NICE Webinar Series

NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION

How Talent Management Systems Help You Manage Your Cybersecurity Human Capital

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Cyber & Army Talent Management

LTC BE Rhodes
Cyber Operations Officer
Colorado Army National Guard

Outline

- Army Cyber MOS (17-series) and general requirements for them
- Professional Certifications the Army requires for our Cyber Operators
- Army Talent Management System
- Where we are going in the future

Cyber Operations Officer (17A)
Active, Guard, and Reserve

Cyber officers **direct teams** of professionals and technicians that defend Army cyberspace and take actions against adversaries to ensure commanders' freedom of maneuver in the cyber domain.

As leaders of Cyber Mission Force teams, Cyber officers are on today's electronic front lines, planning and executing **defensive operations** to protect Army networks and systems from attacks in cyberspace. They also **plan offensive operations** to disrupt and degrade adversaries' abilities to use the cyber domain.
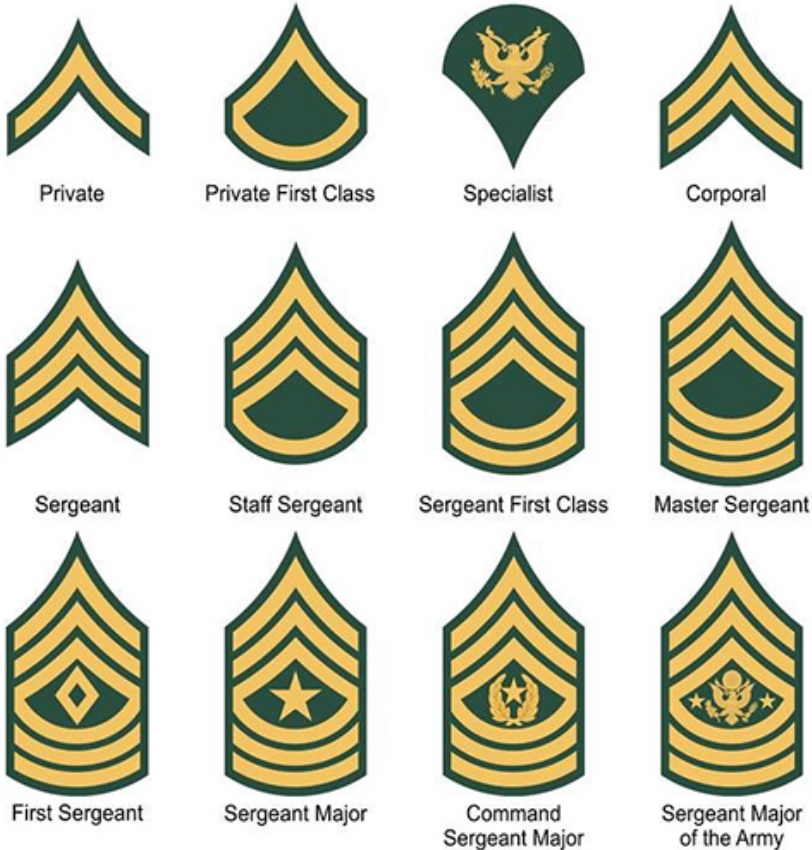

Requirements:
- Commission (Military Academy, ROTC, OCS, Direct)
- Degree in Cybersecurity, Computer Science, Technology or Related
- Ability to obtain a Top Secret Clearance
- Acceptance by the Cyber Center of Excellence
- Attitude & Aptitude!

Cyber Operations Specialist (17C)

Active, Guard, and Reserve

Cyber Soldiers are highly **skilled technical experts** who provide crucial intelligence and network support to safeguard the cyber domain and ensure that commanders can maneuver and win.

As defenders of the Army's presence in cyberspace, Cyber Soldiers **collect, analyze and report digital data**, deploy and maintain network defense tools like routers and firewalls, evaluate network defense operations, and **respond to incidents** in cyberspace.
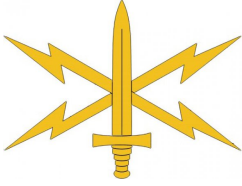
Requirements:
- ASVAB: General Technical (GT): 110, Skilled Technical (ST): 112
- Ability to obtain a Top Secret Clearance
- Acceptance by the Cyber Center of Excellence
- Attitude & Aptitude!

Cyber Operations Technician (170A)

Active, Guard, and Reserve

Acts as the **subject matter expert** and advisor to the commander and staff regarding the employment of offensive and defensive cyber operations, assets and personnel. **Directs and plans cyberspace operations** and develops policy recommendations and technical guidance regarding the operation of cyberspace assets and personnel.

While there is no feeder MOS for 170A, the preferred specialties include 17C, 25D and 35N/S. All other enlisted specialties, including sister service specialties, may apply provided applicants have strong technical backgrounds.

Requirements:
- SGT/E5 and above
- Commission (WOCS)
- 60 College Credits
- Ability to obtain a Top Secret Clearance
- Acceptance by the Cyber Center of Excellence
- Attitude & Aptitude!

IAT Level I	IAT Level II	IAT Level III
A+ CE CCNA-Security Network+ CE SSCP	CCNA Security CySA+ ** GICSP GSEC Security+ CE SSCP	CASP+ CE CCNP Security CISA CISSP (or Associate) GCED GCIH
IAM Level I	**IAM Level II**	**IAM Level III**
CAP GSLC Security+ CE	CAP CASP+ CE CISM CISSP (or Associate) GSLC CCISO	CISM CISSP (or Associate) GSLC CCISO
IASAE I	**IASAE II**	**IASAE III**
CASP+ CE CISSP (or Associate) CSSLP	CASP+ CE CISSP (or Associate) CSSLP	CISSP-ISSAP CISSP-ISSEP
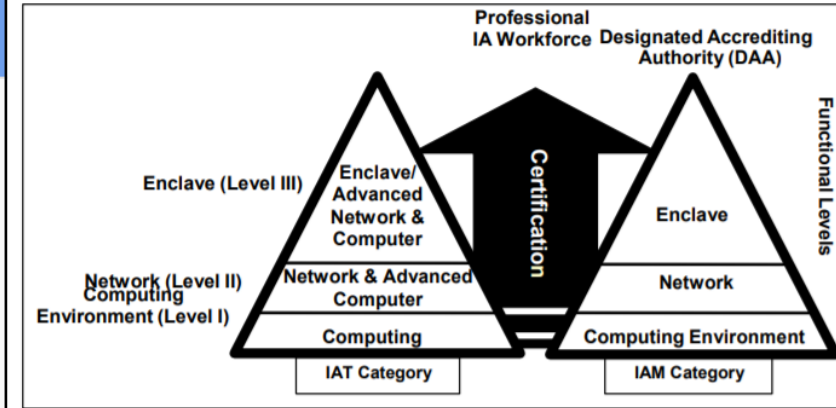
- IAT = Information Assurance Technician
- IAM = Information Assurance Manager
- IASAE = Information Assurance System Architect and Engineer

IAT: Enlisted and Warrant Officers
IAM: Officers and Warrant Officers
IASAE: Officers and Warrant Officers

NOTE: some certifications requirements are work-role dependent

CSSP Analyst	CSSP Infrastructure Support	CSSP Incident Responder
CEH CFR CCNA Cyber Ops CCNA-Security CySA+ ** GCIA GCIH GICSP SCYBER	CEH CySA+ ** GICSP SSCP CHFI CFR	CEH CFR CCNA Cyber Ops CCNA-Security CHFI CySA+ ** GCFA GCIH SCYBER

CSSP Auditor	CSSP Manager	
CEH CySA+ ** CISA GSNA CFR	CISM CISSP-ISSMP CCISO	

- CSSP = Cybersecurity Service Provider

Currently for Army Officers & Warrant Officers:

- Only Active Duty for now
- Assess Officer / Warrant Officer <u>Knowledge</u>, <u>Skills</u>, <u>Behaviors</u>, and <u>Preferences</u>
- Utilizes Officer / Warrant Officer Resume
- Career Coach
- Assignments "Marketplace"

Changes to the Army Enlisted Promotion System:

- Only affects Active Duty (for now)
- Moving to merit-based promotions - excel to promote
- Available promotions will be based on "demand" (needs of the Army)
- Phased in from 2019 through 2021
- Army Career Tracker (https://actnow.army.mil/)

- Information Dominance
  - Cyber
  - EW
  - Information Operations
- Move to the tactical edge
- Faster technology integration (e.g. IoT)
  - Agile development methods
- Continue growth in the domain!

Cyber   EW

Information Operations

Information Dominance
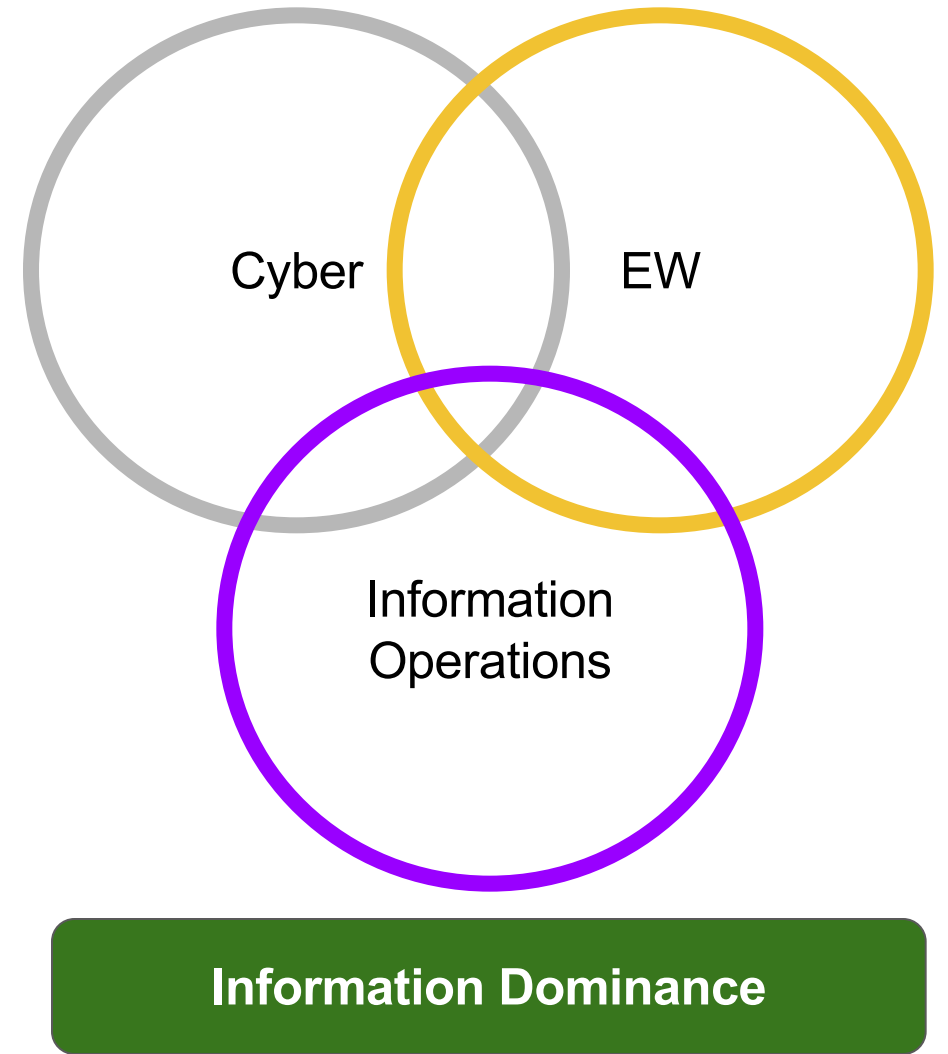
Today...

Tomorrow...
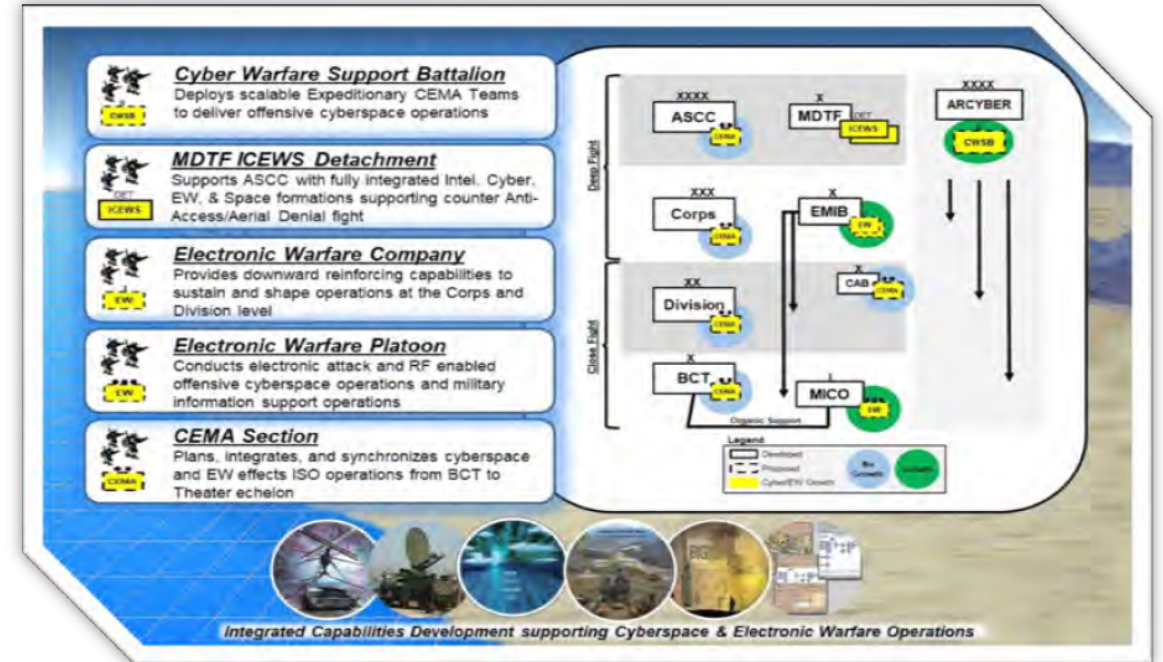
Talent Management supporting a highly skilled and technical Army workforce will sustain the future!

Conclusions

- Cyber is about people!
  - In the end, you're "fighting" another person on the distant of the network connection
  - Organizations must invest in training and budget for it
  - Technology doesn't solve problems, people solve problems with it
  - Talent must be managed and assessed
  - Lifelong learning is the norm for today's Cyber workforce

Key References

- Army Talent Management: https://talent.army.mil/
- Army Computer & Technical Jobs: https://www.goarmy.com/careers-and-jobs/browse-career-and-job-categories/computers-and-technology.html
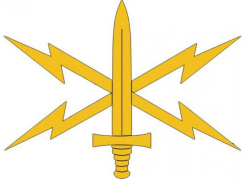- Army Cyber Center of Excellence: https://cybercoe.army.mil/
- Army Cyber Command: https://www.arcyber.army.mil/
- US Cyber Command: https://www.cybercom.mil/
- Joint Publication 3-12 - Cyberspace Operations: https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_12.pdf
- Army Field Manual 3-12 - Cyberspace and Electromagnetic Activities: https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN3089_FM%203-12%20FINAL%20WEB%201.pdf
- Army Field Manual 3-13 - Information Operations: https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/FM%203-13%20FINAL%20WEB.pdf
- DoD Information Assurance Workforce Program: https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodm/857001m.pdf
- Military Cyber Professionals Association - Cyber (magazine): http://magazine.milcyber.org/

Contact: brad.e.rhodes.mil@mail.mil

Q & A

Leo Van Duyn

CTC Workforce Development Strategy

JP Morgan Chase

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Development Cycle

Our workforce platform enables our people to have more transparency into the expectations of our technical job families. This, in turn enables:

- Data-driven development conversations between employees and managers
- Well-planned mobility opportunities and better confidence in role fit
- Org design planning that leverages the strengths of our organization to ensure they are aligned to the most impactful business need

A core part of the workforce development strategy is our culture of continuous learning. Our quarterly development cycle encourages our people to re-assess their skills regularly to enable more focused development conversations, which leverage the full spectrum of development capabilities that our firm offers

2
Discuss
Review and discuss your skills profile with your manager.

3
Set Goals
Define 2-3 development goals with your manager and document in My Development.

Assess
1
Take an inventory of your individual skills and abilities.

Resources
Do your research to identify the resources available to you to meet your goals.
4

Train
Request time and take time to learn, practice and discuss with others.

Request
When internal resources aren't enough submit a request for external support.

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Talent Management

Our current workforce platform uses a common taxonomy approach to define the desired skills for our technical job families and helps individuals self-assess where they are in their development journey towards acquiring these skills. The data collected gives an improved understanding of the development needs at a business, unit, function or employee level, enabling the creation of more effective family and function based training programs.

For our people, this platform enables individuals to proactively identify and explore learning journeys based on their skills assessment and transparency of the full map of desired skills associated with their job family.

Workforce Platform

1 Employees overall state

   a Employees work role progress.

   b Employees assessment results.

   c Employees career path interest.

2 Employees strengths and opportunities for upskilling.

3 Comparison of employees assessment to current work role expectations.

4 What career paths are best suited to the employees profile?

5 How an employees profile compares to their career interests

NOTE: The platform provides links to learning for both assessment and career path.

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WHERE AM I STRONGEST?

HOW DO I RATE MYSELF?

WHAT IS MY OVERALL STATE?

Skills Dashboard — Role Profiles

My T
Explore your T-Shaped technology, business and professional skills as a planning framework for growth.

MY SKILLS
Assess and add skills relevant to your job family and level.

Number of Skills by Proficiency
Click the bars to view recommended courses.

MY CAREER PATHS
Review career opportunities, identify career paths, and view learning recommendations.

Selected Roles:

Leo Van Duyn

Cybersecurity Operations

My Career Paths

HOW DO MY SKILLS MAP?

WHAT CAREER PATH AM I SUITED TO?

Preliminary Insight Analysis

Below is an initial analysis of the insights gained for one of our job families. We have aggregated the teams responses to show top 10 'Areas of Strength' and the top 10 'Areas of Development' team.

NOTE: The 'Skill – Detail' has been anonymized.

Areas of Strength

Skill - Detail	Levels below baseline				Levels above baseline			Gap points*
	-3	-2	-1	0	1	2	3	
Professional Skill 1	0	0	1	5	9	14	4	49
Technical Skill 1	0	0	0	8	20	10	0	40
Technical Skill 2	0	1	1	9	22	7	0	36
Business Skill 1	0	0	1	11	16	10	0	36
Professional Skill 2	0	0	5	6	13	11	0	35
Technical Skill 3	0	0	2	11	15	10	0	35
Business Skill 2	0	0	0	8	21	7	0	35
Business Skill 3	0	0	5	12	11	11	0	33
Professional Skill 3	0	0	5	10	18	7	0	32
Technical Skill 4	0	0	3	12	15	7	0	29

Areas of Development

Skill - Detail	Levels below baseline				Levels above baseline			Gap points*
	-3	-2	-1	0	1	2	3	
Business Skill 4	2	11	11	10	3	0	0	-39
Technical Skill 5	1	10	11	10	1	0	0	-34
Professional Skill 4	0	4	16	9	3	0	0	-24
Technical Skill 6	0	4	12	12	7	0	0	-20
Professional Skill 5	0	3	12	11	5	0	0	-18
Business Skill 5	0	4	8	6	3	0	0	-16
Business Skill 6	0	1	12	11	6	0	0	-14
Professional Skill 6	0	3	8	16	9	0	0	-14
Technical Skill 7	0	2	9	9	6	2	0	-13
Business Skill 7	0	2	8	13	6	0	0	-12

Leadership Observations

Insight from Workforce Platform	Leadership Observation	Next Steps
'Professional Skill 4' is on the 'Areas of Opportunity' list.	'Business Skill 4 is fundamental for this work role.	Work with the education team to create a plan to uplift 'Professional Skill 4'.
'Professional Skill 1' has been identified as a top 'Area of Strength'.	This strength is not being observed consistently in the day-to-day activities.	Need to validate findings: If accurate: Am I using my people in the right way? How can I maximize this strength? If inaccurate: Communicate to team to ensure management and employees have the same understanding of 'Professional Skill 1'?
'Business Skill 5' and 'Business Skill 6' are both on the 'Areas of Opportunity' list.	The team should be strong in these skills. Employees have been provided training for these skills.	Review current training: • Are employees not taking the training? • Does the training need to be updated because its not well understood?

Insights

Challenges

1. Creation and maintenance of the linkages between the taxonomy and learning.
2. Producing effective communications to:
   - Ensure leadership/employees understand this is a development/mobility tool.
   - Address employee concerns regarding assessment data usage.
3. Building confidence in a self assessment dataset.

Next Steps

1. Develop enhanced reporting based on assessment data and business driven requirements to:
   - Create or improve family or function based learning journeys.
   - Identify trend data to inform learning journeys and ensure they remain relevant.
2. Proof of concept using other sources to enrich our self-assessment dataset, such as:
   - Manager Validation
   - Certifications
   - Lab/Range Skill assessments
   - Completion of a learning journey

Q & A

Thank You for Joining Us!

Upcoming Webinar: "Understanding Interventions that Broaden Underrepresented Minority Participation in Cybersecurity Careers"

When: Wednesday, September 18, 2019 at 2:00pm EDT

Register: https://nist-nice.adobeconnect.com/webinar-sep2019/event/registration.html

nist.gov/nice/webinars