

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					PE 0606942F I Assessments and Evaluations Cyber Vulnerabilities							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	99.100	0.000	99.100	0.000	0.000	0.000	0.000	Continuing	Continuing
677821: Cyberspace Vulnerability Assessment	-	0.000	0.000	99.100	0.000	99.100	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 7, PE 0606942F, project 677821, Address Weapon System Cyber Vulnerabilities, is a new start.
This program, BA 7, PE 0606942F, project 677821, Address Infrastructure Cyber Vulnerabilities, is a new start.
This program, BA 7, PE 0606942F, project 677821, Exercise Participation, is a new start.

A. Mission Description and Budget Item Justification

This program funds cyber vulnerability assessments of Air Force weapons systems and critical infrastructure as well as non-recurring engineering for mitigations. The effort leverages the methodology described in the Air Force Cyber Campaign Plan (CCP) to provide Air Force mission assurance in a cyber-contested environment. Under the Air Force CCP, the Air Force is accomplishing work mandated by Section 1647 of the Fiscal Year (FY) 2016 National Defense Authorization Act (NDAA) and Section 1650 of the FY 2017 NDAA. Section 1647 of the FY 2016 NDAA directs the Secretary of Defense to complete an evaluation of the cyber vulnerabilities of each major weapon system of the Department of Defense. Section 1650 of the FY 2017 NDAA mandates the Secretary of Defense submit a plan for assessing the cyber vulnerability of critical defense infrastructure and begin assessment of this infrastructure during a preliminary pilot program that will assess no fewer than two installations. This funding focuses on aspects of the AF CCP that develop processes, products, and people to perform the short term goals of conducting system cyber vulnerability assessments, cyber mitigations, and pilot programs and work toward the long term goal of achieving an enduring cyber resilient Air Force. The program builds upon existing efforts regarding the identification and mitigation of cyber vulnerabilities, and does not duplicate similar ongoing efforts or conduct redundant assessments on systems that have already been evaluated.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force				Date: February 2018			
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0606942F I Assessments and Evaluations Cyber Vulnerabilities					
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Previous President's Budget		0.000	0.000	0.000	0.000	0.000	
Current President's Budget		0.000	0.000	99.100	0.000	99.100	
Total Adjustments		0.000	0.000	99.100	0.000	99.100	
• Congressional General Reductions		0.000	0.000				
• Congressional Directed Reductions		0.000	0.000				
• Congressional Rescissions		0.000	0.000				
• Congressional Adds		0.000	0.000				
• Congressional Directed Transfers		0.000	0.000				
• Reprogrammings		0.000	0.000				
• SBIR/STTR Transfer		0.000	0.000				
• Other Adjustments		0.000	0.000	99.100	0.000	99.100	
Change Summary Explanation							
Increase in FY 2019 due to the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics transitioning the responsibility of funding NDAA 1647 and 1650 activities directly to the Services.							
C. Accomplishments/Planned Programs (\$ in Millions)					FY 2017	FY 2018	FY 2019
Title: Address Weapon System Cyber Vulnerabilities					-	0.000	46.300
Description: Develop processes, products, and people to conduct weapon system cyber vulnerability assessments, cyber mitigations, demonstrations, and pilot programs toward the long term goal of achieving an enduring cyber resilient Air Force.							
FY 2018 Plans:							
Not applicable - program is a new start in FY 2019.							
FY 2019 Plans:							
Conduct weapon systems cyber vulnerability assessments and prototype mitigations.							
FY 2018 to FY 2019 Increase/Decrease Statement:							
FY 2019 increased by \$46.3 million compared to FY 2018 due to this program being a new start.							
Title: Address Infrastructure Cyber Vulnerabilities					-	0.000	46.300
Description: Develop processes, products, and people to conduct infrastructure/control systems/Operational Technology cyber vulnerability assessments, cyber mitigations, demonstrations, and pilot programs toward the long term goal of achieving an enduring cyber resilient Air Force.							
FY 2018 Plans:							

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force		Date: February 2018	
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0606942F <i>I Assessments and Evaluations Cyber Vulnerabilities</i>	
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018
Not applicable - program is a new start in FY 2019.			
FY 2019 Plans: Conduct infrastructure cyber vulnerability assessments. Develop prototype mitigations. Initiate the infrastructure cyber pilot program.			
FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 increased by \$46.3 million compared to FY 2018 due to this program being a new start.			
Title: Exercise Participation Description: This effort supports exercise participation, Combatant Command support, and assessment team activities to validate candidate weapon system and infrastructure cyber vulnerabilities.		-	0.000
FY 2018 Plans: Not applicable - program is a new start in FY 2019.			
FY 2019 Plans: Participate in USSTRATCOM and other Combatant Command exercises. Validate Air Force weapon system and infrastructure cyber vulnerabilities.			
FY 2018 to FY 2019 Increase/Decrease Statement: FY 2019 increased by \$6.5 million compared to FY 2018 due to the program being a new start.			
Accomplishments/Planned Programs Subtotals		-	0.000
D. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
E. Acquisition Strategy When possible, activities in this effort will leverage current competitively-awarded contracts. Additional necessary contracts funded in this program element will be awarded using either competitive or sole source procedures, whichever is most appropriate.			
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force													Date: February 2018		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0606942F / <i>Assessments and Evaluations Cyber Vulnerabilities</i>						Project (Number/Name) 677821 / <i>Cyberspace Vulnerability Assessment</i>					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Weapon Systems Cyber Vulnerability Studies and Reports	TBD	AFMC: TBD : TBD	-	0.000		0.000		27.000	Jan 2019	-		27.000	Continuing	Continuing	-
Weapon Systems Prototype Mitigations	TBD	AFMC: TBD : TBD	-	0.000		0.000		19.300	Jan 2019	-		19.300	Continuing	Continuing	-
Infrastructure Cyber Vulnerability Studies and Reports	TBD	AFCEC: TBD : TBD	-	0.000		0.000		26.400	Jan 2019	-		26.400	Continuing	Continuing	-
Infrastructure Cyber Vulnerability Prototype Mitigations and Pilot Activities	TBD	AFCEC: TBD : TBD	-	0.000		0.000		19.900	Jan 2019	-		19.900	Continuing	Continuing	-
Subtotal			-	0.000		0.000		92.600		-		92.600	Continuing	Continuing	N/A
Remarks In FY 2019, the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics transitioning the responsibility of funding NDAA 1647 and 1650 activities directly to the Services.															
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Exercise and Assessment Team Participation	TBD	AFMC: TBD : TBD	-	0.000		0.000		6.500	Jan 2019	-		6.500	Continuing	Continuing	-
Subtotal			-	0.000		0.000		6.500		-		6.500	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	0.000		0.000		99.100		-		99.100	Continuing	Continuing	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force			Date: February 2018		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0606942F / <i>Assessments and Evaluations Cyber Vulnerabilities</i>			Project (Number/Name) 677821 / <i>Cyberspace Vulnerability Assessment</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>Cyberspace Vulnerability Assessment</i>																												
Conduct cyber vulnerability assessments for weapon systems																												
Develop and assess weapon system cyber mitigations																												
Conduct cyber vulnerability assessments for infrastructure																												
Develop and assess infrastructure cyber mitigations																												
Conduct infrastructure pilot program																												
Participate in exercises and red team activities																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0606942F / <i>Assessments and Evaluations Cyber Vulnerabilities</i>	Project (Number/Name) 677821 / <i>Cyberspace Vulnerability Assessment</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Cyberspace Vulnerability Assessment</i>				
Conduct cyber vulnerability assessments for weapon systems	1	2019	4	2020
Develop and assess weapon system cyber mitigations	1	2019	4	2020
Conduct cyber vulnerability assessments for infrastructure	1	2019	4	2020
Develop and assess infrastructure cyber mitigations	1	2019	4	2020
Conduct infrastructure pilot program	1	2019	1	2020
Participate in exercises and red team activities	1	2019	4	2020