FY 2017

CONGRESSIONAL BUDGET JUSTIFICATION

DOL IT MODERNIZATION

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DOL IT MODERNIZATION

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DOL IT MODERNIZATION

APPROPRIATION LANGUAGE

For necessary expenses for Department of Labor centralized infrastructure technology investment activities related to support systems and modernization, **[$29,778,000]** *$63,162,000 which shall be available through September 30, 2018. (Department of Labor Appropriations Act, 2016)*

DOL IT MODERNIZATION

AMOUNTS AVAILABLE FOR OBLIGATION (Dollars in Thousands)						
	FY 2015 Enacted		FY 2016 Enacted		FY 2017 Request	
	FTE	Amount	FTE	Amount	FTE	Amount
A. Appropriation	**0**	**$15,394**	**0**	**$29,778**	**0**	**$63,162**
Subtotal Appropriation	*0*	*$15,394*	*0*	*$29,778*	*0*	*$63,162*
B. Gross Budget Authority	**0**	**$15,394**	**0**	**$29,778**	**0**	**$63,162**
C. Budget Authority Before the Committee	**0**	**$15,394**	**0**	**$29,778**	**0**	**$63,162**
D. Total Budgetary Resources	**0**	**$15,394**	**0**	**$29,778**	**0**	**$63,162**
Unobligated Balance Expiring	0	-$3	0	$0	0	$0
E. Total, Estimated Obligations	**0**	**$15,391**	**0**	**$29,778**	**0**	**$63,162**

DOL IT MODERNIZATION

SUMMARY OF CHANGES
(Dollars in Thousands)

	FY 2016 Enacted	FY 2017 Request	Net Change
Budget Authority			
General Funds	$29,778	$63,162	+$33,384
Total	$29,778	$63,162	+$33,384
Full Time Equivalents			
General Funds	0	0	0
Total	0	0	0

FY 2017 Change

Explanation of Change	FY 2016 Base FTE	FY 2016 Base Amount	Trust Funds FTE	Trust Funds Amount	General Funds FTE	General Funds Amount	Total FTE	Total Amount
Increases:								
A. Built-Ins:								
To Provide For:								
Costs of pay adjustments	0	$0	0	$0	0	$0	0	$0
Communications, utilities, and miscellaneous charges	0	$0	0	$0	0	$0	0	$0
Printing and reproduction	0	$0	0	$0	0	$0	0	$0
Advisory and assistance services	0	$8,929	0	$0	0	$0	0	$0
Other services from non-Federal sources	0	$0	0	$0	0	$0	0	$0
Other goods and services from Federal sources	0	$0	0	$0	0	$0	0	$0
Operation and maintenance of facilities	0	$0	0	$0	0	$0	0	$0
Operation and maintenance of equipment	0	$18,365	0	$0	0	$0	0	$0
Equipment	0	$2,484	0	$0	0	$0	0	$0
Built-Ins Subtotal	**0**	**+$29,778**	**0**	**$0**	**0**	**$0**	**0**	**$0**
B. Programs:								
VOIP-Wireless-VTC	0	$0	0	$0	0	$33,384	0	$33,384
Programs Subtotal			**0**	**$0**	**0**	**+$33,384**	**0**	**+$33,384**
Total Increase	**0**	**+$29,778**	**0**	**$0**	**0**	**+$33,384**	**0**	**+$33,384**
Decreases:								
A. Built-Ins:								
To Provide For:								
Built-Ins Subtotal	**0**	**$0**	**0**	**$0**	**0**	**$0**	**0**	**$0**

DOL IT MODERNIZATION

Explanation of Change	FY 2016 Base		FY 2017 Change							
			Trust Funds		General Funds		Total			
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount		
B. Programs:										
Total Decrease	0	$0	0	$0	0	$0	0	$0		
Total Change	0	+$29,778	0	$0	0	+$33,384	0	+$33,384		

DOL IT MODERNIZATION

SUMMARY BUDGET AUTHORITY AND FTE BY ACTIVITY (Dollars in Thousands)								
	FY 2015 Enacted		FY 2016 Enacted		FY 2017 Request		Diff. FY17 Request / FY16 Enacted	
	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Departmental Support Systems	**0**	**4,898**	**0**	**4,898**	**0**	**4,898**	**0**	**0**
General Funds	0	4,898	0	4,898	0	4,898	0	0
IT Infrastructure Modernization	**0**	**10,496**	**0**	**24,880**	**0**	**58,264**	**0**	**33,384**
General Funds	0	10,496	0	24,880	0	58,264	0	33,384
Total	**0**	**15,394**	**0**	**29,778**	**0**	**63,162**	**0**	**33,384**
General Funds	**0**	**15,394**	**0**	**29,778**	**0**	**63,162**	**0**	**33,384**

NOTE: 2015 reflects actual FTE.

DOL IT MODERNIZATION

		FY 2015 Enacted	FY 2016 Enacted	FY 2017 Request	Diff. FY17 Request / FY16 Enacted
	BUDGET AUTHORITY BY OBJECT CLASS (Dollars in Thousands)				
	Full-Time Equivalent				
	Total	0	0	0	0
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	0	0	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	8,929	8,929	42,313	33,384
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	3,465	18,365	18,365	0
31.0	Equipment	3,000	2,484	2,484	0
	Total	**15,394**	**29,778**	**63,162**	**33,384**
1/Other goods and services from Federal sources					

DOL IT MODERNIZATION

SIGNIFICANT ITEMS IN FY 2016 APPROPRIATIONS' REPORTS

House Report 114-195, Page 37. While the Committee recognizes there are ongoing modernization needs with respect to the Department's information technology infrastructure, the Committee is concerned that the Department does not have sufficient capacity to effectively manage the large increase in IT modernization funds proposed in the fiscal year 2016 budget. The Committee directs the Department to establish a multi-year IT modernization plan that staggers projects over time in a manner consistent with the Department's capacity to effectively oversee projects and within available appropriations. The Committee directs the Department to assign a qualified project manager that is a full-time employee of the Department to each modernization project to ensure that all IT modernization projects are executed effectively, according to Departmental requirements, on time, and within budget.

Response:
DOL has planned its revised IT Modernization Budget (ITM)-Master Schedule within the FY 2017 $63,162,000 budget level. The Department has revised the schedule, projects and goals of the IT Modernization plan through FY 2019. The timeframe accounts for procurement, technical development and implementation, and a practical phased deployment of the Unified Communications project. This project includes Voice over Internet Protocol (VoIP), video teleconferencing, and wireless infrastructure, and will support more than 17,000 DOL employees and contractors in the national office and 600 field office locations.

To address the committee's concern about a more manageable, focused, and reduced IT modernization scope, the Department has revised its IT Modernization plan to reduce the original proposed scope of the Digital Government Integrated Platform (DGIP) to an internally funded data sharing pilot.

The strategy of first implementing the Unified Communications initiative, including a department wide standardized network and security infrastructure redesign, will lay the necessary and prerequisite groundwork for all DOL IT Modernization objectives. In addition to reducing duplicate data and voice telecommunications costs, UC will introduce new integrated voice response and video teleconferencing capabilities, and as or more importantly provide the well performing and reliable network services needed to support both existing and all future mission operations requirements.

After DOL completes the first phase of the Unified Communications project, DOL will be positioned to plan for the future and complementary capabilities categorized as the DGIP, including Digital Asset Management for audio, video, and images, sharing data, conversion of existing brick and mortar mission applications to mobile anytime, anywhere applications, and increased leveraging of federal shared services and externally hosted IT services deployed using the cloud service delivery model. All of these capabilities depend on a well-performing and secure network infrastructure, and the ability to leverage Voice over Internet Protocol (VOIP.)

DOL has already implemented staffing changes to satisfy these directives, including hiring a Network Engineering Branch Chief to lead the planning and execution for the Unified Communications project in 2016 and beyond. The Department will ensure that all modernization projects are overseen by a qualified project manager who is a full-time employee of the Department.

DOL IT MODERNIZATION

APPROPRIATION HISTORY (Dollars in Thousands)					
	Budget Estimates to Congress	**House Allowance**	**Senate Allowance**	**Appropriations**	**FTE**
2012					
Base Appropriation	$25,000			$19,814	0
2013					
Base Appropriation	$21,852			$18,778	0
2014					
Base Appropriation	$20,587			$19,778	0
2015					
Base Appropriation	$30,578			$15,394	0
2016					
Base Appropriation	$119,602			$29,778	0
2017					
Base Appropriation	$63,162				0

DOL IT MODERNIZATION

OVERVIEW

Introduction

The Department of Labor (DOL) Information Technology (IT) Modernization program supports the consolidation of the Department's IT infrastructure, as well as its ongoing transformation into a modern digital environment that works better and costs less. Consistent with the broader federal IT consolidation guidance including shared services and data center consolidation, the basic premise of infrastructure consolidation is the ability to leverage capacity across multiple programs and agencies instead of buying and maintaining dedicated hardware and software for a particular system or applications.

The primary benefit for DOL, given its historic low level of infrastructure investment, will be cost avoidance. This is because DOL does not have many IT services in place which are typical for an organization of its size and complexity. As a result, there is not as great an opportunity for cost savings – there isn't as much to replace because the services do not exist currently. IT Modernization and consolidation will allow DOL to avoid continuing a model where its agencies buy and build separate siloed IT infrastructure and services. Some cost savings will be realized when DOL does not have to pay for each agency's individual technology refresh costs in the future. For example, currently DOL has a $25 million backlog of end-of-life and past end-of-life infrastructure hardware and software. Approximately 50% of the replacement cost is labor, and the labor could be reduced by approximately 15% if the DOL infrastructure was standardized.

The greatest opportunity for DOL to realize cost avoidance is through Data Center and Network and Security Infrastructure consolidation, part of the Unified Communications project, over a three year period. DOL estimates the consolidation and integration activities will yield approximately $10 million in cost avoidance in FY 2016, through a single standardized network VOIP and UC design instead of continued separate agency efforts. DOL expects to achieve an annual cost avoidance in excess of $20 million across the Department, starting in FY 2018 and beyond.

Historically, the Department has operated with multiple, separate agency-managed IT infrastructures which are not standardized or integrated. This infrastructure is fragile, inherently subject to security vulnerabilities (that can be addressed with more current technology), and inadequate to support modern IT tools. Through the IT Modernization program, from 2012 through 2016, DOL has made some advances in data center consolidation and in migrating from outdated legacy enterprise business systems to more modern department services. This included moving to a Federal shared service human resources system and migrating from nine separate legacy e-mail systems to a commercial federal community cloud email service. However, despite these improvements, the Department continues to largely use technology the way it did a decade ago to administer Federal labor laws to guarantee workers' rights to safe and healthful working conditions; a minimum hourly wage and overtime pay; freedom from employment discrimination; and unemployment insurance. Several DOL agencies have sporadically implemented various new technologies using different software, hardware and services as funds were available. However, this opportunistic model has resulted in incompatible technology,

redundant services that are not interoperable, and duplicate costs that are spread over a small numbers of users.

The resources included in the FY 2017 President's Request in the IT Modernization appropriation, the Working Capital Fund (WCF), and the Departmental Management (DM) appropriation position the Department to move forward in the future. The resources will have direct impact on critical mission areas. They lay the foundation for a modern network infrastructure and mobile device management platform that will allow OSHA field investigators to use tablets and other hand-held devices to capture and share evidence through video and photographs, position ETA to use data and automated tools to effectively monitor program data across 53 jurisdictions in the unemployment insurance system, and avoid and reduce unnecessary overhead costs. IT Modernization is and will continue to improve the effectiveness of agency inspections and investigations, and provide technology that is now expected in the legal system as enforcement actions move through due process proceedings. Over time, these investments will deliver returns for vast segments of the American public, including but not limited to increasing the public trust through enhanced Cyber Security.

To achieve these goals, the Department requests $63,162,000 for FY 2017 in the IT Modernization appropriation. The major elements of the request are:
- An increase of $33,384,000 to support the Department's information technology program with resources for VoIP, video teleconferencing and wireless infrastructure.
- A request to provide set-aside authority for information technology (IT) purchases of 0.5 percent of a limited list of appropriations. This is included in the General Provisions. The request also provides a two-year period of availability for those funds.

It is important to note that the set-aside authority provision is not intended to enable the Department to increase the amount of money spent on IT, but rather to transfer resources that would have been spent on IT at the agency level to the OCIO to achieve economies of scale and ensure consistency and interoperability. For this reason, no grants or benefits appropriations are made eligible for set-aside, and the provision includes a requirement that the Department submit a plan to the Committees on Appropriations of the House of Representatives and the Senate on how the transferred resources will be used. This will allow for improved oversight of these projects and better management of associated costs. The extended period of availability will further support the goal of carefully managing and these projects. These projects require extensive coordination between the CIO and agencies, and the CIO will need adequate time subsequent to the transfer to obligate funds.

In FY 2017, DOL will continue to apply its additional IT Modernization (ITM) funding to improve IT services and provide better, faster, and smarter service to the American public. DOL will continue to implement Department-wide IT services using commercial cloud and federal shared service providers, to integrate and modernize DOL's nine separate infrastructures, and consolidate DOL's data centers. Although DOL is making yearly progress through the Data Center Consolidation project by eliminating dedicated servers and moving to a shared infrastructure model, in order for DOL to integrate its nine separate infrastructures, the Unified Communications project must be completed in its entirety, moving to a single DOL Department network in all 600 field sites, before the technical consolidation will be complete. This is

because the age and disparity of design, hardware and software is too great in the legacy networks to integrate the networks as-is.

In FY 2017, DOL will continue to implement projects to change how the Department does its job of promoting the welfare of the job seekers, wage earners, and retirees of the United States through improved working conditions, opportunities for employment, protecting retirement and health care benefits, and providing accurate and timely labor statistics.

The current and proposed ITM investments are crucial to IT Security. IT Modernization is the only path for DOL to improve its IT Security posture. DOL will improve cyber security as a result of all ITM projects because in parallel with adding new infrastructure capabilities (such as the existing Data Center Consolidation project and the proposed Unified Communications project), DOL is able to correct old, existing infrastructure vulnerabilities. DOL cannot do this with the existing end-of-life network, security, server and storage infrastructure because of the limited technical capabilities of the legacy infrastructure and the inherent associated DOL infrastructure design weaknesses.

DEPARTMENTAL SUPPORT SYSTEMS

				Diff. FY17 Request / FY16 Enacted
BUDGET AUTHORITY BEFORE THE COMMITTEE (Dollars in Thousands)				
	FY 2015 Enacted	**FY 2016 Enacted**	**FY 2017 Request**	
Activity Appropriation	**4,898**	**4,898**	**4,898**	**0**
FTE	0	0	0	0

Introduction

The Departmental Support Systems activity supports enterprise-wide information technology initiatives that facilitate common business solutions for all agencies in the Department. OCIO manages this account as well as the other accounts in the IT Modernization budget.

Ongoing enterprise efforts in the planning, development, and/or implementation phases that will be supported in FY 2017 include:
- Identity and Access Management, and
- DOL Consolidated Enterprise Architecture Program Management.

These initiatives build on prior year investments and move toward the next phase of implementation.

Identity and Access Management HSPD-12: DOL's implementation of the Identity and Access Management component of Homeland Security Presidential Directive-12 (HSPD-12) is necessary to protect DOL data through rigorous identity-proofing and authorized access to DOL IT systems.

Coupled with the DOL network redesign to eliminate siloed active directory structures, which is part of the Unified Communications project, there will be opportunities to improve service. Full implementation of this project will improve IT security and productivity by allowing DOL staff to access different DOL systems with a single password or personal identification verification card. Identity Access and Management will be able to eliminate a long-standing OIG finding related to the manual process that DOL now relies on to create and disable user accounts when staff are added or separated.

DOL Consolidated Enterprise Architecture Program Management: Overall, Enterprise Architecture is a blue print for what DOL needs to deploy in terms of Information Technology to support mission objectives. Enterprise Architecture is a framework and process to ensure that IT investments are aligned with DOL strategic objectives and that sound business and IT decisions are made. Enterprise Architecture also facilitates simplified and redesigned work processes that result in higher quality, more effective customer service; reduced operational complexity; and reallocation of budget resources to higher value applications.

From a practical perspective, the enterprise architecture work is essential to support DOL's IT Modernization, including but not limited to cyber security improvements. Definition of the enterprise target architecture is essential to integrate DOL's infrastructures, consolidate DOL data centers, and converge existing legacy networks and implement a single Departmental network

and security infrastructure. Continual refinement of the Enterprise Architecture, which defines technical standards, is a critical function in the management of DOL's IT investments.

Five-Year Budget Activity History

Fiscal Year	Funding	FTE
	(Dollars in Thousands)	
2012	$11,829	0
2013	$11,195	0
2014	$4,898	0
2015	$4,898	0
2016	$4,898	0

FY 2017

The budget request for FY2017 is $4,898,000, which is the same as the FY 2016 enacted level. This level will support the following activities:

DOL Consolidated Enterprise Architecture Program Management: In FY 2017, the Enterprise Architecture Program Management, will not only focus on ITM technical objectives, but will support the Department in implementing Federal Information Technology Acquisition Reform Act (FITARA) requirements. Key contributions from the Enterprise Architecture program are visible performance results and return on investments; support for IT Governance policies that are identified in the DOL FITARA implementation plan, including strategic planning and policy formulation decisions; IT budget and acquisition oversight, and potential consolidation, re-use, cost-saving, technology advancement, and cost-avoidance opportunities.

*Identity and Access Management***:** Funding in FY 2017 will allow DOL to implement key and critical functions, over and above the simplified two-factor authentication to the machine level which was implemented to support minimal cyber-sprint requirements in 2015. Specifically, funding this project will allow DOL to implement: (a) application provisioning, (b) single sign-on for all integrated applications, and (c) digital identity authentication to all DOL IT services for federal and contract employees.

FY 2016

With the FY 2016 enacted level of $4,898,000, the Department will undertake:

DOL Consolidated Enterprise Architecture Program Management: In FY 2016, the Enterprise Architecture Program Management, in accordance with Departmental priorities, will leverage enterprise architecture to foster information sharing, and the essential functions of identifying consolidation, re-use, cost-saving, and cost-avoidance opportunities. This includes design and pilot VoIP/Unified Communications, Mobile Device Management (MDM), and video teleconferencing capabilities. The scope of this analysis also included analysis of current DOL infrastructure and recommendations to modify it to transition to future target architectures. The

DEPARTMENTAL SUPPORT SYSTEMS

Enterprise Architecture function is also key in analyzing and planning improvements to the Department's FITARA Implementation Plan-related processes and procedures.

*Identity and Access Management***:** DOL's implementation of the Identity and Access Management (IAM) component of HSPD-12 helps to protect employees' identities through uniform identity life cycle management services, rigorous identity-proofing and authorized access to DOL IT systems. With the restored ITM funds in FY 2016, DOL is planning and initiating implementation of IAM-Identity Management cloud-based services enabling the integration of core DOL enterprise-wide systems (including the Department's training, financial management, and time and attendance systems) , into an enterprise Identity and Access Management framework to support application provisioning. Additionally, we will focus on interoperability of the Department's remote solutions and mobile devices with the Identity and Access Management Logical access control solution.

FY 2015

The FY 2015 funding level provided for new and ongoing enterprise-wide investments that are typically enterprise-wide efforts in the planning, design, development, and/or implementation phases.

Initiatives supported by the DSS FY 2015 funding level were:

DOL Consolidated Enterprise Architecture Program Management: In FY 2015, the Enterprise Architecture Program Management, in accordance with Departmental priorities, continued to plan, socialize and design target architectures for the consolidated IT infrastructures. This included projects, such as completing recommended network and security assessment findings to support planning for future initiatives such as wireless, VoIP/Unified Communications, Mobile Device Management, video teleconferencing and virtual desktop infrastructure. The Enterprise Architecture function was also key in analyzing the Department's policies and processes which related to FITARA, and identifying a plan going forward.

Identity and Access Management: DOL's implementation of the Identity and Access Management component of HSPD-12 helps to protect employees' identities through uniform identity life cycle management services, rigorous identity-proofing and authorized access to DOL IT systems. Although this project was not fully funded in FY 2015 through ITM, this project was key in supporting DOL's implementation of the first phase of Logical Access Control to support federal Cybersecurity initiatives and allow DOL users the capability to logon to their network account using their PIV card and PIN. In 2015, this project also implemented the Identity and Access Management communications and training plan and strategy.

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DETAILED WORKLOAD AND PERFORMANCE				
	FY 2015 Enacted		**FY 2016 Enacted**	**FY 2017 Request**
	Target	**Result**	**Target**	**Target**
Departmental Support Systems				
Strategic Goal ALL - All Strategic Goals				
Strategic Objective ALL.1 - All Strategic Objectives				
Percent of universal/common systems with improved functionality through enhancements	88.00%	--	88.00%	88.00%

Legend: (r) Revised   (e) Estimate   (base) Baseline   -- Not Applicable   TBD - To Be Determined   [p] - Projection

Workload Summary

The Departmental Support Systems activity bolsters the Department's mission through efforts that contribute to all strategic and outcome goals. The universal/common solutions included in the budget activity support government-wide requirements by improving service delivery to citizens through information technology and improving the productivity of Federal workers.

In FY 2016, ITM will procure and begin implementation of an Identity and Access management solution. The solution will encompass the necessary hardware, software, maintenance and professional services. The investment will enable the Department to begin implementation of a centralized access management, authentication, single sign-on, and authorization solution for information systems and applications.

ITM will establish and begin implementation of an enterprise data asset management, data model and repository, and data analytics solutions.

DEPARTMENTAL SUPPORT SYSTEMS

		FY 2015 Enacted	FY 2016 Enacted	FY 2017 Request	Diff. FY17 Request / FY16 Enacted
	BUDGET ACTIVITY BY OBJECT CLASS (Dollars in Thousands)				
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	0	0	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	4,498	4,498	4,498	0
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	400	400	400	0
31.0	Equipment	0	0	0	0
	Total	**4,898**	**4,898**	**4,898**	**0**
1/Other goods and services from Federal sources					

DEPARTMENTAL SUPPORT SYSTEMS

CHANGES IN FY 2017
(Dollars in Thousands)

Activity Changes
  Built-In
    To Provide For:

Costs of pay adjustments	$0
Communications, utilities, and miscellaneous charges	0
Printing and reproduction	0
Advisory and assistance services	0
Other services from non-Federal sources	0
Other goods and services from Federal sources	0
Operation and maintenance of facilities	0
Operation and maintenance of equipment	0
Equipment	0
Built-Ins Subtotal	**$0**
Net Program	**$0**
Direct FTE	**0**

	Estimate	FTE
Base	**$4,898**	**0**
Program Increase	**$0**	**0**
Program Decrease	**$0**	**0**

IT INFRASTRUCTURE MODERNIZATION

BUDGET AUTHORITY BEFORE THE COMMITTEE			
(Dollars in Thousands)			
	FY 2015 Enacted	FY 2016 Enacted	FY 2017 Request	Diff. FY17 Request / FY16 Enacted
Activity Appropriation	**10,496**	**24,880**	**58,264**	**33,384**
FTE	0	0	0	0

<u>Introduction</u>

This activity consolidates existing DOL agencies' infrastructure to gain economies of scale, eliminates duplication, and implements new capabilities. The Infrastructure Modernization will increase user productivity and allow DOL to provide better services, while also eliminating cost redundant infrastructures and creating a more reliable, secure and consistent IT infrastructure across the Department.

The IT Infrastructure Modernization Program is establishing a reliable and secure enterprise IT infrastructure that is a necessary prerequisite to implement DOL mission application system improvements. Over time, the projects will transform the DOL IT Infrastructure to a set of standardized enterprise-wide IT software, hardware and services. This will reduce the number of duplicate and incompatible solutions; improve cost effectiveness; increase reliability, maintainability, and security; and transform the entire Department's ability to interact electronically with the public to a level that is consistent the convenience and efficiency which is available in the private sector.

In FY 2017, the Department will move forward in implementing the two major initiatives: Infrastructure Integration and Consolidation, and Network Infrastructure Modernization. Network Infrastructure Modernization covers the Unified Communications project, which includes support for VoIP, video teleconferencing and wireless infrastructure.

Infrastructure Integration and Consolidation: The overall strategy of this effort is to provide a consolidated and integrated infrastructure for DOL agencies. Infrastructure integration and consolidation will eliminate cases where DOL agencies carry large, costly, redundant, and consequently inefficient IT infrastructures and duplicate support staff. The infrastructure services will allow DOL to correct fundamental security flaws which are inherent in the existing infrastructure that evolved over decades through individual non-standardized or integrated agency IT investments.

The next phases of infrastructure integration and cloud migration will be facilitated by the experience gained in FY 2012 through FY 2016, and the network and security assessments completed in FY 2014 and FY 2015. In FY 2015, DOL completed the organization integration of the federal staff and contracts which supported seven of the original nine original DOL infrastructures.

These actions will position DOL well to move forward more rapidly in FY 2017 toward the goal of full technical integration and consolidation. The earliest this will be completed is 2020 with the current IT

IT INFRASTRUCTURE MODERNIZATION

Modernization plan and funding model. DOL will begin to realize cost avoidances and savings in 2018 after the first phase of the UC project is complete.

Five-Year Budget Activity History

Fiscal Year	Funding	FTE
	(Dollars in Thousands)	
2012	$7,985	0
2013	$7,583	0
2014	$14,880	0
2015	$10,496	0
2016	$24,880	0

FY 2017

The budget request for FY 2017 is $58,264,000, which is $33,384,000 above the FY 2016 enacted level. This level of funding will support the following activities:

Infrastructure Integration and Consolidation: The requested funding will allow DOL to continue its progress in meeting the commitment to the Federal Data Center Consolidation Initiative, moving additional critical server production activities from mixed use buildings to a state-of-the-art commercial data center facility.

In addition, DOL will continue its progress to add to the number of internal networks and devices within DOL that are Internet Protocol version 6 (IPv6) capable, enabling agencies' full access to all external Internet resources needed to meet business requirements, and in parallel, addressing the security vulnerabilities inherent in IPv4.

DOL is continuing the technical integration and consolidation of agency infrastructures (EBSA, ETA, ITC, MSHA, OALJ, OFCCP, OLMS, OSHA, OWCP, and WHD). DOL found that the technical integration (and therefore efficiencies) has been hampered by: lack of standardization across DOL agencies, different priorities (and therefore, different services that are partially implemented), and lack of funding and resulting infrastructure maintenance deficiencies. The infrastructure needs are more than expected, leading to an increased scope and costs of our modernization effort. DOL has had to stabilize the agencies' infrastructure to ensure reliable and secure continued service, before virtualizing applications and other prerequisites to migrating services to the new consolidated data center or standard platforms.

Despite the challenges above, DOL will continue its progress in meeting the commitment to the Federal Data Center Consolidation initiative, moving additional critical server production activities from mixed use buildings to the state-of-the-art data center facility.

Network Infrastructure Modernization (Unified Communications): DOL will complete the first phase of Unified Communications through VoIP deployment, capability for video teleconferencing and a wireless infrastructure across the DOL enterprise. The FY 2017 requested funding will allow DOL to build on the preparation work started in FY 2016, and deploy a new modernized Network Infrastructure in four major DOL locations. This will provide immediate

security and reliability benefits to DOL staff in those locations. A security-in-depth model is inherent in the Unified Communications network redesign and replacement of the end-of-life DOL network and security infrastructure.

The FY 2017 Unified Communications project is a critical first step to not only supporting these objectives, but continuing basic existing operations. In FY 2017 (Phase 1), DOL will be able to complete replacement of legacy network infrastructure in one-third of its 600 field sites. By replacing its old failing network infrastructure DOL will realize an across the board improvement in general IT services. The network is the lifeblood of modern IT. The network affects response times, the ability to stand up new capabilities like mobile computing, the reliability of existing IT services, the number of security vulnerabilities, and IT maintenance cost. The network touches all staff, all agencies and every IT component or service. This ITM project will eliminate the old networks which are prone to failures and costly to maintain, and provide DOL with new capabilities. Through VoIP, the Department will be able to implement Unified Messaging, which integrates various voice and data communication so that different software applications and devices can access voice and data interchangeably. Examples include checking voice and email messages from either a web application or phone and offering new flexible workflow options such as appending notes or documents to forwarding voicemails. With Unified Messaging, DOL could allow the public to select a webpage button to talk to a DOL employee.

FY 2016

The FY 2016 enacted level of $24,880,000 will support the following activities:

Infrastructure Integration and Consolidation: In addition to the modernization activities outlined above, DOL plans to continue the organizational consolidation with the consolidation and standardization of two additional agencies into the OCIO's office. DOL will continue its IT organization integration of the Bureau of Labor Statistics (BLS) and Office of Inspector General (OIG) to begin Discovery by signing the OCIO Integration Project Charter. In FY 2016, the consolidated infrastructure organization will support over 85% of DOL IT users.

In FY 2016, DOL is improving its security posture by, for the first time, adding failover and automated disaster recovery for those services housed in consolidated Silver Spring Data Center. Data Center Consolidation not only improves services, maintainability and reliability, but is critical to improving the DOL Security posture.

Network Infrastructure Modernization (Unified Communications): In 2015, DOL leveraged agency and ITM resources to define enterprise Unified Communications requirements, high level design, and detailed design, and completed a pilot implementation in two newly opened DOL facilities in DC. The scope included integration of the old end-of-life VoIP, legacy voice and data telecommunications, and the new unified communications architecture to demonstrate that the DOL transition path is viable. The FY 2016 funding will allow DOL to expand the pilot to redesign the DOL core network and security infrastructure in the Silver Spring Data Center Consolidation (DCCI). In FY 2016, DOL will implement the foundation network design changes and the network convergence that is a prerequisite to the Unified Communications. In

parallel, DOL will complete Network and Security Assessments and organization integration of the remaining two DOL agencies. This will position DOL for success in going forward with the full FY 2017 deployment scope of one-third of all DOL locations in FY 2017, and the remainder respectively in FY 2018 and FY 2019.

FY 2015

In FY 2015, DOL underwent a large scale re-organization with all IT Infrastructure services being consolidated under the CIO's office. Within this consolidation, DOL continued to perform DCCI and Network and Security Infrastructure Organization Consolidation and support staff consolidation and consolidation of critical support tools to include network monitoring and reporting, network address tracking and network services such as DHCP and DNS.

In FY 2015, DOL:

- Met its Data Center Consolidation targets despite reduced IT Modernization funding. Focusing on end-of-life servers DOL reduced high priority security vulnerabilities from 600 to 100.
- Completed an inventory of existing internal routers, switches, hardware firewalls and software to identify high risk components that are candidates for technology refresh.
- Developed an impact analysis to determine fiscal and operational impacts and risks of migrating to IPv6 internally, and worked with DOL service providers to ensure IPv6 vendor support for products and services.
- Piloted its target VoIP and VTC infrastructure in two new physical office locations in the Washington, DC area.
- Completed the mobility device management architecture, policy framework, and integrated MDM with the DOL cloud email services and DOL standard personal devices.

IT INFRASTRUCTURE MODERNIZATION

DETAILED WORKLOAD AND PERFORMANCE				
	FY 2015 Enacted		**FY 2016 Enacted**	**FY 2017 Request**
	Target	**Result**	**Target**	**Target**
IT Infrastructure Modernization				
Strategic Goal ALL - All Strategic Goals				
Strategic Objective ALL.1 - All Strategic Objectives				
ITM-01 Percentage of employees with access to a consolidated and standardized unified communications VoIP solution	--	--	30%	100%
ITM-02 Percentage of internal networks and devices that are IPv6 capable	--	--	100%	100%

Legend: (r) Revised   (e) Estimate   (base) Baseline   -- Not Applicable   TBD - To Be Determined   [p] - Projection

IT INFRASTRUCTURE MODERNIZATION

Workload Summary

IT Infrastructure Modernization supports all of the strategic and outcome goals of the Department. The performance measures are associated with projects that include implementing the DOL-specific Data Center Consolidation Initiative (DCCI), Internet Protocol version 6 (IPv6), and migrating more services to a centralized, cloud-based infrastructure. These steps provide a platform to support telework through remote access and collaboration across the Department.

The IT Integration and the DCCI projects allow the Department to consolidate the nine separate IT help desks, and the staff supporting nine separate data centers and configurations. It will also reduce the Department's power consumption and physical security needs by reducing servers and racks, while increasing the use of server virtualization. (It is important to note that network and security infrastructure consolidation is dependent on the Unified Communications project to complete a department wide network redesign and upgrade.)

In FY 2015, DOL met its targets of consolidating 4 data centers and completed 6 by the end of the calendar year. The work involves moving equipment to a new Tier-1 data center with expected availability of 99.7%. The optimization and consolidation of servers into a virtualized shared services environment, reduces server inventory and overall power consumption. As of December 2015, DOL closed 24 data centers, and in 2016 and 2017 DOL plans to close additional 17 data centers. This reduces the departments energy cost, and reduces the amount that DOL agencies pay for data center facilities. This overall effort provides a more flexible, responsive and reliable infrastructure service. For example, in FY 2015, DOL satisfied 9 new Requests for Information Technology Services (RITS) projects from DOL agencies and provided infrastructure support to over 18 RITS and other key projects within a single fiscal year, promoting all strategic and outcome goals. Without the DCCI facility, DOL would have been unable to satisfy these requirements as quickly; the procurement cycle for dedicated hardware and software alone would have increased the timeline by three to six months for each project.

IPv6 funding will continue to support the DOL upgrade and configuration of publicly accessible web services and other information repositories to enable users to fully access them using the IPv6 protocol. The Department will aim to make all internal network and devices IPv6 capable in FY 2016 and FY 2017.

In FY 2016, ITM will develop a mobility architecture and enhanced enterprise mobile device management plan.

Additionally, the Department intends to implement the first phase of the Network Infrastructure Modernization Unified Communications project which will include planning the technical design and network conversions needed. The Department aims to provide 30 percent of employees with access to consolidated and standardized Unified Communications VoIP solution in FY 2016 and 100 percent in FY 2017. The funds requested in the IT Infrastructure Modernization budget activity will enable DOL to add cyber security capabilities in parallel. These do not exist currently and cannot be added to the existing infrastructure because of the limitations in the design and old technology, and to support agencies with new capabilities including VoIP, wireless access, and video teleconferencing.

IT INFRASTRUCTURE MODERNIZATION

					Diff. FY17 Request / FY16 Enacted
		FY 2015 Enacted	**FY 2016 Enacted**	**FY 2017 Request**	
	BUDGET ACTIVITY BY OBJECT CLASS (Dollars in Thousands)				
11.1	Full-time permanent	0	0	0	0
11.9	Total personnel compensation	0	0	0	0
23.3	Communications, utilities, and miscellaneous charges	0	0	0	0
24.0	Printing and reproduction	0	0	0	0
25.1	Advisory and assistance services	4,431	4,431	37,815	33,384
25.2	Other services from non-Federal sources	0	0	0	0
25.3	Other goods and services from Federal sources 1/	0	0	0	0
25.4	Operation and maintenance of facilities	0	0	0	0
25.7	Operation and maintenance of equipment	3,065	17,965	17,965	0
31.0	Equipment	3,000	2,484	2,484	0
	Total	**10,496**	**24,880**	**58,264**	**33,384**
1/Other goods and services from Federal sources					

IT INFRASTRUCTURE MODERNIZATION

CHANGES IN FY 2017
(Dollars in Thousands)

Activity Changes
  Built-In
    To Provide For:
    Costs of pay adjustments $0
    Communications, utilities, and miscellaneous charges   0
    Printing and reproduction   0
    Advisory and assistance services   0
    Other services from non-Federal sources   0
    Other goods and services from Federal sources   0
    Operation and maintenance of facilities   0
    Operation and maintenance of equipment   0
    Equipment   0
  Built-Ins Subtotal   **$0**

Net Program   **$33,384**
  Direct FTE   **0**

	Estimate	FTE
Base	$24,880	0
Program Increase	$33,384	0
Program Decrease	$0	0