

# NICE Webinar Series

NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION



The Continuity of Learning and Skills Development in Virtual Environments  
May 13, 2020

## NICE Strategic Plan Values

- ***Challenge Assumptions*** – examine rationale for past and present education, training, and workforce approaches and apply critical analysis to future solutions
- ***Drive Change*** – seek creative and innovative solutions that might disrupt or defy the status quo
- ***Stimulate Innovation*** – inspire and experiment with new approaches to education, training, and skills development

# Pandemic and the Private Sector

David Lasater

Sr. Director, Human Resources

**Akamai Technologies**

May 13, 2020

# Akamai Technologies

Akamai is a global content delivery network, cybersecurity, and cloud service company, providing web and Internet security services.

Akamai's content delivery network is one of the world's largest distributed computing platforms, responsible for serving approximately **30% of all web traffic.**

# Pandemic Impact on Business

COVID-19 has had a major impact on Akamai's business

- Dramatic spike in internet traffic and cyberattacks
- Critical need to sustain and increase capacity
- Business continuity challenges to overcome
- Diverging impact on revenue

**Global Traffic is Up ~30%  
Over the Last Month**

(Compared to ~3% Growth for a Typical Month)

Peak Traffic on Akamai's Edge  
Platform is Up More Than 2X Y/Y

**82** Tbps

March 2019

**167** Tbps

March 2020

# Pandemic Impact on Employees

## Challenges:

- Home office setup (ergonomics, connectivity, furniture, etc.)
- Balancing caretaking and professional responsibilities
- Managing mental health (stress, isolation, loneliness etc.)
- Burnout risk

## New Solutions:

- Increased flexibility around productivity and working schedules
- Option for employees to work remotely through end of 2020

# Employee Survey Results

## Most valued communications

- Weekly all-employee email
- Designated Intranet page

## Top concerns about returning to offices

- Maintaining social distancing measures
- Availability of a vaccine or antibody testing
- Commuting on public transportation
- Cleaning and sanitizing procedures

40%

Overall global  
response rate

95%

Confidence in  
Akamai's future

84%

Remote work is going  
well

91%

Confidence to  
perform job  
remotely

# Lessons Learned and Future Impact

**Remote Work:** Shift from accepting to encouraging

**Talent Strategy:** Increased optionality for remote work

**Employee Support:** Increased focus on work-life balance and wellness

**Compliance:** Developing Improved tracking + employee transparency

**Technology:** Investment in collaboration tools + training

**Real Estate:** Balancing savings from downsizing with incentives to increase office attendance



# Q & A



# Cybersecurity Workforce Alliance (CWA) Building Soft/Workplace Skills

Dr. James R. Stellar,

Professor of Behavioural Neuroscience, UAlbany, Past Provost and Interim President  
Education Co-Chair, iQ4 CWA Advisory Board

Industry Co-Chair: David Cass, VP Cyber and Risk, Supervision, Federal Reserve Bank, NY

NICE Monthly Meeting, May 2020

## CWA – Industry Academic Collaboration Founded .....

- To bring industry support to iQ4 courses with virtual industry mentors augmenting academic instruction – *from any faculty*.
- Builds Academic-Industry partnership – and produces workforce readiness.
- Because finding talent for industry that is trainable is not as good as hiring with direct experience.
- Soft skills are 85% of the hiring decision – CWA adds that to context and experience.
- Industry mentors know what they need/want to hire and bring that to the students.

Founders meeting

**23 January 2015**

**14 People form  
the CWA**

**SIFMA – Securities Industries Financial Markets Association  
iQ4 Corp (virtual projects Platform & “Passport”)  
John Jay School of Criminal Justice (CUNY)**

**+ CISO & Risk Officers from**

**Federal Reserve Bank NY, Goldman Sachs, Morgan Stanley, Fidelity,  
BankNY Mellon, Capgemini,  
Express Scripts/(CIGNA) Healthcare**

**Mission**

Address the cybersecurity and technology risk skills gap by scaling a diverse student and professional workforce to provide immediate value to employers.

Provide industry credentialed - applied learning curricula to develop skills in cybersecurity and risk

Dramatically reduce the cost of on-boarding and training for college new hires

Grow and increase cyber/risk awareness, knowledge and experience for learners

**How**

Create the “perfect” student candidate profile & role profiles and develop Candidates

Leverage iQ4 skills passport leading to career pathways

# iQ4 - CWA Alumni Passport

**Share My Passport**

**Digitally Badged Upon Course Success**

**Education**

**SUNY Ulster**  
Associate in Science  
Criminal Justice  
2014 - 2014

**SUNY Albany**  
Bachelor of Science  
Digital Forensics (concentration)  
Forensic graduation: 2014  
Spring 2014 Thesis

**Experience**

**Information Security Officer**  
The Threat Hive - 5/2020-2024 SUNY  
2020 - 2024

Building Skills Strongly - Cybersecurity Practice Services and Healthcare firms report a significant shortage of graduates with the skills, experience and an understanding of transferable knowledge and techniques in critical infrastructure including Cybersecurity, Business Resilience, IT Risk, Business Risk and Building. In response to these skills gaps, SUNY has launched the Cybersecurity Workforce Alliance (CWA) to meet present and future industry demand for Cybersecurity talent and providing graduates that are "workforce ready" - not just graduation certificate holders. Mission: Improve the cyber security skills and talent the college student workforce, so they are more effective in the job and can provide added immediate value to the public & private sector by responding to a company's Cybersecurity operations. Thank You - iQ4/Threat Hive CWA

- Respectful ★★★★★
- Resilience ★★★★★
- Strategy ★★★★★
- Willingness to Learn ★★★★★
- Work Ethic and Dedication ★★★★★
- Ability to Meet Deadlines ★★★★★
- Multifaceted ★★★★★
- Teamwork ★★★★★
- Ability to Think On Your Feet ★★★★★
- Volunteering or Extracurricular Activity/club ★★★★★

Click and email interactive PDF of the Passport

Assessed KSAs

Essential (Soft Skills)

Digitally Badged KSAs Matched From the CWA Role Played

- Communications, Digital Media & Design**
- MEDIA ARTS**
- Graphic Arts and Design ★★★★★
  - Web Design ★★★★★
- VIDEO PRODUCTION**
- Video Production ★★★★★
- Social Science**
- SOCIAL SCIENCE**
- Psychology ★★★★★
- Cybersecurity - Operate and Maintain**
- DATA ADMINISTRATION**
- Information Systems/Network Security ★★★★★
  - Knowledge of cybersecurity principles.
  - Vulnerabilities Assessment ★★★★★
  - Knowledge of cyber threats and vulnerabilities.
- Cybersecurity - Oversee and Govern**
- LEGAL ADVICE AND ADVOCACY**
- Risk Management ★★★★★
  - Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).
- INFORMATION SYSTEMS SECURITY OPERATIONS**
- Information Assurance ★★★★★
  - Knowledge of information assurance (IA) principles used to manage risks related to the use, processing, storage, and transmission of information or data.
- TRAINING, EDUCATION, AND AWARENESS**
- Financial Industry Awareness ★★★★★
  - Knowledge of Financial Industry (e.g., banking, insurance, securities) Products and Processing

NICE Job Role KSAs

## Metrics @ April 2020 – proven transitional program

- 2,500 CWA members – 600 active mentors
- 4,000 Alumni, 43% women
- 98% **not** aware of a cyber careers before the course
- 30% of Graduates in Cyber roles in 6-8 weeks (balance hired for other roles)
- 61% that took the course, but still at University, have physical Cyber internships

Employers report saving >3-months in on-boarding time to productivity (all sectors)

# Virtual Apprenticeships & Internships

- U-Albany – 5 Years, now ~ 120 students per semester; 3 credit course
- DoL approved [pre] Apprenticeship – On-The-Job *Training* 144 hours foundation course yet CWA board recognizes 350 hours of *Experience*
  - e.g. T-Mobile with U-Washington repeating the DoL Apprenticeship model
- Federal 2020 Youth Apprenticeship Grant
  - \$1-5 million for 200 or 900 students
  - *\$500 per student to the college*
  - *\$1,000 to the student in need for Cyber scholarship*



## How it works - Scalable, Economic, Proven

*Respond at scale to the COVID-19 loss of summer internships*

- Mentors – ~ 1.25 hours per week
- Students ~ 5-hours per week

1. *Semester-long – e.g. UAlbany, CUNY, UK, Australia*
2. *Grants: Growing Apprenticeships in non-traditional sectors (GAINS), Pan – Philadelphia PASSHE*
3. *New Jersey Cyber & Data Science Consortium*
4. *4-week sprints – U-Cincinnati*

*NIST Framework-based  
“The Threat Within”*



*Infusing mentored real-world experience with curriculum*

## Summer of COVID-19, U Cincinnati Co-Op (extracts from U Cincinnati website)

*“I would encourage anyone with an interest in IT or anyone who is unsure of their career trajectory to apply for this apprenticeship,”*  
Nolte said.

*“For me, it helped me solidify what I want to do with my future. It’s crazy to think that responding to an email and participating in a 4-week course really can change your life.”*

Jillian Nolte (student)

“These opportunities are worthwhile for students across the university, particularly those that are struggling to find co-op or traditional employment due to the COVID-19 outbreak.”

- Erik Alanson  
Director of computing &  
information technology co-  
op programs

# Join the CWA – make a difference



## CWA Advisory Board

**Education Co-Chair** – Prof. James Stellar, Professor of Behavioural Neuroscience, UAlbany, former Interim President.

**Industry Co-Chair** - David Cass, VP Cyber and Risk, Supervision , Federal Reserve Bank, NY

**Frank Cicio Co-Chair** – Founder of iQ4

**Curriculum Co-Chair** – Prof. Ed Moskal, Founding Director: M.S. in Cyber Security, Cyber Security Center and Internship Program at Saint Peter's University NJ | U.S. Secret Service Partner (Cyber Operations) - NY/NJ Electronic Crimes Task Force

## Its FREE to join

Its and Alliance - Of the people, for the people by the people

- [CWA@iQ4.Com](mailto:CWA@iQ4.Com)

# Q & A

# Thank You for Joining Us!

**Upcoming Webinar:** *The Challenge of That First Job in Cybersecurity - Entry Level Roles and How to Qualify*

**When:** Wednesday, June 17, 2020, at 2:00 p.m. EDT

**Register:** <https://nist-nice.adobeconnect.com/webinarjune2020/event/registration.html>

[nist.gov/nice/webinars](https://nist.gov/nice/webinars)