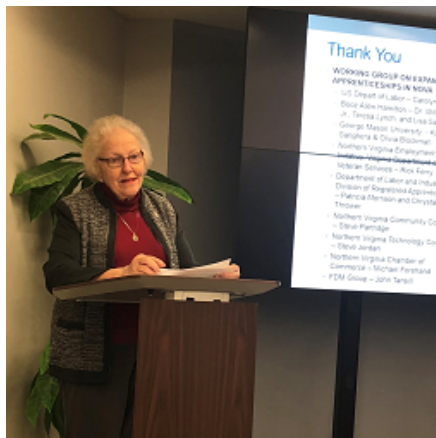


Cyber Apprenticeship Information Session for the Northern Virginia Region
Meeting Summary, November 16, 2018

Session Summary



Welcome and Background. Penny Gross with the Fairfax County Board of Supervisors for the Mason District, and Chair of the *Community, Military & Federal Facility Partnership of Northern Virginia* opened the session. She thanked members of the Apprenticeship working group for their efforts to plan the event. She then referenced the June 2018 Cyber Training & Education Conference as the impetus for the day's information session. She also underscored the importance of moving forward with increasing apprenticeships in the region, along with the other 10 priorities in the *Cyber Training and Education Roadmap*, an outcome from the June Conference.

Definition of Apprenticeships and Overview of How They Work.

Patricia Morrison, Virginia Department of Labor & Industry, Director of the Division of Registered Apprenticeship provided a 15-minute overview of apprenticeships and reference 29 CFR 29. She underscored common myths about apprenticeship and described the applicability of this employment training model. She emphasized that a *registered* apprenticeship has the following four components:

- Employer looking for cyber talent
- Apprenticeable occupation (i.e., cyber security)
- Apprentice (i.e., staff to be trained)
- Related Technical Instruction to upskill talent for job needs

For example, Tidewater Community College provide Technical Instruction for cyber staff that are employed by Peregrine, LLC. This is the first state-level registered cyber apprenticeship in Virginia.

Examples of Existing Cyber Apprenticeships. Michael Forehand, SVP, NOVA Chamber then opened the first panel as moderator and had each member listed below introduce themselves:

- John Tansill, Head of Veteran Initiatives, FDM Group
- Robin Baker, Senior Program Manager, Military Recruiting Programs Amazon Web Services
- Dr. Leigh Armistead, President, Peregrine, LLC



John Tansill with FDM group explained that his company is training veterans for employment under the *DoD SkillBridge Program*. See link to companies in this program and participating companies



<https://www.hireheroesusa.org/training-programs/>

The *DoD SkillBridge* program is an initiative that promotes the civilian job training authority available for transitioning military Service members. Service members meeting certain qualifications can participate in civilian job and employment training, including apprenticeships and internships.

The *FDM Veterans Initiative* provides no-cost vocational training in disciplines with both a business and technical focus, followed by commercial employment working with our prestigious clients as IT professionals. FDM require an aptitude test upfront that must be passed before a transiting service member can enter their training to employment program. Training costs are fully covered by FDM. Following completion of training, successful candidates represent FDM on client sites and support our clients' technology and business requirements for a minimum of 2 years as FDM Consultants.

Robin Baker with Amazon explained their apprenticeship efforts, underscoring that it as an important solution for creating needed talent in their organization. Their apprenticeship is a combination of on-the-job training and related classroom instruction under the supervision of a journey-level professional in which workers learn the practical and theoretical aspects of a highly skilled occupation. There are 4 phases of the apprenticeship:

- Screening and Selection
- Formalized Training Delivery, 8-31 weeks, minimum compensation is \$42 or 60% of their Journey Worker Wage
- On the Job Training for 1 year, with 10% wage increase in 6 months
- Apprenticeship Conversion to FTE at Amazon

This model fills in key technical skill gaps and offers participants an opportunity to learn on the job in high-demand fields. In addition, the GI Bill provides housing benefits and subsidizes wages for veterans in apprenticeship.

Amazon registered apprenticeship with the Federal Department of Labor in January 2017 with 63 apprenticeships, 4 roles and 4 locations. In 2018, the Amazon partnered with Apprenti to deliver training and registered with the *DoD SkillsBridge* program. Their program is growing with a focus on data center technician, cloud support associate, associate cloud consultant, software development engineer, network technician, solutions architect, network development engineer. Northern Virginia Community College is providing Technical Instruction for Amazon in the NoVA region. More information can be found at https://www.amazon.jobs/en/landing_pages/mil-apprentice

Leigh Armistead, President, Peregrine, LLC provided an overview of his cyber apprenticeship efforts. He explained that Peregrine Technical Solutions LLC is a small disadvantaged business, 8(a), Alaska Native Corporation based in Hampton Roads. They were founded to meet the expanding requirements of Cyber offense/defense activities, including full-spectrum Information Operations and security engineering.



Peregrine has been designated as the first corporation in the Commonwealth of Virginia for a registered Cyber Apprenticeship. <http://www.alexandrianews.org/2016/06/governor-mcauliffe-announces-expansion-of-cybersecurity-apprenticeships/>. Their apprenticeship is managed via a committee that includes the Director of Apprenticeship at Tidewater Community College and the respective DOL representatives in VA and AK. One Occupation/Job Series is the Information Security Analyst, O*NET – 15-1122.00. Their apprenticeship is competency based with two categories:

- Level I - 2000 hours at a minimum for 12-18 months
- Level II – 4000 hours at a minimum for 24-30 months

On-the-job Learning Competencies are matched to DoD 8570 and 8140 regulations to become an IAT 1 (Level I) or IAT 2 (Level II). Tidewater Community College provides online courses to give the training to pass the following certifications:

- Level I – Four courses (ITN 101, 106, 107 and 109) to pass CompTia A+ test
- Level II – Eight Courses (The four Level I courses plus ITN 257, 260, 267 and 270) to pass the CompTia Security + test

All Tidewater Community College Cyber Security programs are updated regularly on the TCC website at https://apollo.tcc.edu/pls/apex/f?p=122:32:0::::P32_CUR_GUIDE_ID:348

Apprentice standards have been developed as follows:

- Cyber Security Analyst, Level 1- outcome is completion of one of the recommended industry certifications for Level 1: CAP, SSCP, Security+
- Computer Forensics Analyst, Level 1- outcome is completion of one of the recommended industry certifications for Level 1: EnCE, ACE, Certified Computer Examiner (CCE), or GIAC Certified Forensics Analyst (GCFA)
- Incident Response Analyst Cyber Security, Level 1- outcome is completion of one of the recommended industry certifications for Level 1: GIAC Certified Incident Handler (GCIH), EC-Council Certified Ethical Hacker (CEH), Certified Incident Handler (CIH)
- Peregrine has hired our first cohort of apprentice and are actively conducting these efforts now. If other companies or organizations are interested in learning more on how to set up a similar program, please feel free to contact us at peregrine@gbpts.com.

How Employers in the NOVA Region Can Start a Cyber Apprenticeship Program.



Patricia Morrison, Virginia Department of Labor & Industry, Director of the Division of Registered Apprenticeship then opened the second panel as moderator and had each member listed below introduce themselves:

- Crystal Thrower, Virginia Department of Labor & Industry, Division of Registered Apprenticeship
- Kirk Jefferson, Apprentice Training Representative, U.S. Department of Labor
- Dr. Leigh Armistead, President, Peregrine, LLC
- Steve Partridge, Vice President of Workforce and Economic Development, Northern Virginia Community College

Crystal Thrower, Virginia Department of Labor & Industry, Division of Registered Apprenticeship, explained how State Registered Apprenticeships work. She covered the following steps:

- Employer calls her office, Division of Registered Apprenticeship
- She sets up meeting with employer and covers process, rules and understands the occupation for the apprenticeship (e.g., Cyber Security Analyst), type of on the job training
- The employer and Division of Registered Apprenticeship work up a Master Agreement covering needed information. Discussions also occur specific to the people that will be trained in the apprenticeship
- The employer and Division of Registered Apprenticeship also discuss the technical instruction and as well as the training institution for the apprenticeship.

Kirk Jefferson, Apprentice Training Representative, U.S. Department of Labor, then explained the Federal Apprenticeship process that his organization supports. See <https://www.dol.gov/apprenticeship/>. He covered the basics of program design (to include program administration, on the job training, technical instruction), the registration process, his contact information, and his counterpart at Department of Labor Jefferson.kirk@dol.gov

Per the Department of Labor apprenticeship website, they define an apprenticeship as an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce,

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and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential. There are now two types of apprenticeship programs that employers can offer:

- An Industry-Recognized Apprenticeship Program (IRAP) is a new, customizable model of apprenticeship that will be validated by a proven industry accreditor.
- A Registered Apprenticeship Program (RAP) is a proven model of apprenticeship that has been validated by the Department of Labor or a State Apprenticeship Agency.

Dr. Leigh Armistead, President, Peregrine, LLC, augmented the information that he provided during the first panel (see summary above).

Steve Partridge, Vice President of Workforce and Economic Development, Northern Virginia Community College (NVCC), discussed the tech talent pipeline initiative he leads with the support of a U.S. Department of Labor grant and GO Virginia grant. NVCC is providing technical instruction for Amazon and all classes are online on Blackboard. Per their website, the apprenticeship program will train individuals for Associate Cloud Consultant (ACC) positions. See <https://www.nvcc.edu/news/press-releases/2017/amazon-program.html>

This all-veteran cohort entered training at NOVA for 16 weeks and will continue with on-the-job training at the AWS Herndon headquarters. Throughout the course of their program, apprentices earn a series of highly-technical industry certifications that are in-demand by the technology sector, including: CompTIA Network+, Linux+, and the AWS Solutions Architect.

Engagement with Interested Employers. At the end of the session, the lead for the Virginia Department of Veteran Service provide a summary of his organization and resources to support apprenticeship effort in the NOVA region.

Actions/Next Steps

Dr. Will Rowe, Jr., BAH gave a summary that spelled out several actions that were discussed at the end of the meeting to include the following:

- Develop a Cyber Apprenticeship Fact Sheet or Brochure with examples for employers in the region
- Send this to NVTC for distribution
- Condense the apprenticeship information into a one-hour Information Session that can be presented at a NVTC function.
- Schedule and deliver the one-hour session with NVTC
- Follow-up with interested employers



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List of Attendees

<u>Name</u>	<u>Title</u>	<u>Organization</u>
Stephanie Holt	FCPS Program Manager	Fairfax County Public Schools
Kirk Jefferson	Apprentice Training Rep	U.S. Department of Labor
Beth Downy	FCPS CTE	Fairfax County Public Schools
Trang Ago	Program Coordinator	NVCC
Kevin Rennick	DHR	Fort Belvoir
Dr. Tony Johnson	Dean UDC CC Wall	UDC
Melanie Stover	Director of Bus Engagement	NVCC
Caitlen David	Account Manager	FDM Group
Herman Eobmckek	Business Coordinator	UDC-CC Wall
Kammy Sanghera	STEM Outreach Director	GMU VSE
Clay Railey	EVP/Provost	PGCC
Steve Jordon	Exec Director	NVTC
John Tansill	Director VCT Program	FDM
Daniel Flores	VP	Board of Trade
Diana Bohosld	Instructor	Prince William County School
Gihan Fernando	Exec Director of Career Center	American University
Peyton Brooks	Direc of Business Solutions	Per Scholars
Eric Norothy	Dir Nation Sec/Cyber	American University
Nathalt Arvid	Transition Advisor Quantico	Marine Corps Base Quantico
Hughes C. McLean	Apprenticeship Manager	Depart of Veteran Services
Chris Pommere	Instructor	GMU
Robin Baker	Military Programs	Amazon
Karla Perri		Spectrum Group
Trish Morrison	Director	DOLI Reg Apprenticeship
Dr. William D. Rowe, Jr.	Principal	BAH
Bob Lazaro	Exec Director	NVRC
Peggy Tadej	Dir of Comm & Military Partner	NVRC