**NICE Working Group**

**Meeting Minutes**

**Date: September 25, 2019 Time: 3:30 PM ET**

**Adobe Connect session:** <https://nist-nice.adobeconnect.com/nicewg/>

**SharePoint Page:** <https://nistgov.sharepoint.com/sites/NICEProgram/NICEWG>

# Introduction and Ground Rules

1. Danielle Santos, NICE Program Manager, welcomed participants to the meeting. The NICE Working Group (NICEWG) is setup to provide a mechanism for collaboration between academia, government, and industry, and to discuss strategies and actions to aid in workforce development.
2. During this meeting the Adobe Connect chat box feature should be utilized to provide feedback and ask questions.
3. 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.

# Opening Remarks

1. The Academic Co-Chair, Dr. José-Marie Griffiths of Dakota State University, welcomed members to the meeting. Dr. Griffiths noted that it has been a busy time of the year. She has been traveling and sharing information to those unaware about the [NICE Framework](https://www.nist.gov/itl/applied-cybersecurity/nice/resources/nice-cybersecurity-workforce-framework). Additionally, there has been a lot of activity around apprenticeships all over the country which is exciting to see.
2. Industry Co-Chair, Jason Hite of Daoine Centric LLC, noted that this is a great time of year to re-engage with our corporate partners as next month is Cybersecurity Awareness Month. Jason has been discussing with his peers how one can be a force multiplier on cybersecurity efforts as well as influencing other companies to do so as well. Jason has been distributing products from NICE such as the Workforce Management Subgroup guidebook [*Cybersecurity is Everyone’s Job*](https://www.nist.gov/itl/applied-cybersecurity/nice/workforce-management-guidebook).
3. Government Co-Chair, Rodney Peterson, Director of NICE, pointed to the diversity of perspective and presentation of today’s agenda. The American Workforce Advisory Board, created out of Executive Order 13845, had a meeting last week which put forward some recommendations. One recommendation was to develop a campaign to promote pathways toward cybersecurity careers. This is something we can leverage as part of the NICE Strategic Plan. Another recommendation focused on increasing data transparency to better match workers with employers. NICE is looking for opportunities in that area. Modernizing recruitment and training practices was another recommendation. And, finally, measuring and encouraging trainer lead investments. NICE recognizes training is one of the multiple pathways toward a career which should be supported by on-the-job training led by the employer. Rodney included a definition of “Skills Based Training” in the chat: Activities, programs, or events offered by employers that provide employees with the necessary knowledge, technical skills, and professional skills 1) to perform and stay up-to-date in their current job roles and 2) to be able to perform future job roles or enter other professions. Additional information about the advisory board can be found here: <https://www.commerce.gov/americanworker/american-workforce-policy-advisory-board>

# Standing Items

1. **Report Roundup** **– learning from good ideas**

### Kimberly Hauge, Senior Policy Analyst, Economic Opportunity, NGA Solutions: Center for Best Practices, presented on ‘A Governor’s Action Guide To Achieving Good Jobs For All Americans’

* + The National Governors Association started in 1908. There are 55 governors in the association with a new governor as chair every year. Last year the chair was Steve Bullock, Governor of Montana. During Governor Bullock’s tenure he chose to focus his policy initiative on workforce. His initiative was titled, ‘Good Jobs for All Americans’.
	+ Through the initiative they looked at key trends impacting state economies and labor markets. They then looked at state solutions and how governors and leaders are taking actions to prepare their states for the future.
	+ First and foremost, technological changes are transforming the way people work.
		- New technology reduces cost and increases productivity and disrupts employment.
		- Automation will result in the replacement of approximately 15 percent of jobs by 2030. The jobs most at risk are those with primarily routine tasks which has a great impact on racial and ethnic minority workers.
		- Telework improves possibility of jobs located in rural areas.
	+ Demographic shifts are also a significant trend with 1 out of 5 Americans at retirement age by 2030. Changes in composition of the workforce and decline in geographic mobility, as well as, a decline in worker participation have put strains on communities and some industries.
	+ A tightening labor market with 3.6 percent unemployment puts a new emphasis on engaging previously underserved and lower skilled populations.
	+ The initiative is focusing on three areas: 1.) Workforce of the Future – Governors can partner with businesses to identify the skills they will need in the future and how to best equip workers with these skills. 2.) Rural Resurgence – Governors can help midcareer workers succeed in the workforce through increased access to continuous learning opportunities, improved career transitions and holistic support. 3.) Second Acts – Governors can empower the rural workforce by improving infrastructure and promoting communities’ and residents’ unique assets.
	+ The hope is that this guide can be used as a tool to broaden the conversation about increasing jobs.
	+ Several governors are leading initiatives to improve broadband which is an essential action to improve jobs throughout the country.
	+ See the presentation and find out more [here](https://www.nga.org/center/publications/good-jobs-for-all-americans-governors-guide/).
1. **Strategy Stories – new developments that align to NICE Strategy**

## Danielle Santos, NICE Program Manager, and Marian Merritt, NICE Lead for Industry Engagement presented on the ‘International Workshop on Cybersecurity Education and Workforce Development Capacity Building’. Objective 3.5: Collaborate internationally to share best practices in cybersecurity career development and workforce planning

* + The NICE Program Office helped coordinate and host a workshop at the George C. Marshall Center in Germany. There were 38 participants from 20 countries. The Department of State assisted with funding.
	+ The NICE Program Office created the agenda and brought the group together with the purpose of finding out what is happening on workforce and training internationally.
	+ They explored the different approaches countries are taking toward their workforce needs and getting people into the pipeline. They looked at best practices as well as the tools that have been utilized. The workshop looked at programs the various countries can come together on and build up. They collected feedback on both challenges and opportunities. It was important to create an environment of trust.
	+ Each country presented and they also conducted small break-out sessions. They wanted to get country specific information on topics like gender imbalance or what are the social norms for coming into the workforce.
	+ A report will be created from the information gathered at the workshop.
	+ A few of the key takeaways include:
		- There is a wide range of national readiness. Not all countries are stable with many concerned about elections incoming administrations overturning previous decisions. Many countries have worked out ways around the challenges.
		- Some countries find it a challenge to measure the supply and demand. Many are looking to adopt a model like [CyberSeek](https://www.cyberseek.org/). Many countries are turning to outside organizations to help measure the supply and demand gaps.
		- Work roles are not clearly defined. There are shortages in trained teachers as well as pay discrepancies.
	+ Some key recommendations include:
		- Centralizing the ownership of the cyber-strategy in order to get autonomy around administration changes.
		- Make sure workforce is mentioned in cybersecurity strategies.
		- Establish KPIs and ensure they are being reported on.
	+ Once the report on the workshop is out it will be made available to NICE WG members.
	+ Another international workshop will be held during the upcoming NICE conference.
	+ See presentation for more information.
1. **Metric Moment – what gets measured gets done**

## Dr. John Sands, Director of the Center for Systems Security and Information Assurance CSSIA, Faculty and Department Chair Moraine Valley Community College presented on the ‘Results of Community College Cybersecurity Workforce Study’

* + Academic Programs across the country are losing populations. They are doing all they can at the Community College level to address that trend and better compete for graduates.
	+ Community Colleges put out 45% of undergrad students into the workforce. The NICE Framework job roles should allow us to do a better job modifying programs. We should be doing a better job preparing students for those roles. We want to use data to enable greater impact.
	+ The study was designed and sponsored as part of a partnership between CyberWatch West and CSSIA. The team wanted to know what type of jobs Community College students find after graduation. Using the NICE Framework, which work roles do they fill? How long does it take to move between work roles?
	+ The study involved 12 national Community Colleges. It was conducted by doctoral candidates in a cybersecurity program at Dakota State University. There were 88 participants who completed the entire survey. The survey was standard with follow-up questions from the researchers.
	+ The data collected included everything from personal information, academic program information, degree types, certifications, perception of workforce preparedness, ability to find employment post-graduation, current position, and years employed.
	+ Program and Project Management had the highest percentage of job placement amongst the graduates with Network Services and System Administrators following. Software Development and System Architecture had the lowest job placement.
	+ 20-25% continued to get a bachelors or master’s degree.
	+ They did see a correlation between the type of certification and employment.
	+ Some of the major findings included:
		- Community College cybersecurity alumni self-identified 37 of the 52 work roles.
		- Definite pattern based on the college a student attended.
		- Definite pattern based on community or region students come from.
		- Very strong areas: Operate and Maintain and Protect and Defend.
		- Weakest areas: Security Provision and Investigate.
		- Several institutions stand out areas: Analyze and Oversight and Development.
	+ Some next steps include:
		- The development of a matrix between the NICE Framework work roles and the study findings.
		- Identifying the pathways of students reaching advance work roles from a community college program.
		- Identifying content that can enhance community college student’s opportunity to move to advanced work roles.
	+ The report will likely be released around mid-November.
	+ See presentation for more information.

# Subgroup Updates

## **Apprenticeship –**

## Girish Seshagiri, Co-Chair, provided the update.

* + There was no meeting in August but there will be one this Friday, September 26th. There is a presentation scheduled for some recent winners of a DOL grant. They will present on their plans, the number of apprenticeships they plan on launching, what their strategy will be, and how the NICE Apprenticeship group can help.
	+ The group has a short list of project topics to tackle such as: a landscape tracker; a comparative analysis of learn and earn models; return on investment on apprenticeships; what are the barriers as to why apprenticeships are not widely used in the U.S., and member ideas on how to build an apprenticeship to scale.
	+ The next subgroup meeting is scheduled for October 25th at 11:00 am, ET.
	+ Visit the Apprenticeship subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/apprenticeship-sub-working-group).

## **Collegiate –**

## Denise Kinsey, Co-Chair, provided the update.

* + The Value of Higher Education project team is working on a white paper. The content is focused primarily on recent years. The project is looking to assess and gather information on the attitude, both positive and negative, from all levels and various stakeholders on whether their degree is marketable. Much of what has been found is positive, but students are coming out unprepared due to credit hour policies. The desire is to collect information and opinions to identify where we are and then identify where a lack of information is or create recommendations. The team hopes to present some findings at the NICE Conference. Volunteers are needed! If you would like to participate please email the co-chairs: Denise Kinsey or Stephen Miller.
	+ The next subgroup meeting is scheduled for October 8th at 2:00pm, ET.
	+ Visit the Collegiate subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/collegiate-sub-working-group).

## **Competitions –**

## Amelia Phillips, Co-Chair, provided the update.

* + Brad Wolfenden, Competitions Co-Chair, attended a day-long NICE Leadership session in Rockville, MD in August.
	+ The subgroups last meeting included a presentation by CyberForce. A highlight of their presentation was the description of their competition anomalies and how they map to the NICE Framework. Students were made aware of the points ahead of time but that did not affect the kinds of challenges they chose to do.
	+ They group is working on self-promotion. They are also looking to get local military and industry to help with competitions.
	+ Dan Manson continues to create [podcasts](https://www.youtube.com/cyberfed) on competitions.
	+ They are working on guides and looking for a member to lead the project.
	+ The next subgroup is scheduled for October 15th at 3:00pm, ET.
	+ Visit the Competitions subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/competitions-sub-working-group).

## **K12 –**

## Patrick Schultz, Co-Chair, provided the update.

* + The last meeting had a very good turnout. They reviewed some of their deliverables.
	+ The school counselor flyer is almost ready and just needs the graphics.
	+ The ‘Talking Points’ one pager is completed and [uploaded](https://www.nist.gov/itl/applied-cybersecurity/nice/events/national-cybersecurity-career-awareness-week/toolkit).
	+ They recently took a poll on what to work on next as a group and the top two topics were: 1.) K12 Standards and Guideline for the K12 space and 2) Cross mapping K12 standards to the NICE Framework. A third topic was developing a document that crafts the synergies between cybersecurity and STEM.
	+ The NICE Leadership meeting in Rockville, MD really re-energized the subgroup.
	+ The group will provide a small presentation to the National Coordinating Council for them to broadcast [National Cybersecurity Career Awareness Week](https://www.nist.gov/itl/applied-cybersecurity/nice/events/national-cybersecurity-career-awareness-week/toolkit).
	+ The next K12 subgroup is scheduled for October 16th at 3:30pm, ET.
	+ Visit the K12 subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/k12-sub-working-group).

## **Training and Certifications –**

## John McCumber, Co-Chair, provided the update.

* + A main topic discussed during the groups last meeting was on assessments. How are they defined and used for cyber skills as well as aptitude versus assessment?
		- What areas require demonstrative skills?
		- Another issue that keeps resurfacing is communication skills.
		- The group would also like to look at work roles and the role of the recruiter which comes back to what is training and education.
		- They are looking for volunteers for some of these areas.
	+ The work on Cyber Ranges continues.
	+ The [mapping matrix](https://www.nist.gov/itl/applied-cybersecurity/nice/illustrative-mapping-certifications-nice-framework) is available.
	+ The next T&C subgroup is scheduled for October 17th at 3:30pm, ET.
	+ Visit the Training and Certifications subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/training-and-certifications-sub-working-group)*.*

## **Workforce Management –**

## Susie Cone, Co-Chair, provided the update.

* + They are continuing their discussion on project ideas. Their new focus is on re-writing job descriptions. The hope is that by re-writing job descriptions they will be able to fill work roles more quickly. The descriptions will align with the NICE Framework.
	+ Their next step is to create a project charter to make it official.
	+ They are looking at the top job roles that are the most difficult to fill across sectors.
	+ They are currently gathering information on job descriptions.
	+ The next Workforce Management subgroup is scheduled for October 17th at 1:00pm, ET.
	+ Visit the Workforce Management subgroup website [here](https://www.nist.gov/itl/applied-cybersecurity/nice/about/working-group/workforce-management-sub-working-group).

# Project Progress Reports

## **National Cybersecurity Career Awareness Week** ([NCCAW](https://www.nist.gov/itl/applied-cybersecurity/nice/events/national-cybersecurity-career-awareness-week)) – Davina Pruitt-Mentle provided the update.

* + NCCAW will be held November 11 – 16, 2019.
	+ We encourage members to [register a commitment](https://www.nist.gov/itl/applied-cybersecurity/nice/events/national-cybersecurity-career-awareness-week/events-and) on the website portal. Commitments are actions taken by the community to promote cybersecurity careers and messaging for opportunities as to why people should go into this field.
	+ Additional resources have been added to the NCCAW website and continue to be added.
	+ We encourage everyone to help promote the week. Please engage and share any activities you have planned for the week or resources you have developed.

## **NICE Annual Conference** - Randy Pestana, Florida International University, provided the update.

* + The NICE Conference is scheduled for November 18-20, 2019 in Phoenix, AZ.
	+ Th 2019 conference is building on last years. There is a very strong conference track. Dr. Walter Copan, Director of NIST, will be there to lead a keynote.
	+ Registration ends on October 18th. It sold out last year so be sure to register asap.
	+ There are four pre-conference workshops. The first workshop, Implementing New Approaches to Online Learning and Innovative Instructional Design, is about to sell out.
	+ The hotel block is 90% booked so make your reservations now.
	+ Find out more [here](https://niceconference.org/).
	+ Please email: info@niceconference.org with any questions.

## **NICE K12 Cybersecurity Education Conference** – Amber Lindsay, Vice President, IKeepSafe, provided the update.

* + The NICE K12 conference is scheduled for December 9-10, in Orange County, CA.
	+ Registration is open and the early bird rate end soon. The hotel reservations are open and there is a limited block of rooms.
	+ There are 30-35 available spaces left for exhibitor tables.
	+ Students have been involved in the planning and execution of the K12 conference.
	+ There will be a student keynote speaker, Finn Burmeister, from San Antonio, TX.
	+ Shelbi Rombout, Deputy Chief Information Security Officer, Mastercard is another key note speaker.
	+ See presentation and find out more [here](https://www.k12cybersecurityconference.org/).

### **CAE Community** - Presenter: Anastacia Webster, California State University, San Bernardino, provided the update.

* + The 2019 CAE Virtual Career Fair is this Friday, September 27th. Additional information can be found [here.](https://www.caecommunity.org/news/2019-cae-virtual-career-fair)
	+ The CAE Community quarterly newsletter comes out next week just in time for Cybersecurity Awareness Month. The newsletter is a joint effort with the CAE-CD program office.
	+ The CAE and the Cybersecurity Symposium follows the NICE conference in November. The conference will have research presentations and presentations from the CAE-R and CAE-CD communities.
	+ Find out more [here](https://www.caecommunity.org/).

## **NICE Challenge Project** – James D. Ashley III, Lead Engineer/Project Manager, CSUSB, provided the update.

* + Over the last few months they have seen steady user growth. The project has over 635 instructor sign ups and 375 educational institutions being served. The most rapid growth is seen in the K12 sector.
	+ The fall quarter is seeing record utilization with multiple days out of a week at full capacity.
	+ Over the past few months the project has been updating the underlying operating system. The majority of efforts have been focused on release of quality of life information like tools for users.
	+ A handful of challenges have also been released lately under ‘Protect and Defend’ and ‘Operate and Maintain’.
	+ They are making upgrades to the underlying operating system and a tool that makes the challenges function.
	+ Find out more [here](https://nice-challenge.com/).

# Summary of Action Items - No new action items to report.

# Next Meeting Reminder - The next NICE Working Group meeting is scheduled for Wednesday, October 23, 2019.