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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

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

| COST (\$ in Millions) | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Cost To Complete | Total Cost |
|--|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | 57.529 | 17.899 | 67.631 | 46.577 | - | 46.577 | 50.010 | 10.646 | 10.642 | 10.855 | Continuing | Continuing |
| 140: <i>Information Systems Security Program</i> | 57.529 | 17.899 | 67.631 | 46.577 | - | 46.577 | 50.010 | 10.646 | 10.642 | 10.855 | 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 Assurance (CS&IA) 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. Program Change Summary (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 17.899 | 67.631 | 56.355 | - | 56.355 |
| Current President's Budget | 17.899 | 67.631 | 46.577 | - | 46.577 |
| Total Adjustments | 0.000 | 0.000 | -9.778 | - | -9.778 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • DWR | - | - | -5.723 | - | -5.723 |
| • Economic Assumptions | - | - | -0.055 | - | -0.055 |
| • Reduced Level Of Effort | - | - | -4.000 | - | -4.000 |

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|---|---|

Change Summary Explanation

FY21: The FY 2021 funding request was reduced by \$5.723 million during DWR to account for change in requirements, resulting in a reduced level of effort (classified).

FY21: Defense-Wide Economic Assumptions -\$0.055 million.

FY21: The FY 2021 funding request was reduced by \$4.00 million, resulting in a reduced level of effort.

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

| | FY 2019 | FY 2020 | FY 2021 |
|---|---------|---------|---------|
| <p>Title: Information Systems Security Program Plans and Accomplishments</p> <p>FY 2020 Plans: \$56.000 million: Classified Program</p> <ul style="list-style-type: none"> • Work with industry to develop new technologies that upgrade cybersecurity to current legacy networks and have the potential to evolve into systems that are part of a new cybersecurity architecture and command and control capability. <p>\$11.631 million:</p> <ul style="list-style-type: none"> • Support analyses that would develop artificial intelligence (AI) and machine learning to model network behavior and improve cyber threat detection, and AI capabilities that would enhance and potentially transform information security. • Continue to develop and refine policies to support strategies for acquisition program protection and oversight. Develop strategies, standards, and tools to address supply chain risk management, and continue to collaborate with private industry for commercially acceptable global sourcing and supply chain standards. • Continue to evaluate cyber activities for more efficient mitigation investment decisions, to include metrics focused on the cybersecurity domain, and support for policy development and refinement, policy oversight and formulation of programmatic advice, and participation in various collaborative advisory and governance bodies. • Accelerate the means for use of commercial Cloud providers, related Cloud security guidance and procedures by commercial Cloud service providers, and continued refinement and oversight of policies and capabilities to support comprehensive cybersecurity capability for secure mobility processes in the Joint Information Environment. • Continue development and engineering support for critical Joint Information architectures, C4I tactical networks, coalition, and mission partner's networks. Support includes implementing the joint information environment single security architecture and strategy, related metrics, analyses, Joint Information Environment Single Security Architecture (SSA) policies, architectures, and capabilities to ensure best value architectural decisions are made early to affect the most impact, while increasing mission and security for the entire DoD enterprise. | 17.899 | 67.631 | 46.577 |

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|---|---|

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 |
|--|----------------|----------------|----------------|
| <ul style="list-style-type: none"> • Continue to develop and implement strategies for successful defenses and operations in the event of sophisticated cyber adversaries and large-scale cyber incidents, to include 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). • Support analyses on various aspects of cybersecurity for cloud-based computing for the DoD, applicable risk factors, and continual refinement of mitigation controls as part of the risk management framework regime in support of DoD CIO’s goal of accelerating the adoption of cloud computing within the department. Robust and comprehensive Cloud Risk Management will assist the DoD community with addressing security requirements for systems transitioning to the commercial cloud. • Continue refinement and integration of policies with the risk management framework (RMF), supportive standards, guidance, efficiencies, and web-based processes to strengthen controls and protections for information systems. • Continue to improve mission assurance, mitigation analyses, and vulnerability detection (hardware and software testing) for acquisitions to build-in cybersecurity early (i.e., cybersecurity built in vice bolted on), especially key acquisition programs-of-record (i.e., Major Automated Information Systems; Major Defense Acquisition Programs, and other special interest developmental and acquisition activities). Investments include Program Protection, Systems Engineering, and Acquisition standards. <p>FY 2021 Plans: \$35.222 million: Classified Program</p> <ul style="list-style-type: none"> • Work with industry to develop new technologies that upgrade cybersecurity to current legacy networks and have the potential to evolve into systems that are part of a new cybersecurity architecture and command and control capability. <p>\$11.355 million:</p> <ul style="list-style-type: none"> • Support analyses that develop artificial intelligence (AI) and machine learning to model network behavior and improve cyber threat detection, and AI capabilities that would enhance and potentially transform information security. • Continue to develop and refine policies to support strategies for acquisition program protection and oversight. Develop strategies, standards, and tools to address supply chain risk management, and continue to collaborate with private industry for commercially acceptable global sourcing and supply chain standards. • Continue to evaluate cyber activities for more efficient mitigation investment decisions, to include metrics focused on the cybersecurity domain, and support for policy development and refinement, policy oversight and formulation of programmatic advice, and participation in various collaborative advisory and governance bodies. | | | |

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|---|---|

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 |
|---|----------------|----------------|----------------|
| <ul style="list-style-type: none"> • Accelerate the means for use of commercial Cloud providers, related Cloud security guidance and procedures by commercial Cloud service providers, and continued refinement and oversight of policies and capabilities to support comprehensive cybersecurity capability for secure mobility processes in the Joint Information Environment. • Continue development and engineering support for critical Joint Information architectures, C4I tactical networks, coalition, and mission partner’s networks. Support includes implementing the joint information environment single security architecture and strategy, related metrics, analyses, Joint Information Environment Single Security Architecture (SSA) policies, architectures, and capabilities to ensure best value architectural decisions are made early to affect the most impact, while increasing mission and security for the entire DoD enterprise. • Continue to develop and implement strategies for successful defenses and operations in the event of sophisticated cyber adversaries and large-scale cyber incidents, to include 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). • Support analyses on various aspects of cybersecurity for cloud-based computing for the DoD, applicable risk factors, and continual refinement of mitigation controls as part of the risk management framework regime in support of DoD CIO’s goal of accelerating the adoption of cloud computing within the department. Robust and comprehensive Cloud Risk Management will assist the DoD community with addressing security requirements for systems transitioning to the commercial cloud. • Continue refinement and integration of policies with the risk management framework (RMF), supportive standards, guidance, efficiencies, and web-based processes to strengthen controls and protections for information systems. • Continue to improve mission assurance, mitigation analyses, and vulnerability detection (hardware and software testing) for acquisitions to build-in cybersecurity early (i.e., cybersecurity built in vice bolted on), especially key acquisition programs-of-record (i.e., Major Automated Information Systems; Major Defense Acquisition Programs, and other special interest developmental and acquisition activities). Investments include Program Protection, Systems Engineering, and Acquisition standards. <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> FY 20 funding increased was a classified add.</p> | | | |
| Accomplishments/Planned Programs Subtotals | 17.899 | 67.631 | 46.577 |

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|---|---|

D. Other Program Funding Summary (\$ in Millions)

| <u>Line Item</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> <u>Base</u> | <u>FY 2021</u> <u>OCO</u> | <u>FY 2021</u> <u>Total</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
|--|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| • 0303140D8Z O&M DW: <i>Information System</i> <i>Security Program</i> | 16.110 | 9.809 | 11.355 | - | 11.355 | 10.655 | 10.857 | 10.857 | 11.074 | Continuing | Continuing |

Remarks

E. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Office of the Secretary Of Defense **Date:** February 2020

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

| Support (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------------------|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Studies and Analysis | Option/ Various | Various : Various | 2.667 | 0.936 | Jul 2019 | 1.962 | Jul 2020 | 1.962 | Jul 2021 | - | | 1.962 | Continuing | Continuing | - |
| Technical Engineering Services | Option/ Various | Various : Various | 23.157 | 6.580 | Jul 2019 | 56.000 | Jul 2020 | 35.222 | Jul 2021 | - | | 35.222 | Continuing | Continuing | - |
| Services Support | Option/ Various | Various : Various | 11.086 | 10.000 | Jul 2019 | 0.194 | Jul 2020 | 0.194 | Jul 2021 | - | | 0.194 | Continuing | Continuing | - |
| Subtotal | | | 36.910 | 17.516 | | 58.156 | | 37.378 | | - | | 37.378 | Continuing | Continuing | N/A |

| Management Services (\$ in Millions) | | | | FY 2019 | | FY 2020 | | FY 2021 Base | | FY 2021 OCO | | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Program Management Support | Option/ Various | Various : Various | 1.681 | 0.155 | Jul 2019 | 0.394 | Jul 2020 | 0.394 | Jul 2021 | - | | 0.394 | Continuing | Continuing | - |
| Engineering Support | Option/ Various | Various : Various | 12.720 | 0.100 | Jul 2019 | 6.923 | Jul 2020 | 6.647 | Jul 2021 | - | | 6.647 | Continuing | Continuing | - |
| Research & Development | Option/ Various | Various : Various | 6.218 | 0.128 | Jul 2019 | 2.158 | Jul 2020 | 2.158 | Jul 2021 | - | | 2.158 | Continuing | Continuing | - |
| Subtotal | | | 20.619 | 0.383 | | 9.475 | | 9.199 | | - | | 9.199 | Continuing | Continuing | N/A |

Remarks
NA

| | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|-------------|---------|---------|--------------|-------------|---------------|------------------|------------|--------------------------|
| Project Cost Totals | 57.529 | 17.899 | 67.631 | 46.577 | - | 46.577 | Continuing | Continuing | N/A |

Remarks
NA

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| Exhibit R-4, RDT&E Schedule Profile: PB 2021 Office of the Secretary Of Defense | | Date: February 2020 |
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| | | | | | |
|--------------------------------------|------------------|------------------|------------------|------------------|------------------|
| R4 | | | | | |
| PE 0303140D8Z | | | | | |
| Information Systems Security Program | | | | | |
| | 10/1/2021 | 10/1/2022 | 10/1/2023 | 10/1/2024 | 10/1/2025 |
| FY2021 Program Execution | | | | | |
| FY2022 Program Execution | | | | | |
| FY2023 Program Execution | | | | | |
| FY2024 Program Execution | | | | | |
| FY2025 Program Execution | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Office of the Secretary Of Defense | | Date: February 2020 |
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Schedule Details

| Events by Sub Project | Start | | End | |
|---------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| *** SUBPROJECT TITLE *** | | | | |
| FY 2021 Projected Execution | 3 | 2021 | 2 | 2022 |
| FY 2022 Projected Execution | 1 | 2022 | 2 | 2023 |
| FY 2023 Projected Execution | 1 | 2023 | 2 | 2024 |
| FY 2024 Projected Execution | 1 | 2024 | 2 | 2025 |
| FY2025 Projected Execution | 1 | 2025 | 4 | 2025 |