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**Department of Defense  
Fiscal Year (FY) 2022 Budget Estimates**

May 2021



**Washington Headquarters Services**

*Defense-Wide Justification Book Volume 5 of 5*

***Research, Development, Test & Evaluation, Defense-Wide***

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Washington Headquarters Services • Budget Estimates FY 2022 • RDT&E Program

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# Footnotes

## **FY 2020 Actuals**

Includes Division A, Title IX and X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116-136).

## **FY 2021 Enacted**

Includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).

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Department of Defense  
FY 2022 President's Budget  
Exhibit R-1 FY 2022 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

04 May 2021

Appropriation -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
Research, Development, Test & Eval, DW	10,920	999	918
Total Research, Development, Test & Evaluation	10,920	999	918

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Department of Defense  
 FY 2022 President's Budget  
 Exhibit R-1 FY 2022 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

04 May 2021

Summary Recap of Budget Activities -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
Management Support	10,920	999	918
Total Research, Development, Test & Evaluation	10,920	999	918
 Summary Recap of FYDP Programs -----			
Research and Development	10,920	999	918
Total Research, Development, Test & Evaluation	10,920	999	918

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Defense-Wide  
FY 2022 President's Budget  
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04 May 2021

Appropriation -----	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request
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Total Research, Development, Test & Evaluation	10,920	999	918

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Defense-Wide  
 FY 2022 President's Budget  
 Exhibit R-1 FY 2022 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

04 May 2021

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request	S e c
--	-----	----	---	-----	-----	-----	-
180	0606589D8W	Defense Digital Service (DDS) Development Support	06	10,920	999	918	U
		Management Support		10,920	999	918	
				-----	-----	-----	
		Total Research, Development, Test & Eval, DW		10,920	999	918	

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Washington Headquarters Services  
 FY 2022 President's Budget  
 Exhibit R-1 FY 2022 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

04 May 2021

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2020 Actual*	FY 2021 Enacted**	FY 2022 Request	Se
--	-----	-----	---	-----	-----	-----	-
180	0606589D8W	Defense Digital Service (DDS) Development Support	06	10,920	999	918	U
		Management Support		10,920	999	918	
Total Washington Headquarters Services				10,920	999	918	

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**Program Element Table of Contents (by Budget Activity then Line Item Number)**

***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

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<b>Line #</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
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<b>Program Element Title</b>	<b>Program Element Number</b>	<b>Line #</b>	<b>BA</b>	<b>Page</b>
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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 Washington Headquarters Services **Date:** May 2021

<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support	<b>R-1 Program Element (Number/Name)</b> PE 0606589D8W I Defense Digital Service (DDS) Development Support
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	1.000	10.920	0.999	0.918	-	0.918	-	-	-	-	Continuing	Continuing
281: Defense Digital Service (DDS)	1.000	10.920	0.999	0.918	-	0.918	-	-	-	-	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Launched in November 2015, and formally chartered under DoD Directive 5105.87 in January 2017, Defense Digital Service (DDS) is charged with bringing the best available technology in an efficient way into the DoD. The DDS serves as an organization composed of commercially experienced software developers, software designers, product managers, and problem solvers within the DoD, who utilize best-in-class private sector practices, talent, and technology to transform the way digital services are delivered within the Department.

The DDS uses design and technology to improve government services, strengthen national defense, and care for military members and their families. For FY 2022, DDS will continue previous innovative efforts, leverage public and private sector initiatives, and pursue innovative solutions to transform technology and improve and expand modern digital services and capabilities across the Department.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	1.000	0.999	0.999	-	0.999
Current President's Budget	10.920	0.999	0.918	-	0.918
Total Adjustments	9.920	0.000	-0.081	-	-0.081
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustment	9.920	-	-0.081	-	-0.081

**Change Summary Explanation**

Decrease of \$0.081 million reflects reduced contract costs associated with counter-unmanned aerial solutions.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Washington Headquarters Services										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 0400 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0606589D8W / <i>Defense Digital Service (DDS) Development Support</i>				<b>Project (Number/Name)</b> 281 / <i>Defense Digital Service (DDS)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
281: <i>Defense Digital Service (DDS)</i>	1.000	10.920	0.999	0.918	-	0.918	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

DDS builds software prototypes and implements proof-of-concept tests for key Department projects that support missions and long term goals of the Department to modernize its offensive and defensive technological capabilities. This funding will allow DDS to determine which private sector software development best practices and/or technology work best for the Department. DDS research and development is one of the Secretary of Defense's top priorities with the intent of advancing and modernizing technology, especially software systems, critical to the successful implementation of a variety of Department and war fighter missions. DDS requirements are driven by challenging technical problems identified by the Secretary of Defense where technology is failing the Department's mission and could impede the lethality and effectiveness of the war fighter. These technical problems vary in scope and complexity, but at a minimum, when resolved, have a positive impact on the war fighter's mission and capabilities. DDS involvement may be in the development of new code, product management, advising on code development processes and releases, and hacking or re-writing existing policies or processes that are antiquated or otherwise unnecessary. DDS engages on highly troubled projects to quickly implement fixes that ultimately reduce schedule slip, increase security, lower costs, improve user experiences, and accelerate performance.

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Defense Digital Service (DDS)	10.920	0.999	0.918
<p><b>Description:</b> DDS has provided services and tools that have improved and saved the lives of Service members and their families, and provided technological superiority in areas critical to national defense. DDS successfully completed the System for Automated Background Evaluation and Review prototype and continues counter-unmanned aerial systems (cUAS) work, as well as, the Hack the Pentagon program with multiple bug bounties including Hack the Air Force 5, Hack the Army 3, Hack the PFPA 2, Hack the Kessel Run, and a partnership with DARPA centered around hardware security. DDS continues to support cyber adversary detection and negation via multiple projects, including a domain name system security project. DDS has transitioned the MilMove/DP3 project to TRANSCOM and completed the Army Cyber Soldier training curriculum updates.</p> <p><b>FY 2021 Plans:</b> The Rogue Squadron project was transferred to DDS from Defense Innovation Unit in FY 2020 and is on-going in FY 2021. Rogue Squadron's primary function is to rapidly field low-cost cUAS solutions using commercial sector best practices. To date Rogue Squadron has fielded Dowding (a web based common operating picture), WindTalker (a highly accurate DJI drone detection system), and RIZER (a firmware update to safely enable blue force UAS operations).</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Washington Headquarters Services		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0606589D8W / <i>Defense Digital Service (DDS) Development Support</i>	<b>Project (Number/Name)</b> 281 / <i>Defense Digital Service (DDS)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<p>In FY 2021, SABER development will move from prototype to a minimally viable product and have initial capability of delivering an automated background investigation on new military accessions with no foreign travel history and only domiciled in states that participate in the National Law Enforcement Telecommunications System.</p> <p><b>FY 2022 Plans:</b> In FY 2022, DDS plans to develop mature cUAS solutions for the warfighter. DDS will further expand detection capabilities, ruggedization, and integration capabilities. DDS will also enhance mitigation capabilities via drone-on-drone defeat capabilities ("Drogon") and for a middleware platform to enhance cUAS system interoperability and facilitate development of a data lake to improve drone analysis, detection, and defeat capabilities.</p> <p>The Rogue Squadron project will continue in FY 2022 to improve cUAS capabilities, including enhanced detection and defeat capabilities. DDS is currently looking to leverage its highly accurate WindTalker drone detection capability to allow for precise drone-to-drone engagement and defeat. Additionally, DDS is looking to build interoperability with other cUAS systems (NINJA, CORIAN) to achieve greater effect across a wider range of drones and to support building a data lake of drone signature information.</p> <p><b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decrease of \$0.081 million reflects reduced contract costs associated with counter-unmanned aerial solutions.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	10.920	0.999	0.918

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• O&M: BA 4, PE 0901589D8W	5.587	4.121	3.174	-	3.174	-	-	-	-	Continuing	Continuing
• O&M: BA 4, PE 0901598D8W	1.500	0.000	0.000	0.000	0.000	-	-	-	-	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**  
N/A

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