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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Information Systems Agency **Date:** March 2019

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	19.611	42.796	-	42.796	12.904	8.422	8.470	8.601	Continuing	Continuing
IA3: <i>Information Systems Security Program</i>	0.000	0.000	19.611	42.796	-	42.796	12.904	8.422	8.470	8.601	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Information Systems Security Program (ISSP) mission focuses on developing Department of Defense (DoD) enterprise solutions to Combatant Commands, Services, and Defense-wide agencies to ensure critical mission execution in the face of cyber attacks. The ISSP ensures that, the network, the computing centers, and core enterprise services will evolve to better support a joint cybersecurity/information assurance model that has common enterprise-scale perimeter defenses and will support a broad range of sharing policies from completely unclassified to tightly-held within a classified community. The ISSP will test and develop active-active defensive capabilities; test and integrate software defined networking and orchestration closed-loop security; perform research, development and engineering of emerging cyber situational awareness technologies; harden the network by providing architecture support, systems engineering and analytical functions for Endpoint and Perimeter defense capabilities; cyber IT infrastructure and automation support to deploy enterprise-wide next generation identity technologies; and develop and evolve an integrated cyber domain security workforce to be on the leading edge of defensive capabilities.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	0.000	19.611	12.596	-	12.596
Current President's Budget	0.000	19.611	42.796	-	42.796
Total Adjustments	0.000	0.000	30.200	-	30.200
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustment	-	-	30.200	-	30.200

Change Summary Explanation

The increase of +\$30.200 in FY 2020 is due to +\$36.000 of additional funding for Identity, Credential, and Access Management (ICAM) and the Secure Application Development Program. The funding will be used to develop and implement the Automated Account Management data sharing and automation and Master User Record (MUR) for the automated account provisioning effort within ICAM (+\$28.000); resource R&D innovation efforts to evaluate commercial meta/virtual directory data synchronization services in alignment with identity management, credentialing, active authentication, federation, and automated authorization for the federalized authentication services within ICAM (+\$2.000); and support innovation activities and mission priorities for secure application

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development and quantitative analysis tools within the Secure Application Development program (+\$6.000). This is offset by a decrease of -\$5.800 in FY 2020 is due to the implementation of a standard information technology (IT) enterprise patch management capability.		

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Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303140K / Information Systems Security Program				Project (Number/Name) IA3 / Information Systems Security Program			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
IA3: Information Systems Security Program	0.000	0.000	19.611	42.796	-	42.796	12.904	8.422	8.470	8.601	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Information Systems Security Program (ISSP) mission focuses on developing Department of Defense (DoD) enterprise solutions to Combatant Commands, Services, and Defense-wide agencies to ensure critical mission execution in the face of cyber attacks. The ISSP ensures that, the network, the computing centers, and core enterprise services will evolve to better support a joint cybersecurity/information assurance model that has common enterprise-scale perimeter defenses and will support a broad range of sharing policies from completely unclassified to tightly-held within a classified community. The ISSP will test and develop active-active defensive capabilities; test and integrate software defined networking and orchestration closed-loop security; perform research, development and engineering of emerging cyber situational awareness technologies; harden the network by providing architecture support, systems engineering and analytical functions for Endpoint and Perimeter defense capabilities; cyber IT infrastructure and automation support to deploy enterprise-wide next generation identity technologies; and develop and evolve an integrated cyber domain security workforce to be on the leading edge of defensive capabilities.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2018	FY 2019	FY 2020
Title: Zero-Day Network Defense Email Capability Description: Zero-Day Network Defense (ZND) Email Capability Technology Assessment/Evaluation for Tech Refresh. FY 2019 Plans: Conduct Technology Assessment/Evaluation in support of Zero-Day Network Defense (ZND) Email Tech Refresh. FY 2019 to FY 2020 Increase/Decrease Statement: The decrease of -\$4.500 from FY 2019 to FY 2020 represents one-time funding in FY 2019 for technology evaluation in support of the Zero Day Net Defense (ZND) email capability on the Non-Classified Internet Protocol Router Network (NIPRNet). The evaluation supports research and engineering solutions for enhanced malware analysis, preventative spear-phishing and perimeter attacks within the Department of Defense Information Network (DODIN), design of layered defenses against adversary Tactics, Techniques, and Procedures (TTPs) and testing of automated machine to machine processes of cyber situational awareness at the five email gateways.	-	4.500	-
Title: DoD Cyber Security Range (CSR) Description: The DoD Cyber Security Range (CSR) provides a multi-classification level, operationally realistic, DODIN representative, cyber security environment to sustain and enhance the professional development of the DoD cyber security workforce.	-	1.811	1.337

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
<p>FY 2019 Plans: Continue providing the IA Range platform to test new Cybersecurity efforts using the CS Range; Increase capability to leverage CS Range for training and capstone events; Increase capability for remote access to CS Range for testing, training and exercises. Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements, JRSS Management System (JMS) Enhancements, and replicate the tactical network boundaries of the four services.</p> <p>FY 2020 Plans: Continue providing the Cybersecurity (CS) / Information Assurance (IA) Range platform to test new Cybersecurity efforts using the CS Range; Continue to support capability to leverage CS Range for training and capstone events; Support capability for remote access to CS Range for testing, training and exercises. Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements, JRSS Management System (JMS) Enhancements, and replicate the tactical network boundaries of the four services.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: The decrease of -\$0.474 from FY 2019 to FY 2020 is attributable to reduced testing and simulation requirements for the operational networks within the Cybersecurity Range.</p>			
<p>Title: Endpoint Security Solutions (ESS)</p> <p>Description: Endpoint Security Solutions (ESS) provides counters exploitation and destructive malware, contain exploited threats, and make indicators of attack/compromise visible to the operator; fully supports friendly forces operating in contested cyber environments. Provides Asset Inventory Management Modules (AIMM) to provide near-real time situational awareness of devices. Provides Digital Policy Management System (DPMS) to facilitate development and maintenance of Cybersecurity/Information Assurance Standards. Provides Assured Compliance Assessment Solution (ACAS) to assess the configuration compliance of networks and systems against DoD and all known vulnerabilities.</p> <p>FY 2019 Plans: Provide software licensing necessary to perform the Automated Patch Management (APM) Proof of Concept, technical expertise necessary to deploy this APM solution, and additional infrastructure investment to provide an updated platform for the APM effort to be successful.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: The decrease of -\$3.000 from FY 2019 to FY 2020 represents one-time funding in FY 2019 for a standard information technology (IT) enterprise patch management capability proof of concept.</p>		-	3.000
Title: Cyber HQs Support		-	10.300

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019	FY 2020
Description: Preserves User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands. FY 2019 Plans: Perform engineering and provide software licensing/maintenance in support of the User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands. FY 2019 to FY 2020 Increase/Decrease Statement: The decrease -\$10.300 from FY 2019 to FY 2020 is attributed to the transition of engineering and software licensing/maintenance of DoD User Activity Monitoring (UAM) capability into Operations and Sustainment in countering insider threats for the nine Combatant Commands.				
Title: Cyber Innovation and Technology Description: Provide research and development, conduct technology assessments, rapidly produce prototypes using commercial solutions, validate assumptions, and provide empirical data to drive real time enterprise solutions and decisions in assisting DoD requirement owners for enterprise fielding of innovative gap fillers to address cyber capabilities and militarization of commercial information assurance capabilities tactical edge. All project undertaken directly increase information sharing capabilities and assure C2 functionality against a common operating picture. The program will leverage its robust IT infrastructure to develop small prototypes to find cost saving initiatives across the DODIN in an effort to provide the DoD with faster more reliable communications capabilities. These solutions will look to provide enhanced warfighting technology and research development programs improving the protection, survivability, mobility and combat effectiveness of the DoD. FY 2020 Plans: Assess at least two capabilities as directed by senior leadership, with focus on Blockchain and Next Generation Identify and Authentication commercial capabilities emphasizing enhancements and integrations of innovative technologies, to enhance enterprise level services for all DoD entities keeping the agency and DoD at the forefront of IT capabilities. DISA capabilities to be leveraged include DoD Mobility Classified Capability/Unclassified Capability (DMCC/UC), DoD Public Key Infrastructure (PKI), JRSS, NETOPS, Perimeter and Endpoint programs and transport to include terrestrial. FY 2019 to FY 2020 Increase/Decrease Statement: The increase of +\$11.459 from FY 2019 to FY 2020 is due to the establishment of Cyber Innovation Funds supporting cyber innovation and technology assessment of 2 cyber capabilities. Increase will also be used to improve the security of application development by deploying DevSecOps software/model/platforms on NIPRNet and SIPRNet.		-	-	11.459
Title: Identity, Credential, and Access Management (ICAM)		0.000	-	30.000

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2018	FY 2019
<p>Description: Develop and deploy Identity, Credential, and Access Management (ICAM) efforts associated with automated account provisioning and auditability and federalized authentication services that support credentials for DoD and non-DoD personnel.</p> <p>FY 2020 Plans: Conduct the Master User Record (MUR) pathfinder effort and several Automated Account Provisioning (AAP) use-case Pilots.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: The increase of +\$30.000 in is due to a +\$28,000 increase to develop and implement the Automated Account Management data sharing and automation and Master User Record (MUR) for the automated account provisioning effort within ICAM and a +\$2,000 increase to resource R&D innovation efforts to evaluate commercial meta/virtual directory data sycronization services in alignment with identity management, credentialing, active authentication, federation, and automated authorization for the federalized authentication services within ICAM.</p>			
Accomplishments/Planned Programs Subtotals		0.000	19.611
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
N/A			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
<p>Conduct Technology Assessment/Evaluation in support of Zero-Day Network Defense (ZND) Email Tech Refresh. Performance objectives include 60% of Defense Enterprise Email (DEE) Mailboxes protected, 0% bypassed emails, and capability to handle up to 43% unique attachments to total threats detected.</p> <p>Continue providing the IA Range platform to test new Cybersecurity efforts using the CS Range; Increase capability to leverage CS Range for training and capstone events; Increase capability for remote access to CS Range for testing, training and exercises. Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements, JRSS Management System (JMS) Enhancements, and replicate the tactical network boundaries of the four services. Annual objectives include 15 test and evaluation events, 9 training events, and support of 5 exercise events.</p>			

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<p>Provide engineering expertise and software licensing/maintenance in support of the User Activity Monitoring (UAM) capability in countering insider threats at Ten CCMDs (USSOCOM, USAFRICOM, USCENTCOM, USEUCOM, USCYBERCOM, USNORTHCOM, USPACOM, USSOUTHCOM, USSTRATCOM, and USTRANSCOM).</p> <p>Acquire software licensing necessary to perform the Automated Patch Management (APM) Proof of Concept, technical expertise necessary to deploy this APM solution, and infrastructure investment to provide an updated platform for the APM effort to be successful.</p> <p>Two cyber architecture model and DODIN assessments to programs per fiscal Year</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency												Date: March 2019			
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Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
ZND Technology Assessment/Evaluation for email capability Tech Refresh	C/FFP	TBD : TBD	-	-		4.500	Feb 2019	-		-		-	0.000	4.500	-
DoD Cyber Security Range (CSR) Virtual Training Environment	C/FFP	ManTech : Fairfax, VA	-	-		1.198	Feb 2019	-		-		-	0.000	1.198	-
DoD Cyber Security Range (CSR) Virtual Training Environment - Re-compete	C/FFP	TBD : TBD	-	-		0.483	Jun 2019	1.207	Sep 2020	-		1.207	Continuing	Continuing	-
DoD Endpoint Security Solutions (ESS)	C/FFP	TBD : TBD	-	-		3.000	Jan 2019	-		-		-	0.000	3.000	-
Cyber HQs Support	C/FFP	TBD : TBD	-	-		10.300	Jan 2019	-		-		-	0.000	10.300	-
Joint Information Operations Range (JIOR) Connection	C/FFP	TBD : TBD	-	-		0.130	Jan 2019	0.130	Sep 2020	-		0.130	Continuing	Continuing	-
DISA EA Model Development for Cyber Security and Network Technical Domains, DODCAR Cyber Analysis Tool Development	C/FFP	TBD : TBD	-	-		-		0.459	Jan 2020	-		0.459	Continuing	Continuing	-
Deployment of Blockchain and Next Generation Identity	C/FFP	TBD : TBD	-	-		-		6.000	Jan 2020	-		6.000	Continuing	Continuing	-
Cyber Innovation and Technology	C/FFP	TBD : TBD	-	-		-		5.000	Mar 2020	-		5.000	Continuing	Continuing	-
Identity, Credential, and Access Management (ICAM)	C/FFP	TBD : TBD	-	-		-		30.000	Mar 2020	-		30.000	Continuing	Continuing	-
Subtotal			-	-		19.611		42.796		-		42.796	Continuing	Continuing	N/A

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			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		19.611		42.796		-		42.796	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency			Date: March 2019
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	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
Zero-Day Network Defense Email Capability																												
Zero-Day Network Defence (ZND) Email Capability Technology Assessment/ Evaluation for Tech Refresh																												
Cyber HQs Support																												
Test new Cybersecurity efforts using the CS Range																												
Increase capability to leverage CS Range for training and capstone events;																												
Increase capability for remote access to CS Range for testing, training and exercises.																												
Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements																												
JRSS Management System (JMS) Enhancements																												
Replicate the tactical network boundaries of the four services.																												
Architecture and Model development																												
DODCAR WG Support																												
Innovation and Technology																												
Block Chain Cyber Innovation Technology Assessment																												
Next Gen Identity Tool Suite Cyber Innovation Technology Assessment																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Information Systems Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Zero-Day Network Defense Email Capability</i>				
Zero-Day Network Defence (ZND) Email Capability Technology Assessment/ Evaluation for Tech Refresh	4	2018	4	2019
<i>Cyber HQs Support</i>				
Test new Cybersecurity efforts using the CS Range	4	2018	4	2024
Increase capability to leverage CS Range for training and capstone events;	4	2018	4	2024
Increase capability for remote access to CS Range for testing, training and exercises.	4	2018	4	2024
Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements	4	2018	4	2024
JRSS Management System (JMS) Enhancements	4	2018	4	2024
Replicate the tactical network boundaries of the four services.	4	2018	4	2024
<i>Architecture and Model development</i>				
DODCAR WG Support	2	2020	3	2024
<i>Innovation and Technology</i>				
Block Chain Cyber Innovation Technology Assessment	3	2020	3	2024
Next Gen Identity Tool Suite Cyber Innovation Technology Assessment	3	2020	3	2024