| Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Office of the Secretary Of Defense | | | | | | | | | | | Date: February 2018 | |

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*	PE 0303140D8Z I *Information Systems Security Program*

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	29.895	8.560	9.415	7.940	-	7.940	11.631	11.355	10.655	10.857	Continuing	Continuing
140: *Information Systems Security Program*	29.895	8.560	9.415	7.940	-	7.940	11.631	11.355	10.655	10.857	Continuing	Continuing

Note

The FY2019 funding request was reduced by 2.133 million to account for the availability of prior year execution balances.

A. Mission Description and Budget Item Justification

The DoD CIO Information Systems Security Program (ISSP) provides for focused research, development, testing and integration of technology and technical solutions critical to the Defense Cybersecurity and Information Assurance Program to meet the requirements of 10 USC 2224 (Defense Information Assurance Program), 44 USC 3544, (Federal Information Security Management Act of 2002), OMB Circular A-130, and DoD Directives/Instructions 8500, 8510, 8520, 8530, and 8540. This program is funded under Budget activity 7, Operational System Development because it integrates technology and technical solutions to the Defense Information Assurance Program.

ISSP RDT&E funds support the DoD CIO and its mission partners on architecting, engineering, and technical matters for developing governance processes and structures; on evolving and enabling a more integrated and synchronized Joint Information Environment that will leverage a single and converged joint enterprise IT platform; on the continued development of the U.S. Government's ability to prevent and defend against adversarial and/or commercial information and communications technology supply-chain attacks on its mission critical systems, networks, and devices; on improving oversight of the life-cycle management of cybersecurity risks; and on the integration of cybersecurity standards, methods, and procedures across the DoD for a more robust and resilient cybersecurity posture.

B. Program Change Summary ($ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	8.876	9.415	9.966	-	9.966
Current President's Budget	8.560	9.415	7.940	-	7.940
Total Adjustments	-0.316	0.000	-2.026	-	-2.026
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.305	-			
• Program Adjustment	-0.011	-	0.107	-	0.107
• Other Program Adjustments	-	-	-2.133	-	-2.133

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2019 Office of the Secretary Of Defense		**Date:** February 2018
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0303140D8Z *I Information Systems Security Program*	

Change Summary Explanation

FY 2017: SIBR/STTR Reduction -0.305, Program Adjustment -0.011 million.

FY 2018: No change.

FY 2019: Under Execution -2.133 million, Program Adjustment 0.107 million.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense		Date: February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140D8Z / Information Systems Security Program	Project (Number/Name) 140 / Information Systems Security Program

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
140: *Information Systems Security Program*	29.895	8.560	9.415	7.940	-	7.940	11.631	11.355	10.655	10.857	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD CIO Information Systems Security Program (ISSP) provides for focused research, development, testing and integration of technology and technical solutions critical to the Defense Cybersecurity and Information (CS&IA) Assurance Program to meet the requirements of 10 USC 2224 (Defense Information Assurance Program), 44 USC 3544, (Federal Information Security Management Act of 2002), OMB Circular A-130, and DoD Directives/Instructions 8500, 8510, 8520, 8530, and 8540. This program is funded under Budget Activity 7, Operational System Development, because it integrates technology and technical solutions to the Defense CS&IA Program.

ISSP RDT&E funds support the DoD CIO and its mission partners: on architecting, engineering, and technical matters for developing governance processes and structures; on evolving and enabling a more integrated and synchronized Joint Information Environment (JIE) to provide the means for more integrated information sharing and collaboration that also endeavors to close identified gaps across all mission areas with a shared network of core enterprise services; on the continued development of the U.S. Government's ability to prevent and defend against adversarial and/or commercial information and communications technology supply-chain attacks on its mission critical systems, networks, and devices; on improving oversight of the life-cycle management of cybersecurity risks; and on the integration of cybersecurity standards, methods, and procedures across the DoD for a more robust and resilient cybersecurity posture.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Title: Information Systems Security Program Plans and Accomplishments *FY 2018 Plans:* • Continue to develop and provide required engineering support for critical architectures, to include the Joint Information Environment, C4I tactical networks, and for coalition and other mission partners. Continue to develop, refine, and implement a Joint Information Environment single security architecture strategy, and the related strategic metrics and enhanced analytical capabilities. • Continue to develop and implement strategies for successful defenses and operations in the event of sophisticated cyber adversaries and large-scale cyber incidents. • Continue to research to develop means of assessing and prioritizing supply-chain threats and responses, for training regarding threats and risks, and for program protection plans to address supply-chain risks, to help ensure implementation of consistent protection practices from supply chain exploitation and attack within/by individual procurements of materiel and services on which the DoD systems, networks, and missions depend..	8.560	9.415	7.940

Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense		**Date:** February 2018
Appropriation/Budget Activity 0400 *I* 7	**R-1 Program Element (Number/Name)** PE 0303140D8Z *I Information Systems Security Program*	**Project (Number/Name)** 140 *I Information Systems Security Program*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2017**	**FY 2018**	**FY 2019**
• Continue threat-based system-security-engineering efforts and development of critical design artifacts (threat analyses, risk analyses, system-of- system-security architectures), having demonstrated applications to space systems and mission partner environment (MPE). • Continue development and implementation of a more robust governance mechanism to minimize supply chain risks across the DoD components and activities, and to develop an overarching international standard, or an improved integrated family of existing standards, for improving supply-chain-risk-management. • Continue to develop the means for improved mission assurance, mitigation analyses, and vulnerability detection via hardware and software testing, and for acquisitions that are better integrated with informed threat prospects. • Continue to develop and publish supportive standards, guidance, and processes on the web-based Knowledge Service, for the continual reauthorization and cyber strengthening of information systems, and in satisfaction of requirements mandated by OMB Circular A-130. • Continue to support key acquisition programs-of-record (i.e., Major Automated Information Systems; Major Defense Acquisition Programs, and other special interest developmental and acquisition activities) to drive the development and implementation of more effective cybersecurity strategies, risk management plans, and processes. • Continue to develop, publish, and refine DoD mobility strategy, and processes for use of commercial Cloud providers; to develop Cloud computing security guidance that details cybersecurity guidance and procedures for use by potential commercial Cloud service providers, and continued oversight of policies and capabilities to support comprehensive cybersecurity capability for the Joint Information Environment (JIE), including the DoD Cloud and mobile device strategies and roadmaps. ***FY 2019 Plans:*** • Leverage new private sector innovations by initiating and increasing investments in the Defense Innovation Unit Experimental (DIUx), to investigate emerging capabilities in the areas of user identification, such as: system security and access based on multi-dimensional location characteristics, such as the potential for contextual location fingerprint (CLF) based on collected contextual information; multi-factor authentication methods to confirm a user's claimed identity by utilizing creative combinations multiple components that are incapable of being compromised; and to take advantage of other leading-edge capabilities to better manage the Department's user identity and access management in demanding operational environments.			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense		Date: February 2018
Appropriation/Budget Activity 0400 I 7	R-1 Program Element (Number/Name) PE 0303140D8Z I Information Systems Security Program	Project (Number/Name) 140 I Information Systems Security Program

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
• Continue the development of engineering support for critical architectures, to include the Joint Information Environment, C4I tactical networks, for coalition and other mission partners, and the single security architecture strategy (and related metrics) and enhanced analytical capabilities to develop, refine, and implement a Joint Information Environment (JIE). • Continue research to develop means of assessing and prioritizing supply-chain threats and responses; for program protection plans to address supply-chain risks, to help ensure implementation of consistent protection practices from supply chain exploitation and attack within/by individual procurements of materiel and services on which the DoD systems and networks (and missions) depend; of a more robust governance mechanism to minimize supply chain risks across the DoD components and activities; and development of an overarching international standard (or an improved integrated family of existing standards) for improving supply-chain-risk-management. • Continue threat-based system-security-engineering efforts and development of critical design artifacts (threat analyses, risk analyses, system-of- system-security architectures), having demonstrated applications to space systems and the mission partner environment (MPE). • Continue the development and implementation strategies for successful defenses and operations in the event of sophisticated cyber adversaries and large-scale cyber incidents; and development of the means for improved mission assurance, mitigation analyses, and vulnerability detection via hardware and software testing. • Continue to develop and publish supportive standards, guidance, and processes on the web-based Knowledge Service, for the continual reauthorization and cyber strengthening of information systems, and in satisfaction of requirements mandated by OMB Circular A-130. • Continue supporting key acquisition programs-of-record (i.e., Major Automated Information Systems; Major Defense Acquisition Programs, and other special interest developmental and acquisition activities) to drive the development and implementation of more effective cybersecurity strategies, risk management plans, and processes. • Continue to develop, publish, and refine DoD mobility strategy, and processes for use of commercial Cloud providers; to develop Cloud computing security guidance that details cybersecurity guidance and procedures for use by potential commercial Cloud service providers, and continued oversight of policies and capabilities to support comprehensive cybersecurity capability for the Joint Information Environment (JIE), including the DoD Cloud and mobile device strategies and roadmaps. **_FY 2018 to FY 2019 Increase/Decrease Statement:_**			

Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense		Date: February 2018
Appropriation/Budget Activity 0400 I 7	**R-1 Program Element (Number/Name)** PE 0303140D8Z I *Information Systems Security Program*	**Project (Number/Name)** 140 I *Information Systems Security Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019
Reduced contractor support for: development of improved cybersecurity solutions; development and refinements of a Joint Information Environment Single Security Architecture; funding subject-matter-expertise on Cybersecurity Supply Chain Risk Management; support for developing program protection plans for key high-risk acquisition programs; reduced support for DoD CIO participation in the Key Management Infrastructure (KMI) Program and its applicable senior level Departmental and Services' working groups; reduced subject-matter-expertise and support for analysis of threats to the positioning, navigation, and timing enterprise; and reduced support for engagement with the intelligence community to assist development of cybersecurity intelligence collection requirements and intelligence reporting for specifically identified cyber threats.			
Accomplishments/Planned Programs Subtotals	8.560	9.415	7.940

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 0303140D8Z O&M DW: *Information System Security Program*	16.084	10.262	9.673	-	9.673	9.789	9.996	10.159	10.352	Continuing	Continuing

Remarks

D. Acquisition Strategy
 N/A

E. Performance Metrics
 - Annual FISMA metrics
 - Evolving JIE cybersecurity metrics

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Office of the Secretary Of Defense			Date: February 2018
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0303140D8Z / Information Systems Security Program	Project (Number/Name) 140 / Information Systems Security Program

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Studies and Analysis	Option/ Various	Various : Various	0.895	0.861	Jul 2017	0.911	Jul 2018	0.968	Jul 2019	-		0.968	Continuing	Continuing	-
Technical Engineering Services	Option/ Various	Various : Various	12.000	3.970	Jul 2017	4.566	Jul 2018	2.786	Jul 2019	-		2.786	Continuing	Continuing	-
Services Support	Option/ Various	Various : Various	1.000	0.086	Jul 2017	0.090	Jul 2018	0.096	Jul 2019	-		0.096	Continuing	Continuing	-
Subtotal			13.895	4.917		5.567		3.850		-		3.850	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	Option/ Various	Various : Various	1.000	0.173	Jul 2017	0.183	Jul 2018	0.194	Jul 2019	-		0.194	Continuing	Continuing	-
Engineering Support	Option/ Various	Various : Various	10.000	2.520	Jul 2017	2.664	Jul 2018	2.832	Jul 2019	-		2.832	Continuing	Continuing	-
Research & Development	Option/ Various	Various : Various	5.000	0.950	Jul 2017	1.001	Jul 2018	1.064	Jul 2019	-		1.064	Continuing	Continuing	-
Subtotal			16.000	3.643		3.848		4.090		-		4.090	Continuing	Continuing	N/A

Remarks
NA

	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	29.895	8.560	9.415	7.940	-	7.940	Continuing	Continuing	N/A

Remarks
NA

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Office of the Secretary Of Defense		Date: February 2018
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0303140D8Z / *Information Systems Security Program*	**Project (Number/Name)** 140 / *Information Systems Security Program*

R4

PE: 0303140D8Z/ Information Systems Security Program

Funding supports focused research, development, testing and integration of technology and technical solutions critical to the Defense Information Assurance Program (10 USC 2224) through pilot programs and technology demonstration; investment in high leverage, near-term programs that offer immediate Information Assurance (IA) benefit.

	10/1/2016	10/1/2017	10/1/2018	10/1/2019	10/1/2020	10/1/2021	10/1/2022	10/1/2023
FY2017 Program Execution	███	███						
FY2018 Program Execution		███	███					
FY2019 Program Execution			███	███				
FY2020 Program Execution				███	███			
FY2021 Program Execution					███	███		
FY2022 Program Execution						███	███	
FY2023 Program Execution							███	███

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Exhibit R-4A, **RDT&E Schedule Details:** PB 2019 Office of the Secretary Of Defense		**Date:** February 2018
Appropriation/Budget Activity 0400 *I* 7	**R-1 Program Element (Number/Name)** PE 0303140D8Z *I Information Systems Security Program*	**Project (Number/Name)** 140 *I Information Systems Security Program*

Schedule Details

Events by Sub Project	Start		End	
	Quarter	**Year**	**Quarter**	**Year**
*** SUBPROJECT TITLE ***				
FY 2018 Projected Execution	1	2018	2	2019
FY 2019 Projected Execution	1	2019	2	2020
FY 2020 Projected Execution	1	2020	2	2021
FY 2021 Projected Execution	1	2021	2	2022
FY 2022 Projected Execution	1	2022	2	2023