprenticeship Week](#) (November 14-20, 2022). Lots of activities planned such as the [Cybersecurity Apprenticeship Sprint](#) effort.
 - Regional efforts are planned all around the country. Exciting things happening on a rural basis through creative solutions such as the creation of highspeed community hubs with 'WeWork' style job training and talent development community hubs where they have been applying apprenticeships to some of those efforts.
 - Site: [Apprenticeships in Cybersecurity Community of Interest | NIST](#)
 - Next Meeting: October 28, 2022, at 11:00 a.m. ET
- b. Cybersecurity Skills Competitions
Co-chair: Amelia Phillips, PhD, University of the Cumberland

- Brad Wolfenden provided a debrief on ANISA Open Division which was hosted by ANISA in Vienna, Austria. The US came in second behind Canada. He provided an overview of the US Cyber Games and invites everyone to the [US Cyber Games Open Draft Day](#) on October 17, 2022 at the US Department of Commerce in Washington, DC. Registration required.
 - Susan Green presented on the [International Cyber League Collegiate Cyber Cup](#) hosted by [Cyberbit](#). The competition begins October 13th to promote the CCAW.
 - Created a [list of cybersecurity competitions](#) and discussed how to organize them. The group asks everyone to review the list and provide additional competitions. Feedback, including the name of the competition as well as the URL, can be emailed to nice@nist.gov.
 - The October meeting will support the CCAW with a special panel of participants to share insight into the value of competitions and how it has helped people in their current employment.
 - Site: [Cybersecurity Skills Competitions Community of Interest | NIST](#)
 - Next Meeting: October 20, 2022, at 3:30pm ET
- c. K12 Cybersecurity Education
Co-chair: Thomas Trevethan, Palo Alto Networks
- Donna Woods and her students gave a special presentation from the Reno Valley United Schools Districts. The students from Springs High School came on live stream video and shared their 7700 square foot Cybersecurity Awareness Center.
 - Aubrey Kendall, a NICE Summer Graduate Fellow, shared several highlights from the Chips and Science Act.
 - The group is working on activities in support of CCAW. Prepared a special panel lineup for the October meeting. The panel will share a wide range of exciting ideas.
 - Christi Rice and students from Spotsylvania High School will discuss how to celebrate career spirit week. They will share activities and events that have proven successful in promoting careers in cyber. The students will dress up as their favorite character related to cybersecurity. For this meeting, the group is encouraging all attendees to also wear costumes.
 - Site: [K12 Cybersecurity Education Community of Interest | NIST](#)
 - Next Meeting: October 13, 2022, at 3:20 p.m. ET
- d. NICE Framework Users
Karen Wetzal, Manager of the NICE Framework
- Thanks to all who provided comments on the re-factored knowledge, skill, and ability statements that have been aligned with the TKS authoring guide. Nearly finished adjudicating comments.
 - Halfway through review of task statements. There is a lot of redundancy, duplication, and lack of clarity. Hope to make those more useful for everyone as well be able to identify some gaps. It will be forthcoming by end of year.
 - The NICE Framework Competency Areas NISTR is nearing finality. It will be shared with the updated list of competency areas.
 - Want feedback on how to develop these out, particularly the competency areas, and look at the gaps.
 - Site: [NICE Framework Users Group | NIST](#)

- For more information, email Karen Wetzel at karen.wetzel@nist.gov

VI. Project Progress Reports

- a. Cybersecurity Career Awareness Week- October 17- 22, 2022
Presented by Presented by Davina Pruitt-Mentle, Lead for Academic Engagement, NICE
URL: <https://www.nist.gov/itl/applied-cybersecurity/nice/events/cybersecurity-career-awareness-week>
 - A multitude of resources are available on the NICE CCAW website for anyone to use to promote the week such as a video series created by the NICE interns listed under the 'Work Role Videos' section. Additional sections include: discovering cybersecurity careers, interviews, career briefs, tools, posters, workforce demand data, places to visit including virtual tours, etc.
 - Special Events Highlight:
 - Kick-off event at noon in the Rayburn Building. More details on the agenda will be forthcoming.
 - The [US Cyber Games open draft day](#) at the US Department of Commerce in Washington, DC. from 3:30-7:30pm.
 - A twitter chat will be held on Tuesday with working group partner participation.
 - Videos and webinars will be held throughout the week.
 - Capture the Flag Competition will be held throughout the week with partners at the Virginia Cyber Range.
 - Several livestreaming events as well as several professional development activities for educators and those who are re-skilling and up-skilling.
 - [Commitment Portal](#): be sure to submit events in the portal.
 - Careers Working Group and the Competitions Community of Interest's October meetings are both having panels on a variety of topics. The K12 Community of Interest will have students discussing ideas and suggestions about how to engage in community outreach and activities.
 - Davina Pruitt-Mentle is the point of contact for the week: dpruitt@nist.gov
- b. NICE K12 Cybersecurity Education Conference (St. Louis, Missouri) – December 5-6, 2022
Presented by Felicia Rateliff, Director of Operations and Programs, iKeepSafe
URL: <https://www.k12cybersecurityconference.org/>
 - Early bird registration is open until October 15, 2022 and the fee is \$275. The General registration fee is \$350. Breakfast and lunch are included in the fee. One day attendance is not available at a discounted rate.
 - Fee for Federal employees is \$275 through December but it does not include meals.
 - There are 12 pre-conference workshops over December 3-4, 2022. Registration for the pre-conference workshops will open on October 7, 2022. Each 120-minute workshop is \$75. The conferences can be easily added onto the original registration.
 - Keynotes: Susan Warner, Vice President, Talent Community Engagement, Mastercard; Arica Willis, high school student; Bastian Freund, Special Agent, Cellular Analysis Survey Team, FBI, St. Louis
 - Opening Speaker: Dr. Margie Vandeven, Commissioner, Missouri Department of Elementary and Secondary Education.

- Panels: School Counselor Panel will include counselors from the American Schools Counselor Association. A Student Panel will consist of six students ranging from eighth grade to high school talking about their stories.
 - Cyber Signing day-mini event: the event will feature 7 students currently or have recently participated in an internship and or apprenticeship program.
 - Sponsorship and Exhibiting Opportunities - there are still a few spots available for both on-site and virtual exhibits. For more information, email: K12cybercon@ikeepSAFE.org
- c. NICE Conference and Expo (Seattle, Washington) – June 5-7, 2022
Presented by Eddy Madero, Florida International University
URL: <https://niceconference.org/>
- Conference theme was just announced: ‘Resetting Expectations: Creating Accessible Cybersecurity Career Pathways’
 - Call for proposals: October 3, 2022 - January 22, 2023
 - RICET, Virtual Pre-Conference Event: November 16, 2022: Regional Initiative for Cybersecurity Education and Training (RICET): hosted by OAS and FIU and supported by NICE. It is a virtual and free event serving as a collaborative effort to build and strengthen a foundation in cybersecurity education, training, and workforce for the Americas. Additional information can be found [here](#).
 - Early Bird Registration: February 27, 2023 – March 19, 2023
 - Regular Registration: March 20, 2023 – May 14, 2023
 - Late Registration (if applicable): May 15 – May 28, 2020
 - Connect with us:
 - Website: www.niceconference.org
 - Email: info@niceconference.org
 - Twitter: [@nicecybercon](https://twitter.com/nicecybercon)
 - NICE Conference LinkedIn Group: <https://www.linkedin.com/groups/12696840/>
- a. US Cyber Games
Presented by Jessica Gulick, CEO, Katzcy
URL: <https://www.uscybergames.com/>
- Completing Season 1 and midway through the selection of Season 2.
 - Season 1 update: the team was invited to join the European Union countries at their European finals in Vienna, Austria in September. Took 10 players. 32 teams competed. The US team came in second place. It was a great experience which offered students the opportunity to network as well as discuss shared challenges in diversity. Invited to return next year in Norway.
 - [US Cyber Games Draft Day](#): October 17, 2022 from 3:30-7:30pm at the Department of Commerce. The event will be in-person and live streamed. Invite all to attend.
 - 3:30 - 4:30pm: exhibit with US Cyber Game sponsors. Visitors can try hands-on cyber competition challenges to see what it’s all about. Season 1 team and coaches will be in attendance.
 - 4:30pm: the draft will begin after a couple of speakers. After the draft concludes there will be a short reception.

VII. Deeper Dive Topic

NICE Working Group Report on Credentials

Presented by Nancy Austin, Ph.D., Leonardo Coaching - Design the Future; Jeremy Rabson, General Manager – GIAC Certifications

URL: https://drive.google.com/file/d/1DgogVD_nDlIfWHOsl7Y2ZjREeBJVncK/view?usp=sharing

- Chartered as a subgroup to think about how to improve the quality, transparency, accessibility and affordability of credentials.
- Performed a gap analyses to understand the issue and conducted discovery on different experiences to determine the problem.
- Looked at the certification one-pager produced in 2018. The message needs to be reconsidered in 2022.
- Heard from people, women in particular, who do everything they were told to do to get their credentials, but still are unable to find that promised job. There are many case study anecdotes to look at.
- CyberSeek shows certifications with the greatest number of holders does not result in the greatest job posting demand.
- Examined additional reports looking at age groups and women. Discovered a gap between the data and the messaging. Credentials do not guarantee employment.
- Team member, Benjamin Mosse, created a free training program based on competencies. There is an employer driven paradigm shift that values competencies over credentials. The report goes into this point in detail.
- Team member, Jeremy Rabson, believes others have been successful with credentials in building their careers. Employers hire people with credentials finding they have the practical job skills. There is a duality where both sides must be respected.
- Everyone wants to build a mature credential eco-system. Kane Porter and Jeff Grann came up with a pathway forward.
- There are foundational gaps with no refined or defined requirements for credentials. Many believe a certificate is less comprehensive than a certification and a certification is less comprehensive to a degree. Yet, this has not been validated.
- By addressing Objective 2.3.1: credential transparency description language, a schema can be developed in an open source credential registry where industry can be supported through the wide adoption of a defined schema.
- Two additional pieces of the maturity model must be addressed, 1) confirm utility and 2) being able to measure that same utility. The measuring and confirming utility can be done through: 1) open-source reviews, 2) specialist evaluations, and 3) third party review of open source content.
- Employers are now shifting toward competencies to address real world problems.
- NICE draft Framework 8355 highlights how these competencies can be used to communicate an individual's portfolio or proficiencies. A transparent description language is necessary.
- How does the new paradigm integrate with the maturity model? The connecting tissue is the credential language, those competencies that are attached to the credential language, and a quality assurance that supports an optimizing maturity model.
- **Credential Transparency Description Language** (CTDL) and the value proposition of standards highlights a natural move to the value proposition of standards.

- The CTDL schema supports rich Linked Open Data about credentials, costs, assessments, skills, organizations, quality assurance, outcomes, and pathways. All important information that is currently not communicated through a consistent standard.
- CTDL is a voluntary consensus standard for describing credential offerings and connections. Modelled on RDF and built for the semantic web. Living language, with over 700 terms defined, managed on GitHub via non-profit Credential Engine. Anyone is free to use it. It is openly licensed.
- Resources:
 - Credential Engine Technical Site: <https://credreg.net/>
 - A use case example was demonstrated through the Credential Finder [site](#).
 - An of credential connections is demonstrated [here](#).
- Recommend moving from a managed state to a defined state. Suggest endorsing the CTDL schema for documenting credential alignments to the NICE Framework. Include CTDL schema and transparency requirements in future funding opportunities, competitive grants, competitions, and procurement solicitations to keep competitive with the speed of change in the 21st century.
- Free and low-cost courses can be found on the NICE Online Learning Content [page](#).
- Conclusion: Cybersecurity is a young profession. Must be inclusive leadership to bring the voices of people who may not make it to the table. Listen to stories and don't get side tracked by data analytics. Important for somebody to not be invested with an industry to ensure they are bringing transparency. Endorse a paradigm shift that values competencies over credentials. This is a chance to spark market innovation.
- The team contact information can be found on the last page of the [report](#).
- Q&A:

Q: There seems to be an extreme disconnect with the recruiting industry and their knowledge. They don't seem to be aware of credentials or verbiage. How is recruiting tied into this framework and learning?

A: Consistent terminology across all stakeholders is one of the opportunities in that maturity model move. Recruiters are a key stakeholder for interpreting credentials for this market. Need to understand the difference between a certificate and a certification. The differences can be confusing for someone not involved in this on a regular basis.

Q: How would prior learning assessments be impacted/informed by this?

A: Many credential providers have articulation agreements and processes for giving credit for workplace learning assessments and other forms of credentials. Many students miss out on those because they don't connect with counselors who are aware of those opportunities. Having all of that information represented as a data model and into tools and applications will help more people take advantage of those opportunities.

VIII. Closing Remarks and Next Meeting Reminder

- The next NICE Council Meeting will be **October 26, 2022**, at 3:30 p.m. ET.