STATE OF NEW HAMPSHIRE
DEPARTMENT OF INFORMATION TECHNOLOGY
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Denis Goulet
Commissioner

May 27, 2021

The Honorable Ken Weyler, Chairman
Fiscal Committee of the General Court
State House
Concord, NH 03301

His Excellency, Governor Christopher T. Sununu
  and the Honorable Council
State House
Concord, NH 03301

REQUESTED ACTION

1. Pursuant to the provisions of RSA 14:30-a, VI, authorize the Department of Information Technology (DoIT) to accept and expend $6,407,187 of American Rescue Plan (ARP) State and Local Fiscal Recovery Funds (FRF), in support of DoIT's response to the COVID-19 public health emergency, and $ 23,600,000 for government services under Section 602(c)(1)(C), effective upon Fiscal Committee and Governor and Council approval for the period July 1, 2021 through June 30, 2023. **Funding Source: 100% Federal Funds.**

2. Pursuant to the provisions of RSA 124:15, authorize the Department of Information Technology (DoIT) to establish Class 046 Consultants for the purpose of hiring independent professional services for installation and configuration of hardware, software, cyber threat analysis support and assistance with the management of platform and resource utilization effective upon Fiscal Committee and Governor and Council approval for the period July 1, 2021 through June 30, 2023. **Funding Source: 100% Federal Funds.**

Funds are to be budgeted in FY2022 and FY2023 in the new accounting units as follows. All transactions will be accounted for using activity codes to be determined and as assigned by GOFERR.

01-03-003-030010-24xxxxxx Department of Information Technology, ARP Cybersecurity (COVID-19 public health response)

Class	Description	FY22 Requested Budget	FY23 Requested Budget	FY22/FY23 Total Requested Budget
037-500171	TECHNOLOGY HARDWARE	$646,000	$0	$646,000
038-500177	TECHNOLOGY SOFTWARE	$875,000	$0	$875,000
040-500800	INDIRECT COSTS	$2,500	$0	$2,500
041-500801	AUDIT FUND SET ASIDE	$2,086	$0	$2,086
046-500465	CONSULTANTS	$530,414	$0	$530,414
066-500545	TRAINING	$30,000	$0	$30,000
	TOTAL EXPENSES	**$2,086,000**	**$0**	**$2,086,000**
Source of Funds				
000-48xxxx	FEDERAL FUNDS	$2,086,000	$0	$2,086,000
	TOTAL REVENUE	**$2,086,000**	**$0**	**$2,086,000**

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01-03-003-030010-24xxxxxx Department of Information Technology, ARP Cloud Services (COVID-19 public health response)

Class	Description	FY22 Requested Budget	FY23 Requested Budget	FY22/FY23 Total Requested Budget
038-500177	TECHNOLOGY SOFTWARE	$844,800	$0	$844,800
040-500800	INDIRECT COSTS	$2,500	$0	$2,500
041-500801	AUDIT FUND SET ASIDE	$3,450	$0	$3,450
046-500465	CONSULTANTS	$2,336,450	$0	$2,336,450
066-500545	TRAINING	$262,500	$0	$262,500
	TOTAL EXPENSES	**$3,449,700**	**$0**	**$3,449,700**
Source of Funds				
000-48xxxx	FEDERAL FUNDS	$3,449,700	$0	$3,449,700
	TOTAL REVENUE	**$3,449,700**	**$0**	**$3,449,700**

01-03-003-030010-24xxxxxx Department of Information Technology, ARP Continuity of Operations (COVID-19 public health response)

Class	Description	FY22 Requested Budget	FY23 Requested Budget	FY22/FY23 Total Requested Budget
037-500171	TECHNOLOGY HARDWARE	$583,487	$0	$583,487
040-500800	INDIRECT COSTS	$2,500	$0	$2,500
041-500801	AUDIT FUND SET ASIDE	$871	$0	$871
046-500465	CONSULTANTS	$284,629	$0	$284,629
	TOTAL EXPENSES	**$871,487**	**$0**	**$871,487**
Source of Funds				
000-48xxxx	FEDERAL FUNDS	$871,487	$0	$871,487
	TOTAL REVENUE	**$871,487**	**$0**	**$871,487**

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01-03-003-030010-24xxxxxx Department of Information Technology, ARP Critical IT Infrastructure: (government services under Section 602(c)(1)(C))

Class	Description	FY22 Requested Budget	FY23 Requested Budget	FY22/FY23 Total Requested Budget
037-500171	TECHNOLOGY HARDWARE	$17,491,398	$0	$17,491,398
038-500177	TECHNOLOGY SOFTWARE	$5,120,602	$0	$5,120,602
040-500800	INDIRECT COSTS	$2,500	$0	$2,500
041-500801	AUDIT FUND SET ASIDE	$23,600	$0	$23,600
046-500465	CONSULTANTS	$961,900	$0	$961,900
	TOTAL EXPENSES	**$23,600,000**	**$0**	**$23,600,000**
Source of Funds				
000-48xxxx	FEDERAL FUNDS	$23,600,000	$0	$23,600,000
	TOTAL REVENUE	**$23,600,000**	**$0**	**$23,600,000**

EXPLANATION

Pursuant to US Treasury 31 CFR Part 35, RIN 1505-AC77, the Coronavirus State Fiscal Recovery Fund established under the American Rescue Plan Act, DoIT will use the funds for the following activities:

ARP Cybersecurity ($2,086,000): The COVID-19 public health emergency continues to have a number of negative impacts to the confidentiality, integrity and availability of critical personal and public health information for New Hampshire's citizens and key public health programs that are protected by DoIT's cybersecurity program. These cybersecurity program enhancements are targeted to address these negative impacts by:

- Monitoring and protecting the real-time flow of personal and federally protected health information related to COVID-19 vaccines, vaccination, and public health issues between state systems and cloud-hosted applications.
- Providing positive identity verification and protection from phishing and ransomware attacks by malicious actors who are using the COVID-19 public health emergency as a lure in phishing emails and infected attachments.
- Expanding our cyber threat analysis capabilities to detect and block malicious cyber activity before it can affect systems that store and protect sensitive personal and public data related to the COVID-19 public health emergency.

The ARP funds in support of Cybersecurity will allow the State of New Hampshire to apply the necessary threat intelligence, identity verification and cyber capabilities to monitor and protect the flow of critical COVID-19 related citizen and public health data against malicious cyber actors and is therefore allowable as a COVID-19 related response to the public health emergency.

ARP Cloud Services Fiscal Recovery Funds ($3,449,700): Two major factors are driving DoIT's request to obtain services and tools to design, develop, implement and provide cloud solutions that will enable and modernize digital government services. First, our historical unbundling strategy has put us at a disadvantage when responding to the challenges of the COVID-19 response and recovery activities that are still continuing. This removed our ability to skip releases and unbundle to reduce operational expenses to enable functional capabilities due to COVID-19. Second, our tools vendor Microsoft has switched from a perpetual license model to a bundled subscription model.

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The state has begun implementing these tools based on CARES Act funding provided as part of the state's initial COVID-19 response. Funds are needed to continue and expand functionality and continue support and effective management of the environment, which has become a critical and heavily utilized platform for the state throughout the continuing COVID-19 crisis. This effort has allowed agencies to continue to work effectively during the pandemic due to remote work capability needs to serve its citizens and businesses. These collaboration and cloud services solutions provide flexible and scalable platforms that can adapt to changing business needs and allow the state to react quickly when disasters occur. They also minimize the impact on our state's infrastructure and provide flexibility and enhanced functionality as state agencies expand citizen services. As these improvements continue to be needed to respond to the State's IT needs during the COVID-19 public health emergency the continued reliance of the public on remote communications and access to State services, these services and investments are therefore allowable as a COVID-19 related response to the public health emergency.

ARP Continuity of Operations ($871,487): This request will address core Information Technology services required to implement cloud based infrastructure to accommodate DoIT continuity of operation (COOP) and disaster recovery (DR) services. These services will be based on business needs identified during the COVID-19 response and currently being collected and refined under an existing capital appropriation. In essence, this will improve the ability of NH agencies to support its citizens and businesses during emergency conditions that could potentially disrupt critical services, such as COVID-19.

The ability to run DoIT services from a flexible and scalable cloud platform will provide a more dynamic environment when needed to ensure critical systems and services are available to agencies, citizens and businesses in the event of a crisis.

This includes providing protection·against unexpected events impacting the delivery of DoIT services provided from the primary data center, enhanced security to defend against attacks on the primary data center such as ransomware and other cybersecurity attacks, the prevention of data loss, and the infrastructure required to provide disaster recovery services in the event the State's primary data center services are unavailable. As these improvements continue to be needed to respond to the State's IT needs resulting from the COVID-19 public health emergency and the continued reliance of the public on remote communications and access to State services, these services and investments are therefore allowable as a COVID-19 related response to the public health emergency.

ARP Critical IT Infrastructure ($23,600,000): This initiative consists of multiple components to address Core IT infrastructure modernization, that will enhance security and monitoring capabilities, allows for rapid infrastructure expansion to address capacity and business needs that have been challenging during COVID, while providing added protection of State and citizen information. These improvements are allowable as government services under Section 602(c)(1)(C).

Network Continuity: Replaces all end of life (EOL) core network infrastructure, agency equipment and addresses capacity constraints, security and compliance issues. The Executive Branch network that supports state agencies has a high percentage of network equipment that is either at EOL or will be at EOL shortly. When equipment reaches its End of Life, vendors no longer provide security patches and other updates which create growing security, federal, and Payment Card Industry (PCI) compliance risks. In addition to EOL equipment there is a major technology shift occurring in the networking space called Software Defined Networking (SDN). States are migrating toward SDN to assist with the increasing requirements for performance and security on their networks driven by:
- Accelerated adoption of cloud computing
- Expansion of Internet of Things (IOT)
- Increased remote workforce needs due to COVID-19
- Steep increase in the volume of citizen critical services that travel on our networks, driven by the COVID-19 public health emergency

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DoIT has worked with our network equipment vendor to identify the equipment and services required to keep agency networks performant and compliant for the next 5 – 6 years. The proposal provides a significant discount over our standard pricing by acquiring all of the equipment in a large volume single transaction, along with design and training services. Rapid implementation services are included (12,000 hours), allowing the project to be completed within 12-18 months. The network refresh would replace routers, switches, firewalls, and wireless equipment, along with expanding wireless capabilities to additional agencies.

Implementing this solution will also provide the opportunity to shift ownership and funding of agency network infrastructure environments to DoIT, utilizing the existing Telecommunications revolving fund to address new requirements and future refresh needs.

DoIT DR/COOP: Accelerates the planned DoIT core infrastructure DR/COOP solution and addresses the need to replace aged infrastructure in our primary Data Center. The American Rescue Plan funding would be used to expand and accelerate the DoIT Disaster Recovery Services Project proposed for FY22/FY23. Key upgrades to our primary data center at 27 Hazen Drive are required to address severe power, cooling and fault tolerance limitations. These upgrades would include the replacement of transformers, HVAC systems, UPS, distribution panels and adding redundant generator backup, to reduce unplanned downtime and allow routine maintenance without operational shutdowns.

Addressing these deficiencies will significantly extend the long term viability of the Hazen Data Center and allow for further consolidation of on campus data centers. Included in the expanded DR/COOP plan are consulting services thereby allowing DoIT to accelerate and complete the project in 2 years while providing an "Infrastructure as a Service" in the cloud for DR Services.

Backup: Modernizes the DoIT backup architecture solution and storage environments through consolidation and implementation of new technologies. Performing regular backups is a critical component of any modern organization's resiliency efforts. One critical reason for creating backups is to perform a restore of data to a given point in time, should data loss or corruption occur. During the COVID-19 response over the past year, backup was a critical service, ensuring we could recover whole systems, department shared drives, personal drives, and databases when the need arose, as well as the backup of new, unplanned pandemic data and applications created in support of the State's response to COVID. Without this resiliency, our pandemic response efforts may have been compromised.

DoIT's growing reliance on critical data and the sheer volume of that data is straining our already aging backup infrastructure, especially when we consider it is ultimately a tape-based system. A modern, tapeless architecture, utilizing hybrid Cloud and Disaster Recovery as a Service (DRaaS) technologies, will allow us to scale in support of growing data needs and speed up recovery, especially when we consider our ability to perform a timely restore from ransomware events such as the Colonial Pipeline compromise. In a number of similar attacks, strong backups reduced, or virtually eliminated, ransom payments.

Storage: The ability to store and provide fast, reliable access to data is a critical service in support of our citizens. Nowhere was this more apparent than during the COVID-19 pandemic. Comprehensive data analytics utilized during our pandemic response required high performance solid-state storage and consumed enormous space in support of this critical mission.

However, our current storage landscape consists of nine aging storage arrays, four of which are end-of-life and five approaching end-of-life. As our storage arrays reach EOL, maintenance and support are no longer available from the primary vendor. Contracts with third party vendors have been implemented to provide support, putting the environment at an increased risk. In addition, the sheer number of arrays, all of varying sizes and software release levels, has made support difficult and inefficient. A single, modern array will allow us to consolidate the existing arrays, create administrative efficiency and support future, modern workloads with a hybrid Cloud architecture.

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Funds are budgeted as follows:

Class 037-Technology, Hardware

Cybersecurity Project
- Procure servers and physical personal identity tokens

Critical IT Infrastructure Project
- Hardware to store data on-site at the primary data center for immediate critical systems recovery
- Cloud based infrastructure (servers, storage) that will be duplicated in the cloud to provide DR and COOP
- Storage array hardware for primary data center
- Power, cooling, distribution and fault tolerance replacements/upgrades·in our primary data center
- Network equipment (routers, switches, firewalls, wireless equipment) to address EOL, security and compliance

Class 038 -Technology, Software

Cybersecurity Project
- Cloud access security broker software

Cloud Services Project
- Procure enhanced licenses to enable functions and security features required to manage the ongoing environment

Critical IT Infrastructure Project
- Licensing for the Backup Solution
- Licensing for the storage arrays, data center monitoring and alerts

Class 040 -Indirect Expenses
- Budgeted at a rate of 10% of direct costs up to the first $25K of any contract outsourcing functions or sub awards

Class 041 -Audit Fund Set Aside
- Budgeted at a rate of .001

Class 046-Consultants

Cybersecurity Project
- Independent consultants for installation and configuration of hardware and software
- Cyber threat analysis support and assistance with the management of the platform and resource utilization

Cloud Services Project
- Assist with the management of the platform and resource utilization (Cloud Services)
- Assist with business analysis for ongoing agency requests and environmental configuration,
- Assist with architectural planning to ensure ongoing sustainability of the platform
- Provide development services within the platform as needed
- Manage activities to setup agency TEAMS and SharePoint sites
- Provide ongoing training and guidance on platform best practices and supported usage

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DR/COOP Project

- Consulting services to provide assistance needed to duplicate DoIT technology services, processes, applications, hardware and software platforms, and to migrate and continuously sync the data to the cloud.

Critical IT Infrastructure Project

- Assist in the design and implementation of the backup and storage solutions
- Data Center re-design and installation services

Class 066-Training

Cybersecurity Project and Cloud Services Project

- On-going DoIT staff training in support of new services and tools

The following information is provided in accordance with the Comptroller's instructions memorandum dated September 21, 1981

1. List of personnel involved: Temporary consultants.
2. Nature, Need and Duration: for the purpose of hiring independent professional services for installation and configuration of hardware, software, cyber threat analysis support and assistance with the management of platform and resource utilization.
3. Relationship to existing agency programs: Builds upon DoIT's previous efforts in response to the COVID-19 public health emergency across all state agencies and partnerships relative to the COVID-19 response efforts.
4. Has a similar program been requested of the legislature and denied? No.
5. Why wasn't funding included in the agency's budget request? It was not known at the time that DoIT would be applying for American Rescue Plan (ARP) State and Local Fiscal Recovery Funds (FRF).
6. Can portions of the grant funds be utilized? This request is 100% federally funded.
7. Estimate the funds required to continue these positions: $0.00. The temporary consulting positions will not be continued beyond the time frame of the American Rescue Plan (ARP) State and Local Fiscal Recovery Funds (FRF)

In the event that Federal Funds are no longer available, General Funds will not be requested to support this program.

Respectfully submitted,

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