CAREER PATHWAY PRODUCT SUPPORT MANAGER (803)

Developed By:

The Interagency Federal Cyber Career Pathways Working Group

December 2020

Endorsed By:

Table of Contents

1 803-PRODUCT SUPPORT MANAGER

1.1 WORK ROLE OVERVIEW

The table below provides an overview of various role-specific elements related to 803-Product Support Manager.

Table 1. 803-Product Support Manager Work Role Overview

NICE Role Description	Manages the package of support functions required to field and maintain the readiness and operational capability of systems and components.
OPM Occupational Series	Personnel performing the 803-Product Support Manager work role are most commonly aligned to the following Occupational Series (Top 5 shown) - 2210-Information Technology – 42% - 0343-Management and Program Analysis – 7% - 0391-Telecommunications – 6% - 1102-Contracting – 5% - 1550-Computer Science – 4%
Work Role Pairings	Personnel performing the 803-Product Support Manager work role are most commonly paired with the following complimentary Work Roles (Top 5 shown): - 802-IT Project Manager – 21% - 804-IT Investment/Portfolio Manager – 12% - 411-Technical Support Specialist – 9% - 801-Program Manager – 9% - 641-Systems Requirements Planner – 7%
Functional Titles	Personnel performing the 803 - Product Support Manager work role may unofficially or alternatively be called: - Device Manager - General Supply Specialist - Industrial Engineering Technician - Information Resource Manager - Information System Owner - Logistics Manager - Platform Specialist - Procurement Analyst / Manager - Product Line Manager - Product Manager - Product Owner - Property Disposal Specialist / Officer - Software Asset Manager - Solution Architect

	- Supply Chain Management Specialist / Manager - Sustainment Manager
Distribution of GS-Levels	Personnel performing the 803-Product Support Manager work role are most commonly found within the following grades on the General Schedule. - ☐ GS-5 – redacted** - ☐ GS-6 – redacted** - ☐ GS-7 – redacted** - ☐ GS-8 – redacted** - ☐ GS-9 – redacted** - ☐ GS-10 – redacted** - ☒ GS-11 – 5% - ☒ GS-12 – 17% - ☒ GS-13 – 28% - ☒ GS-14 – 17% - ☒ GS-15 –4% *24% of all 803s are in non-GS pay plans and excluded from this section **Percentages below 3% are redacted.
On Ramps	The following work roles are examples of possible roles an individual may perform prior to transitioning into the 803-Product Support Manager work role: - 411-Technical Support Specialist - 421-Database Administrator - 422-Data Analyst - 431-Knowledge Manager - 441-Network Operations Specialist - 451-System Administrator - 461-Systems Security Analyst - 521-Cyber Defense Infrastructure Support Specialist - 612-Security Control Assessor - 621-Software Developer - 632-Systems Developer - 641-Systems Requirements Planner - 661-Research and Development Specialist - 671-System Testing and Evaluation Specialist - 711-Cyber Instructional Curriculum Developer - 802-IT Project Manager
Off Ramps	The following work roles are examples of common transitions an individual may pursue after having performed the 803-Product Support Manager. This is not an exhaustive list, nor does it consider learning and development opportunities an individual may pursue to prepare

	themselves for performing alternate work roles:
	- 732-Privacy Officer/Privacy Compliance Manager
	- 751-Cyber Workforce Developer and Manager
	- 752-Cyber Policy and Strategy Planner
	- 801-Program Manager
	- 804-IT Investment/Portfolio Manager
	- 805-IT Program Auditor

2.1 CORE TASKS

The table below provides a list of tasks that represent the Core, or baseline, expectations for performance in the 803-Product Support Manager work role, as well as additional tasks that those in this role may be expected to perform.

Table 2. 803-Product Support Manager Core Tasks

Task ID	Task	Core or Additional
T0174	Perform needs analysis to determine opportunities for new and improved business process solutions.	Core
T0196	Provide advice on project costs, design concepts, or design changes.	Core
T0204	Provide input to implementation plans and standard operating procedures.	Core
T0208	Provide recommendations for possible improvements and upgrades.	Core
T0223	Review or conduct audits of information technology (IT) programs and projects.	Core
T0277	Ensure that all acquisitions, procurements, and outsourcing efforts address information security requirements consistent with organization goals.	Core
T0302	Develop contract language to ensure supply chain, system, network, and operational security are met.	Core
T0354	Coordinate and manage the overall service provided to a customer end-to-end.	Core
T0370	Ensure that appropriate Service-Level Agreements (SLAs) and underpinning contracts have been defined that clearly set out for the customer a description of the service and the measures for monitoring the service.	Core
T0493	Lead and oversee budget, staffing, and contracting.	Core
T0525	Provide enterprise cybersecurity and supply chain risk management guidance.	Core
T0072	Develop methods to monitor and measure risk, compliance, and assurance efforts.	Additional
T0207	Provide ongoing optimization and problem-solving support.	Additional
T0220	Resolve conflicts in laws, regulations, policies, standards, or procedures.	Additional
T0256	Evaluate the effectiveness of procurement function in addressing information security requirements and supply chain risks through procurement activities and recommend improvements.	Additional
T0273	Develop and document supply chain risks for critical system elements, as appropriate.	Additional
T0340	Act as a primary stakeholder in the underlying information technology (IT) operational processes and functions that support the service, provide direction and monitor all significant activities so the service is delivered successfully.	Additional
T0377	Gather feedback on customer satisfaction and internal service performance to foster continual improvement.	Additional
T0389	Review service performance reports identifying any significant issues and variances, initiating, where necessary, corrective actions and ensuring that all outstanding issues are followed up.	Additional
T0394	Work with other service managers and product owners to balance and prioritize services to meet overall customer requirements, constraints, and objectives.	Additional
T0412	Conduct import/export reviews for acquiring systems and software.	Additional

Task ID	Task	Core or Additional
T0414	Develop supply chain, system, network, performance, and cybersecurity requirements.	Additional
T0551	Draft and publish supply chain security and risk management documents.	Additional
T0553	Apply cybersecurity functions (e.g., encryption, access control, and identity management) to reduce exploitation opportunities.	Additional

2.2 CORE KNOWLEDGE, SKILLS, AND ABILITIES

The table below provides a ranking of KSAs that represent the Core, or baseline, expectations for performance in the 803-Product Support Manager work role, as well as additional KSAs that those in this role may be expected to demonstrate.

Table 3. 803-Product Support Manager Core Knowledge, Skills, and Abilities

KSA ID	Description	Competency	Importance to Work Role
K0004	Knowledge of cybersecurity and privacy principles.	Information Systems/Network Security	Foundational to All Work Roles
K0001	Knowledge of computer networking concepts and protocols, and network security methodologies.	Infrastructure Design	Foundational to All Work Roles
K0003	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	Legal, Government, and Jurisprudence	Foundational to All Work Roles
K0002	Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).	Risk Management	Foundational to All Work Roles
K0005	Knowledge of cyber threats and vulnerabilities.	Vulnerabilities Assessment	Foundational to All Work Roles
K0006	Knowledge of specific operational impacts of cybersecurity lapses.	Vulnerabilities Assessment	Foundational to All Work Roles
S0038	Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	Information Technology Assessment	Core
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management	Core
K0169	Knowledge of information technology (IT) supply chain security and supply chain risk management policies, requirements, and procedures.	Risk Management	Core
K0164	Knowledge of functionality, quality, and security requirements and how these will apply to specific items of supply (i.e., elements and processes).	Third Party Oversight/Acquisition Management	Core
K0126	Knowledge of Supply Chain Risk Management Practices (NIST SP 800-161)	Contracting/Procurement	Additional
K0257	Knowledge of information technology (IT) acquisition/procurement requirements.	Contracting/Procurement	Additional
K0270	Knowledge of the acquisition/procurement life cycle process.	Contracting/Procurement	Additional
A0031	Ability to conduct and implement market research to understand government and industry capabilities and appropriate pricing.	Contracting/Procurement	Additional
A0056	Ability to ensure security practices are followed throughout the acquisition process.	Contracting/Procurement	Additional
K0043	Knowledge of industry-standard and organizationally accepted analysis principles and methods.	Data Analysis	Additional
K0200	Knowledge of service management concepts for networks and related standards (e.g., Information Technology Infrastructure Library, current version [ITIL]).	Enterprise Architecture	Additional

KSA ID	Description	Competency	Importance to Work Role
K0150	Knowledge of enterprise incident response program, roles, and responsibilities.	Incident Management	Additional
K0120	Knowledge of how information needs and collection requirements are translated, tracked, and prioritized across the extended enterprise.	Information Management	Additional
S0372	Skill to translate, track, and prioritize information needs and intelligence collection requirements across the extended enterprise.	Information Management	Additional
K0194	Knowledge of Cloud-based knowledge management technologies and concepts related to security, governance, procurement, and administration.	Knowledge Management	Additional
K0196	Knowledge of Import/Export Regulations related to cryptography and other security technologies.	Legal, Government, and Jurisprudence	Additional
K0198	Knowledge of organizational process improvement concepts and process maturity models (e.g., Capability Maturity Model Integration (CMMI) for Development, CMMI for Services, and CMMI for Acquisitions).	Process Control	Additional
K0072	Knowledge of resource management principles and techniques.	Project Management	Additional
K0048	Knowledge of Risk Management Framework (RMF) requirements.	Risk Management	Additional
K0154	Knowledge of supply chain risk management standards, processes, and practices.	Risk Management	Additional
K0165	Knowledge of risk/threat assessment.	Risk Management	Additional
A0009	Ability to apply supply chain risk management standards.	Risk Management	Additional
K0235	Knowledge of how to leverage research and development centers, think tanks, academic research, and industry systems.	Strategic Planning	Additional
K0090	Knowledge of system life cycle management principles, including software security and usability.	Systems Integration	Additional
K0059	Knowledge of new and emerging information technology (IT) and cybersecurity technologies.	Technology Awareness	Additional
K0148	Knowledge of import/export control regulations and responsible agencies for the purposes of reducing supply chain risk.	Third Party Oversight/Acquisition Management	Additional
A0039	Ability to oversee the development and update of the life cycle cost estimate.	Third Party Oversight/Acquisition Management	Additional
A0045	Ability to evaluate/ensure the trustworthiness of the supplier and/or product.	Third Party Oversight/Acquisition Management	Additional

2.3 CORE COMPETENCIES

The table below is a compilation of competencies aligned to the 803-Product Support Manager work role, and their associated importance. Listed competencies are collections of three or more similar Knowledge, Skills, or Abilities aligned to the Work Role. *These competencies originate from the [NICE Framework Competency Pivot Tool](#).*

Table 4. 803-Product Support Manager Core Competencies

Technical Competency	Comp ID	Definition	Work Role Related KSAs	Importance
Contracting / Procurement	C010	KSAs that relate to the various types of contracts, techniques for contracting or procurement, and contract negotiation and administration.	- Knowledge of Supply Chain Risk Management Practices (NIST SP 800-161) - Knowledge of information technology (IT) acquisition/procurement requirements. - Knowledge of the acquisition/procurement life cycle process. - Ability to conduct and implement market research to understand government and industry capabilities and appropriate pricing. - Ability to ensure security practices are followed throughout the acquisition process.	Core
Risk Management	C044	KSAs that relate to the methods and tools used for risk assessment and mitigation of risk.	- Knowledge of Risk Management Framework (RMF) requirements. - Knowledge of supply chain risk management standards, processes, and practices. - Knowledge of risk/threat assessment. - Ability to apply supply chain risk management standards. - Knowledge of risk management processes (e.g., methods for assessing and mitigating risk). - Knowledge of information technology (IT) supply chain security and supply chain risk management policies, requirements, and procedures.	Core
Third Party Oversight / Acquisition Management	C056	KSAs that relate to the process of analyzing and controlling risks presented to your company, data, operations and finances by parties other than your own company.	- Knowledge of import/export control regulations and responsible agencies for the purposes of reducing supply chain risk. - Ability to oversee the development and update of the life cycle cost estimate. - Ability to evaluate/ensure the trustworthiness of the supplier and/or product. - Knowledge of functionality, quality, and security requirements and how these will apply to specific items of supply (i.e., elements and processes).	Core

2.4 SUGGESTED QUALIFICATIONS / CAPABILITY INDICATORS

Table 5. 803-Product Support Manager Suggested Qualifications / Capability Indicators

For indicators of capability for the 803-Product Support Manager work role, please see Draft NISTR 8193 - National Initiative for Cybersecurity Education (NICE) Framework Work Role Capability Indicators.

Section to be populated with updated DoD-8140 Qualification Matrix for 803-Product Support Manager.

3 APPENDIX: 803-PRODUCT SUPPORT MANAGER TASK ANALYSIS AND KSA MAPPING

3.1 KEY TO READING THE TASK ANALYSIS AND KSA MAPPING

Table 6. Key to Reading the Task Analysis and KSA Mapping

Proficiency	Task Statement	Importance
As Written	Task as written within the NICE Cybersecurity Workforce Framework (NICE Framework).	Overall Importance to Work Role
Entry	*Example behavioral indicator / task permutation for performing this task at an Entry skills proficiency level.*	
Intermediate	*Example behavioral indicator / task permutation for performing this task at an Intermediate skills proficiency level.*	
Advanced	*Example behavioral indicator / task permutation for performing this task at an Advanced skills proficiency level.*	

Table 7. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
ID of K, S, or A	Knowledge, Skill or Ability needed to perform the task as written within the NICE Framework	Competency mapped to the individual K, S, or A.

3.2 803-PRODUCT SUPPORT MANAGER TASK ANALYSIS AND KSA MAPPING

Table 8. T0174 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Perform needs analysis to determine opportunities for new and improved business process solutions.	Core
Entry	*Gather and provide information to perform needs analysis to determine opportunities for new and improved business process solutions.*	
Intermediate	*Perform needs analysis to determine opportunities for new and improved business process solutions.*	
Advanced	*Evaluate and recommend opportunities for new and improved business process solutions.*	

Table 9. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
A0031	Ability to conduct and implement market research to understand government and industry capabilities and appropriate pricing.	Contracting/Procurement
K0043	Knowledge of industry-standard and organizationally accepted analysis principles and methods.	Data Analysis
K0120	Knowledge of how information needs and collection requirements are translated, tracked, and prioritized across the extended enterprise.	Information Management
K0198	Knowledge of organizational process improvement concepts and process maturity models (e.g., Capability Maturity Model Integration (CMMI) for Development, CMMI for Services, and CMMI for Acquisitions).	Process Control

Table 10. T0196 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Provide advice on project costs, design concepts, or design changes.	Core
Entry	*Document project costs, design concepts, or design changes.*	
Intermediate	*Provide advice on project costs, design concepts, or design changes.*	
Advanced	*Lead the authorization process of project costs, design concepts, or design changes.*	

Table 11. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0072	Knowledge of resource management principles and techniques.	Project Management
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management
K0090	Knowledge of system life cycle management principles, including software security and usability.	Systems Integration
K0059	Knowledge of new and emerging information technology (IT) and cybersecurity technologies.	Technology Awareness

Table 12. T0204 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Provide input to implementation plans and standard operating procedures.	Core
Entry	*Document and provide input to implementation plans and standard operating procedures.*	
Intermediate	*Manage and provide updates to implementation plans and standard operating procedures.*	
Advanced	*Evaluate and recommend enhancements to implementation plans and standard operating procedures.*	

Table 13. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0072	Knowledge of resource management principles and techniques.	Project Management
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management

Table 14. T0208 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Provide recommendations for possible improvements and upgrades.	Core
Entry	*Identify, document, and prioritize requirements of possible improvements and upgrades.*	
Intermediate	*Provide and prioritize recommendations for possible improvements and upgrades.*	
Advanced	*Evaluate and approve recommendations for possible improvements and upgrades.*	

Table 15. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
S0038	Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	Information Technology Assessment
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management
K0059	Knowledge of new and emerging information technology (IT) and cybersecurity technologies.	Technology Awareness

Table 16. T0223 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Review or conduct audits of information technology (IT) programs and projects.	Core
Entry	*Assist with conducting audits and monitoring of information technology (IT) programs and projects.*	
Intermediate	*Review and/or conduct audits of information technology (IT) programs and projects.*	
Advanced	*Evaluate audit results and make suggested improvements to information technology (IT) programs and projects.*	

Table 17. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0169	Knowledge of information technology (IT) supply chain security and supply chain risk management policies, requirements, and procedures.	Risk Management
K0059	Knowledge of new and emerging information technology (IT) and cybersecurity technologies.	Technology Awareness
K0164	Knowledge of functionality, quality, and security requirements and how these will apply to specific items of supply (i.e., elements and processes).	Third Party Oversight/Acquisition Management

Table 18. T0277 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Ensure that all acquisitions, procurements, and outsourcing efforts address information security requirements consistent with organization goals.	Core
Entry	*Coordinating with Information System Security Officers to evaluate all acquisitions, procurements, and outsourcing efforts to address information security requirements.*	
Intermediate	*Ensure that all acquisitions, procurements, and outsourcing efforts address information security requirements consistent with organization goals.*	
Advanced	*Review and approve to ensure all acquisitions, procurements, and outsourcing efforts address information security requirements consistent with organization goals.*	

Table 19. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0257	Knowledge of information technology (IT) acquisition/procurement requirements.	Contracting/Procurement
K0270	Knowledge of the acquisition/procurement life cycle process.	Contracting/Procurement
K0003	Knowledge of laws, regulations, policies, and ethics as they relate to cybersecurity and privacy.	Legal, Government, and Jurisprudence
K0164	Knowledge of functionality, quality, and security requirements and how these will apply to specific items of supply (i.e., elements and processes).	Third Party Oversight/Acquisition Management

Table 20. T0302 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Develop contract language to ensure supply chain, system, network, and operational security are met.	Core
Entry	*Reference previously drafted contract language to ensure supply chain, system, network, and operational security are met.*	
Intermediate	*Develop contract language to ensure supply chain, system, network, and operational security are met.*	
Advanced	*Approve and recommend contract language to ensure supply chain, system, network, and operational security are met.*	

Table 21. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0257	Knowledge of information technology (IT) acquisition/procurement requirements.	Contracting/Procurement

Table 22. T0354 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Coordinate and manage the overall service provided to a customer end-to-end.	Core
Entry	*Support others in their efforts to coordinate the overall service provided to a customer end-to-end.*	
Intermediate	*Coordinate and manage the overall service provided to a customer end-to-end.*	
Advanced	*Oversee others who coordinate the overall service provided to a customer end-to-end.*	

Table 23. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0270	Knowledge of the acquisition/procurement life cycle process.	Contracting/Procurement
K0200	Knowledge of service management concepts for networks and related standards (e.g., Information Technology Infrastructure Library, current version [ITIL]).	Enterprise Architecture
S0038	Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	Information Technology Assessment
K0072	Knowledge of resource management principles and techniques.	Project Management
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management
K0169	Knowledge of information technology (IT) supply chain security and supply chain risk management policies, requirements, and procedures.	Risk Management
A0045	Ability to evaluate/ensure the trustworthiness of the supplier and/or product.	Third Party Oversight/Acquisition Management
K0164	Knowledge of functionality, quality, and security requirements and how these will apply to specific items of supply (i.e., elements and processes).	Third Party Oversight/Acquisition Management

Table 24. T0370 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Ensure that appropriate Service-Level Agreements (SLAs) and underpinning contracts have been defined that clearly set out for the customer a description of the service and the measures for monitoring the service.	Core
Entry	*Work with others to ensure appropriate Service-Level Agreements (SLAs) and underpinning contracts have been defined that clearly set out for the customer a description of the service and the measures for monitoring the service.*	
Intermediate	*Ensure that appropriate Service-Level Agreements (SLAs) and underpinning contracts have been defined that clearly set out for the customer a description of the service and the measures for monitoring the service.*	
Advanced	*Lead efforts in ensuring appropriate Service-Level Agreements (SLAs) and underpinning contracts have been defined that clearly set out for the customer a description of the service and the measures for monitoring the service.*	

Table 25. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
S0038	Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	Information Technology Assessment
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management

Table 26. T0493 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Lead and oversee budget, staffing, and contracting.	Core
Entry	*Participate in and document efforts regarding budget, staffing, and contracting.*	
Intermediate	*Lead and oversee budget, staffing, and contracting.*	
Advanced	*Oversee and guide others responsible for budget, staffing, and contracting.*	

Table 27. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0270	Knowledge of the acquisition/procurement life cycle process.	Contracting/Procurement
K0072	Knowledge of resource management principles and techniques.	Project Management
K0249	Knowledge of sustainment technologies, processes and strategies.	Project Management
A0039	Ability to oversee the development and update of the life cycle cost estimate.	Third Party Oversight/Acquisition Management

Table 28. T0525 Task Analysis

Proficiency	Task Statement	Importance
As Written within Framework	Provide enterprise cybersecurity and supply chain risk management guidance.	Core
Entry	*Assist others in providing cybersecurity and supply chain risk management guidance.*	
Intermediate	*Provide enterprise cybersecurity and supply chain risk management guidance.*	
Advanced	*Oversee and lead others in the provision of enterprise cybersecurity and supply chain risk management guidance.*	

Table 29. Primary Knowledge, Skills, and Abilities Required to Perform the above Task

KSA ID	Description	Competency
K0126	Knowledge of Supply Chain Risk Management Practices (NIST SP 800-161)	Contracting/Procurement
S0038	Skill in identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	Information Technology Assessment
K0169	Knowledge of information technology (IT) supply chain security and supply chain risk management policies, requirements, and procedures.	Risk Management