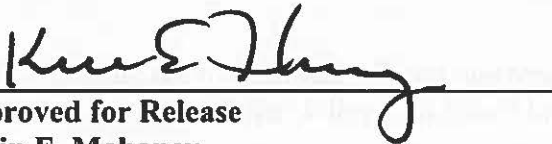JUN 2 9 2018

Approved for Release   Date
Kevin E. Mahoney
Director for Human Resources Management and
Chief Human Capital Officer

DEPARTMENT OF COMMERCE
OFFICE OF HUMAN RESOURCES MANAGEMENT

HUMAN RESOURCES (HR) BULLETIN #224, FY18

SUBJECT: Identifying, Addressing, and Reporting Cybersecurity Work Roles of Critical Need

EFFECTIVE DATE: Upon release of this HR Bulletin

EXPIRATION DATE: Effective until superseded or revoked

SUPERCEDES: HR Bulletin #215, FY17, "Assigning New Cybersecurity Codes to Positions with Information Technology, Cybersecurity, and Cyber-Related Functions at the Department of Commerce," dated April 4, 2017.

REVISIONS: The Department of Commerce must determine cybersecurity Work Roles of Critical Need as part of the Federal Cybersecurity Workforce Assessment Act of 2015 (Act).

PURPOSE: This bulletin provides the implementation plan for the Department of Commerce (Department) to follow guidance established by the Office of Personnel Management (OPM), which upholds the requirements of the Act. OPM has requested that Federal agencies identify and report information technology (IT), cybersecurity, and other cyber-related Work Roles of Critical Need. The preliminary report to OPM is due on August 31, 2018, and an additional report is due by April 30, 2018; subsequent reports will be required annually through 2022.

BACKGROUND: Beginning in 2013, under the Special Cybersecurity Workforce Project, Federal agencies were tasked to identify and code positions that perform cybersecurity work within the IT Management Series (2210 series). Agencies were later tasked with identifying and coding all positions with appropriate cybersecurity codes. The initial coding aligned with an early version of the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework. The intention was to provide standardization across the public, private, and academic sectors to define cybersecurity work, as well as the common set of tasks and the knowledge, skills, and abilities required to perform cybersecurity work. The Department met the objectives of the initial Special Cybersecurity Workforce Project.

The Act required OPM to establish procedures to implement the next NICE coding structure. The new structure was updated to include work roles and associated codes, and was broadened to include not only cybersecurity functions, but also IT and cyber-related functions. The updated codes incorporated a three-digit code, in place of the former two-digit codes, and allowed for up to

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three codes to be assigned per position. The Department met the requirements of the Act and OPM guidance to ensure that all positions were reviewed and coded by April 4, 2018.

Since all positions have been identified and coded, the Act requires the Department to identify and report IT, cybersecurity, and other cyber-related Work Roles of Critical Need.

COVERAGE: Applies to all Servicing Human Resources Offices (SHROs) in the Department.

POLICY: In order to complete the requirements of the Act, as defined in OPM's "Guidance for Identifying, Addressing and Reporting Cybersecurity Work Roles of Critical Need," the Department must identify IT, cybersecurity, and other cyber-related Work Roles of Critical Need in the workforce; and submit a report to OPM describing the roles identified, and substantiating the critical-need designation.

Process

SHROs: The SHROs, in conjunction with their Chief Information Officer (CIO) community counterparts, are required to work with managers/supervisors in their serviced areas to identify Work Roles of Critical Need, to determine root causes, and to develop an action plan with metrics and targets to address and mitigate root causes and shortages. Each SHRO and CIO bureau office must have a designated point of contact to co-manage the initiative.

Identifying Work Roles of Critical Need

Work Roles of Critical Need are work roles deemed as having the greatest skill shortages, in terms of staffing levels and/or proficiency/competency levels, current and emerging shortages, and mission criticality or importance. Each bureau must use its "Work Roles" spreadsheet (to be provided to the bureau) to identify all Work Roles of Critical Need. All work roles coded as of May 1, 2018, are included on each spreadsheet as a reference. Additionally, bureaus may utilize an optional Cyber Staffing Resource Chart (to be provided by the bureau), in order to assist in workforce planning. It is important to keep in mind that all work roles are recorded, rather than recording individual positions. For example, if an employee has two three-digit codes, then they will have two codes recorded on both the "Work Roles" spreadsheet and the optional Cyber Staffing Resource Chart.

Determine Root Causes of Shortages in Work Roles of Critical Need

Each bureau must use its "Work Roles" spreadsheet to identify the root cause. Root causes may involve a range of issues such as talent pipeline, recruitment/outreach, hiring, retention, development/training, performance management, and resources/budget. All other causes should be identified and described as well.

Develop Action Plan with Metrics and Targets to Address and Mitigate Root Causes and Shortages in Work Roles of Critical Need

Once bureaus have identified the root cause for shortages, they must complete OPM's template for each Work Role of Critical Need. Completing these templates will include developing an action

plan to address and mitigate the root causes identified, and establishing metrics and targets for gauging success in mitigating the root causes and shortages.

Government-wide Time Line

- August 31, 2018 – All agencies must identify IT, cybersecurity, and other cyber-related Work Roles of Critical Need, and root causes, to OPM in a preliminary report.
- April 30, 2019 – All agencies must provide a complete report to OPM. This report includes developing action plans with metrics and targets to address and mitigate root causes and shortages in Work Roles of Critical Need.
- April 2020 – Annual report due to OPM.
- April 2021 – Annual report due to OPM.
- April 2022 – Annual report due to OPM.

Department Timeline

- July 13, 2018 – SHROs and CIO counterparts review bulletin and discuss responsibilities.
- July 20, 2018 – SHROs meet with all managers/supervisors to discuss new requirements.
- August 17, 2018 – SHROs provide completed "Work Roles" spreadsheets to program manager in order to complete preliminary reporting requirements to OPM.
- March 1, 2019 – SHROs provide completed corresponding templates for each Work Role of Critical Need.
- March 1, 2020 – SHROs provide complete report.
- March 1, 2021 – SHROs provide complete report.
- March 1, 2022 – SHROs provide complete report.

Reporting Requirements

The SHROs must provide completed spreadsheet and templates by the designated date above to the Program Manager.

REFERENCES: OPM's "Guidance for Identifying, Addressing and Reporting Cybersecurity Work Roles of Critical Need," https://chcoc.gov/content/guidance-identifying-addressing-and-reporting-cybersecurity-work-roles-critical-need. Attachment to Memo, "Guidance for Identifying, Addressing and Reporting Cybersecurity Work Roles of Critical Need," https://chcoc.gov/sites/default/files/Attachment%20to%20Memo%20-%20Guidance%20for%20Identifying%20Addressing%20Reporting%20Cyb.._.pdf. Preliminary Report on Agency Cybersecurity Work Roles of Critical Need due August 31, 2018, https://chcoc.gov/content/preliminary-report-agency-cybersecurity-work-roles-critical-need-due-august-31-2018

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PROGRAM MANAGER: Mary O'Connor, MOConnor@doc.gov, (202) 482-2080

AGENCY LIST OF CYBERSECURITY WORK ROLES OF CRITICAL NEED

AGENCY: SAMPLE - Commerce

AGENCY POC:

INSTRUCTIONS: In column C, mark all Work Roles the agency has determined as the Work Roles of Critical Need (WRCN) and then complete the next three sections (columns D - O) for only those WRCNs.

This report is due to OHRM no later than August 17, 2018 (send to MOConnor@doc.gov)

WORK ROLES OF CRITICAL NEED (WRCN)			WRCN SKILL SHORTAGE IN: (mark one or both)			WRCN SKILL SHORTAGE IS: (mark one or both)		ROOT CAUSE(S) OF WRCN SKILL SHORTAGE (mark all that apply)								COMMENTS
WRCN Titles	OPM Code	Work Roles Coded as of 5/1	Mark All That Apply	Staffing Levels	Proficiency/ Competency Levels	Current	Emerging	Talent Pipeline	Recruitment/ Outreach	Hiring	Retention	Development/ Training	Performance Mgt	Resources/ Budget	Other (describe)	
Securely Provision Category																
Authorizing Official/Designating Representative	611															
Security Control Assessor	612	1														
Software Developer	621	10														
Secure Software Assessor	622															
Enterprise Architect	651	11														
Security Architect	652															
Research & Development Specialist	661	14														
Systems Requirements Planner	641	16														
System Testing and Evaluation Specialist	671	38														
Information Systems Security Developer	631	47														
Systems Developer	632	18														
Operate and Maintain Category																
Database Administrator	421	19														
Data Analyst	422															
Knowledge Manager	431	9														
Technical Support Specialist	411	48														
Network Operations Specialist	441	77														
System Administrator	451	59														
Systems Security Analyst	461	20														
Oversee and Govern Category																
Cyber Legal Advisor	731															
Privacy Compliance Manager	732															
Cyber Instructional Curriculum Developer	711															
Cyber Instructor	712															
Information Systems Security Manager	722	14														
Communications Security (COMSEC) Manager	723	1														
Cyber Workforce Developer and Manager	751															
Cyber Policy and Strategy Planner	752	15														
Executive Cyber Leadership	901	8														
Program Manager	801	11														
IT Project Manager	802	7														
Product Support Manager	803	9														
IT Investment/Portfolio Manager	804															
IT Program Auditor	805															
Protect and Defend Category																
Cyber Defense Analyst	511	2														
Cyber Defense Infrastructure Support Specialist	521	1														
Cyber Defense Incident Responder	531	5														
Vulnerability Assessment Analyst	541															
Analyze Category																
Warning Analyst	141															
Exploitation Analyst	121															
All-Source Analyst	111	3														
Mission Assessment Specialist	112															
Target Developer	131															
Target Network Analyst	132															
Multi-Disciplined Language Analyst	151															
Collect and Operate Category																
All Source-Collection Manager	311															
All Source-Collection Requirements Manager	312															
Cyber Intel Planner	331															
Cyber Ops Planner	332															
Partner Integration Planner	333															
Cyber Operator	321															
Investigate Category																
Cyber Crime Investigator	221	2														
Forensics Analyst	211	2														
Cyber Defense Forensics Analyst	212	9														
		476														

Cyber Staffing Resource Chart

Agency Name	Department of Commerce
Sub-component/bureau Name if applicable	SAMPLE
Size of Total Agency or Sub-component Workforce	
Start Date of Measurement Year	May 1, 2018
End Date of Measurement Year	September 30, 2019
Date of this Report	
Years Agency Uses for Long Term Goal	4 Years
Agency Point of Contact (POC)	

STARTING POINT (DATA FROM BEGINNING OF MEASUREMENT YEAR)

Cyber Code - Cyber Work Role	(A) BASELINE - Number of Work Roles On Board as of 5/1/2018	(B) Target for Number of Work Roles to Reach by End of FY2019 (Sept 30, 2019)	(C) Projected Attrition for FY2019 (May 1, 2018 - Sept 30, 2019)(Enter Negative Numbers for Attrition)	(D) Target for Number of Work Roles to Reach by End of FY2020 (Sept 30, 2020)	(E) Projected Attrition for FY2020 (Oct 1, 2019 - Sept 30, 2020)(Enter Negative Numbers for Attrition)	(F) Target for Number of Work Roles to Reach by End of FY2022 (Sept 30, 2022)	(G) Projected Attrition for FY2021 and FY 2022 (Oct 1, 2020 - Sept 30, 2022)(Enter Negative Numbers for Attrition)	(H) Staffing Gap (-)/ Surplus (+) to Close by the end of FY2019 (Including Attrition) (A) + (C) - (B)	(I) Staffing Gap (-)/ Surplus (+) to Close by the end of FY2020 (Including Attrition) (A) + (C) + (E) - (D)	(J) Staffing Gap (-)/ Surplus (+) to Close by the end of FY2022 (Including Attrition) (A) + (C) + (E) + (G) - (F)
111-All-Source Analyst	3									
112-Mission Assessment Specialist										
121-Exploitation Analyst										
131-Target Developer										
132-Target Network Analyst										
141-Warning Analyst										
151-Multi-Disciplined Language Analyst										
211-Forensics Analyst	2									
212-Cyber Defense Forensics Analyst	9									
221-Cyber Crime Investigator	2									
311-All Source-Collection Manager										
312-All Source-Collection Requirements Manager										
321-Cyber Operator										
331-Cyber Intel Planner										
332-Cyber Ops Planner										
333-Partner Integration Planner										
411-Technical Support Specialist	48									
421-Database Administrator	19									
422-Data Analyst										
431-Knowledge Manager	9									
441-Network Operations Specialist	77									
451-System Administrator	59									
461- Systems Security Analyst	20									
511-Cyber Defense Analyst	2									
521-Cyber Defense Infrastructure Support Specialist	1									
531-Cyber Defense Incident Responder	5									
541-Vulnerability Assessment Analyst										
611-Authorizing Official / Designating Representative										
612-Security Control Assessor	1									
621-Software Developer	10									
622-Secure Software Assessor										
631-Information Systems Security Developer	47									
632-Systems Developer	18									
641-Systems Requirements Planner	16									
651-Enterprise Architect	11									
652-Security Architect										
661-Research & Development Specialist	14									
671-System Testing and Evaluation Specialist	38									
711-Cyber Instructional Curriculum Developer										
712-Cyber Instructor										
722-Information Systems Security Manager	14									
723-COMSEC Manager	1									
731-Cyber Legal Advisor										
732-Privacy Compliance Manager										
751-Cyber Workforce Developer and Manager										
752-Cyber Policy and Strategy Planner	15									
801-Program Manager	11									
802-IT Project Manager	7									
803-Product Support Manager	9									
804-IT Investment / Portfolio Manager										
805-IT Program Auditor										
901-Executive Cyber Leadership	8									
Totals	**476**									

Legend:

Numbers in cells in aqua must be completed by the agency at the beginning of a measurement year.

Numbers in cells in green must be completed by the agency at the end of a measurement year.

Yellow cells show values that will be entered or calculated by the computer program.

Enter information about dates and names in the rows at the top of the table. Underlined dates in the table will be entered by the computer program based on what the agency enters at the top of the table.

Enter names of MCOs on the table's rows. Gaps, attrition, and losses should be shown as negative numbers and surpluses as positive numbers.

Column (A) = number of Work Roles on board at the start of the measurement year, May 1, 2018.

Column (B) = projection of Work Roles needed at the end of fiscal year 2019.

Column (C) = the projected attrition the occupation is expected to experience during fiscal year 2019 based on workforce analysis and planning; cells will turn red if positive values are entered.

Column (D) = projection of Work Roles needed at the end of fiscal year 2020.

Column (E) = the projected attrition the occupation is expected to experience during fiscal year 2020 based on workforce analysis and planning; cells will turn red if positive values are entered.

Column (F) = projection of Work Roles needed at the end of fiscal year 2022.

Column (G) = the projected attrition the occupation is expected to experience during fiscal years 2021 and 2022 based on workforce analysis and planning; cells will turn red if positive values are entered.

Column (H) = the gap (or surplus) between on board Work Roles (A) and Work Roles needed by FY2019 (B) plus projected attrition (C) for this row.

Column (I) = the gap (or surplus) between on board Work Roles (A) and Work Roles needed by FY2020 (D) plus projected FY2019 attrition (C) FY2020 attrition (E) for this row.

Column (J) = the gap (or surplus) between on board Work Roles (A) and Work Roles needed by FY2022 (F) plus projected FY2019 attrition (C) plus FY2020 attrition (E) plus FY2021 and FY2022 attrition (G) for this row.