

**[Discussion Draft]**

AUGUST 8, 2014

113<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**H. R.** \_\_\_\_\_

To amend titles 40, 41, and 44, United States Code, to streamline Federal adoption and use of cloud computing and to enhance efficiency in information technology acquisition and management.

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IN THE HOUSE OF REPRESENTATIVES

M. \_\_\_\_\_ introduced the following bill; which was referred to the  
Committee on \_\_\_\_\_

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**A BILL**

To amend titles 40, 41, and 44, United States Code, to streamline Federal adoption and use of cloud computing and to enhance efficiency in information technology acquisition and management.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Fifth Generation of  
5 Computing Act” or the “5G Act”.

**1 SEC. 2. TABLE OF CONTENTS.**

2 The table of contents for this Act is as follows:

- Sec. 1. Short title.
- Sec. 2. Table of contents.
- Sec. 3. Purpose.
- Sec. 4. Findings.

TITLE I—ADOPTION OF CLOUD COMPUTING BY THE FEDERAL GOVERNMENT

- Sec. 101. Guidelines for security assessment and operational authorization for cloud computing services.
- Sec. 102. Pilot program establishing additional fiscal authorities for cloud-based solutions.
- Sec. 103. Lead coordination role of Chief Information Officers Council.

TITLE II—EFFICIENCY IN ACQUISITION AND MANAGEMENT FOR CLOUD COMPUTING

- Sec. 201. New contract type authorized for cloud computing services and other utility-like services.
- Sec. 202. Development of best practices for service level agreements and establishment of common platforms.
- Sec. 203. Governmentwide software purchasing program.
- Sec. 204. Pilot program for share-in-savings cloud computing contracts.
- Sec. 205. Designation of Governmentwide cloud brokers.
- Sec. 206. Modular contracting and agile approaches to technology acquisitions.
- Sec. 207. Requirement for operational assessment of legacy information technology investments.

TITLE III—ADDITIONAL PROVISIONS

- Sec. 301. Definitions.
- Sec. 302. Interagency working group for global cloud computing standards.
- Sec. 303. Access to cloud computing records for law enforcement.
- Sec. 304. Chief Data Officer.

**3 SEC. 3. PURPOSE.**

4 The purpose of this Act is to streamline Federal  
5 adoption and use of cloud computing.

**6 SEC. 4. FINDINGS.**

7 Congress finds the following:

- 8 (1) Cloud computing is the fifth generation of  
9 computing in that it follows the mainframe era, the  
10 advent of ubiquitous personal computers, the use of

1 client-server computing, and the broad acceptance  
2 and adoption of the internet.

3 (2) This transformative technology has the po-  
4 tential to save the Government billions of dollars in  
5 costs.

6 (3) Transition to cloud computing offers signifi-  
7 cant potential benefits for the implementation of key  
8 cyber security initiatives and for the flexible and  
9 agile development of Federal information technology  
10 projects, which in turn can radically enhance the de-  
11 livery of Government services to citizens.

12 **TITLE I—ADOPTION OF CLOUD**  
13 **COMPUTING BY THE FED-**  
14 **ERAL GOVERNMENT**

15 **SEC. 101. GUIDELINES FOR SECURITY ASSESSMENT AND**  
16 **OPERATIONAL AUTHORIZATION FOR CLOUD**  
17 **COMPUTING SERVICES.**

18 (a) GUIDELINES FOR CLOUD COMPUTING.— The  
19 Chief Information Officers Council shall provide and  
20 maintain guidelines for executive agencies for security as-  
21 sessment, operational authorization, and continuous moni-  
22 toring of cloud computing products and services used by  
23 the Federal Government. At a minimum, the guidelines—

24 (1) shall provide for consistent security author-  
25 izations Governmentwide by using a baseline set of

1 standards for cloud computing product approval;  
2 and

3 (2) shall include accreditation and certification  
4 requirements for cloud services providers.

5 (b) REQUIREMENT IN GOVERNMENT CONTRACTS  
6 FOR CLOUD COMPUTING SERVICES.—An executive agency  
7 may not issue a solicitation for cloud computing services  
8 unless the agency includes a requirement that the cloud  
9 services provider satisfies the accreditation and certifi-  
10 cation requirements established pursuant to subsection (a)  
11 before performance of the services begins.

12 **SEC. 102. PILOT PROGRAM ESTABLISHING ADDITIONAL FIS-**  
13 **CAL AUTHORITIES FOR CLOUD-BASED SOLU-**  
14 **TIONS.**

15 (a) ESTABLISHMENT OF PILOT PROGRAM.—Not  
16 later than 180 days after the date of the enactment of  
17 this Act, the Director of the Office of Management and  
18 Budget shall establish a pilot program to monitor and sup-  
19 port the establishment of additional fiscal authorities for  
20 Chief Information Officers for the purpose of transitioning  
21 to cloud computing.

22 (b) REQUIREMENTS OF PILOT PROGRAM.—Under  
23 the pilot program, a Chief Information Officer of an agen-  
24 cy listed in section 901(b) of title 31, United States Code,  
25 may apply to the Office of Management and Budget to

1 establish such cloud computing services Working Capital  
2 Funds, in consultation with the Chief Financial Officer  
3 of the agency, as may be necessary to transition to cloud-  
4 based solutions.

5 (c) FUNDING AVAILABILITY.—Notwithstanding any  
6 other provision of law, any Working Capital Fund estab-  
7 lished under the pilot program shall remain available for  
8 a period of 5 years from the date of deposit into the Fund.

9 (d) REPORT TO CONGRESS.—Any establishment of a  
10 Working Capital Fund under the pilot program shall be  
11 reported to the Committees on Appropriations of the  
12 House of Representatives and the Senate and other rel-  
13 evant Congressional committees.

14 (e) COMPTROLLER GENERAL REQUIREMENTS.—

15 (1) REQUIREMENT TO EXAMINE EFFECTIVE-  
16 NESS.—The Comptroller General of the United  
17 States shall examine the effectiveness of the pilot  
18 program, with particular focus on whether agencies  
19 are actively using any Working Capital Funds estab-  
20 lished under the program and whether any addi-  
21 tional funding flexibilities may be needed to further  
22 facilitate the transition to cloud-based solutions.

23 (2) REPORT.—Not later than 3 years after the  
24 date of the enactment of this Act, the Comptroller  
25 General shall submit to the relevant congressional

1 committees a report containing the findings and rec-  
2 ommendations of the Comptroller General from the  
3 examination required by paragraph (1).

4 (f) TERMINATION.—The pilot program established  
5 under this section shall be terminated on the date occur-  
6 ring 5 years after the date of the enactment of this Act.

7 **SEC. 103. LEAD COORDINATION ROLE OF CHIEF INFORMA-**  
8 **TION OFFICERS COUNCIL.**

9 (a) LEAD COORDINATION ROLE.—Subsection (d) of  
10 section 3603 of title 44, United States Code, is amended  
11 to read as follows:

12 “(d) LEAD INTERAGENCY FORUM.—

13 “(1) IN GENERAL.—The Council is designated  
14 the lead interagency forum for improving agency co-  
15 ordination of practices related to the design, develop-  
16 ment, modernization, use, operation, sharing, per-  
17 formance, and review of Federal Government infor-  
18 mation resources investment. As the lead inter-  
19 agency forum, the Council shall develop cross-agency  
20 portfolio management practices to allow and encour-  
21 age the development of cross-agency shared services  
22 and shared platforms. The Council shall also issue  
23 guidelines and practices for infrastructure and com-  
24 mon information technology applications, including  
25 expansion of the Federal Enterprise Architecture

1 process if appropriate. The guidelines and practices  
2 may address broader transparency, common inputs,  
3 common outputs, and outcomes achieved. The guide-  
4 lines and practices shall be used as a basis for com-  
5 paring performance across diverse missions and op-  
6 erations in various agencies.

7 “(2) REPORT.—Not later than December 1 in  
8 each of the 6 years following the date of the enact-  
9 ment of this paragraph, the Council shall submit to  
10 the relevant congressional committees a report (to be  
11 known as the ‘CIO Council Report’) summarizing  
12 the Council’s activities in the preceding fiscal year  
13 and containing such recommendations for further  
14 congressional action to fulfill its mission as the  
15 Council considers appropriate.

16 “(3) RELEVANT CONGRESSIONAL COMMIT-  
17 TEES.—For purposes of the report required by para-  
18 graph (2), the relevant congressional committees are  
19 each of the following:

20 “(A) The Committee on Oversight and  
21 Government Reform and the Committee on  
22 Armed Services of the House of Representa-  
23 tives.

1           “B) The Committee on Homeland Security  
2           and Governmental Affairs and the Committee  
3           on Armed Services of the Senate.”.

4           (b) REFERENCES TO ADMINISTRATOR OF E-GOVERN-  
5           MENT AS FEDERAL CHIEF INFORMATION OFFICER.—

6           (1) REFERENCES.—Section 3602(b) of title 44,  
7           United States Code, is amended by adding at the  
8           end the following: “The Administrator may also be  
9           referred to as the Federal Chief Information Offi-  
10          cer.”.

11          (2) DEFINITIONS.—Section 3601(1) of such  
12          title is amended by inserting “or Federal Chief In-  
13          formation Officer” before “means”.

14       **TITLE II—EFFICIENCY IN ACQUI-**  
15       **SITION AND MANAGEMENT**  
16       **FOR CLOUD COMPUTING**

17       **SEC. 201. NEW CONTRACT TYPE AUTHORIZED FOR CLOUD**  
18               **COMPUTING SERVICES AND OTHER UTILITY-**  
19               **LIKE SERVICES.**

20       (a) FIXED UNIT PRICE CONTRACT AUTHORIZED.—

21           (1) IN GENERAL.—A type of contract to be  
22           known as a “fixed unit price contract” may be used  
23           by executive agencies on and after the date occur-  
24           ring 180 days after the date of the enactment of this

1 Act, in accordance with this section and the Federal  
2 Acquisition Regulation.

3 (2) USES FOR NEW CONTRACT TYPE.—A fixed  
4 unit price contract may be used when there is a need  
5 for a service other than labor that can be priced on  
6 a fixed-price basis, and for which the level of units  
7 needed fluctuates over time and may not be deter-  
8 mined up front. Such type of contract shall be avail-  
9 able for the acquisition of cloud computing services  
10 and other utility-like services.

11 (3) CHARACTERISTICS OF NEW CONTRACT  
12 TYPE.—A fixed unit price contract—

13 (A) shall be considered a variation of a  
14 fixed price contract;

15 (B) shall be awarded with prenegotiated  
16 fixed unit prices with quantities that vary based  
17 upon usage; and

18 (C) may include tiered pricing discounts or  
19 economic price adjustments.

20 (b) REVISION OF FAR.—Not later than 180 days  
21 after the date of the enactment of this Act, the Federal  
22 Acquisition Regulation shall be revised to implement this  
23 section. **【Note that chapter 39 of title 41 deals with types**  
24 **of contracts.】**

1 **SEC. 202. DEVELOPMENT OF BEST PRACTICES FOR SERV-**  
2 **ICE LEVEL AGREEMENTS AND ESTABLISH-**  
3 **MENT OF COMMON PLATFORMS.**

4 (a) BEST PRACTICES.—The Chief Information Offi-  
5 cers Council shall promote, develop, and implement the  
6 use of best acquisition practices in the area of cloud com-  
7 puting, including the development of model service level  
8 agreements, common cloud computing performance  
9 metrics, and common platforms.

10 (b) ADOPTION OF COMMON PLATFORM.—The Chief  
11 Information Officer of an agency listed in section 901(b)  
12 of title 31, United States Code, in consultation with the  
13 senior agency information security officer designated  
14 under section 3534(a)(3)(A) of title 44, United States  
15 Code, shall establish common platforms for the agency,  
16 to the maximum extent practical, to promote efficient im-  
17 plementation of cloud computing security and development  
18 and deployment of cloud computing applications.

19 **SEC. 203. GOVERNMENTWIDE SOFTWARE PURCHASING**  
20 **PROGRAM.**

21 (a) IN GENERAL.—The Administrator of General  
22 Services, in consultation with the Secretary of Defense,  
23 shall identify and develop a strategic sourcing initiative  
24 to enhance Governmentwide acquisition, shared use, and  
25 dissemination of software suitable for cloud computing, as  
26 well as compliance with end user license agreements.

1 (b) EXAMINATION OF CONSUMPTION METHODS.—In  
2 developing the initiative under subsection (a), the Admin-  
3 istrator shall examine the use of various consumption  
4 models that allow for pricing by actual usage or output,  
5 including fixed unit price contracts authorized under sec-  
6 tion 201.

7 (c) GOVERNMENTWIDE USER LICENSE AGREE-  
8 MENT.—The Administrator, in developing the initiative  
9 under subsection (a), shall allow for the purchase of a li-  
10 cense agreement that is available for use by all executive  
11 agencies as one user to the maximum extent practicable  
12 and as appropriate.

13 **SEC. 204. PILOT PROGRAM FOR SHARE-IN-SAVINGS CLOUD**  
14 **COMPUTING CONTRACTS.**

15 (a) ESTABLISHMENT OF PILOT PROGRAM.—【Note:  
16 more discussion and revision needed on this section.】The  
17 Administrator for Federal Procurement Policy shall estab-  
18 lish a pilot program under which an executive agency may  
19 enter into a fixed price, fixed savings contract that allows  
20 for 【equitable sharing of cost savings in return for private  
21 capital investments.】

22 (b) REQUIREMENTS OF PILOT PROGRAM.—Such  
23 pilot program shall—

24 (1) require a contract to be awarded competi-  
25 tively with at least two acceptable bids received;



1           (1) the expedient delivery of cloud computing  
2 capabilities;

3           (2) the development of specialized expertise in  
4 the acquisition of cloud computing services; and

5           (3) Governmentwide sharing of specialized  
6 cloud computing acquisition capability to augment  
7 any shortage in the information technology acquisi-  
8 tion workforce.

9           (b) DESIGNATION OF CLOUD BROKERS.—Not later  
10 than 1 year after the date of the enactment of this section,  
11 and every 3 years thereafter, the Administrator of the Of-  
12 fice of Electronic Government within the Office of Man-  
13 agement and Budget, in consultation with the Chief Infor-  
14 mation Officers Council, shall designate, redesignate, or  
15 withdraw the designation of a Governmentwide cloud  
16 broker for each type of commonly used cloud computing  
17 service to carry out the functions set forth in subsection  
18 (c).

19           (c) FUNCTIONS.—The functions of cloud brokers des-  
20 ignated pursuant to subsection (b) are as follows:

21           (1) BEST PRACTICES.—To promote, develop,  
22 and implement the use of best acquisition practices  
23 in the area of cloud computing, including the devel-  
24 opment of model service level agreements and com-  
25 mon cloud computing performance metrics.

1           (2) REINFORCEMENT OF COMMERCIAL ITEM  
2           PROCUREMENT.—To maximize the benefit of the  
3           streamlined commercial item acquisition process and  
4           competitive pricing available in the commercial mar-  
5           ket.

6           (3) ASSISTED ACQUISITIONS.—To assist all  
7           Government agencies in the expedient, strategic, and  
8           cost-effective acquisition of cloud computing tech-  
9           nology goods or services covered by such area of spe-  
10          cialized acquisition expertise by engaging in repeated  
11          and frequent acquisition of similar information tech-  
12          nology requirements.

13          (4) DEVELOPMENT OF RESELLER MODEL.—On  
14          an optional basis and as appropriate, to serve as a  
15          reseller of commonly used cloud computing services  
16          to Government customers by using preestablished  
17          contracts through competitive procedures.

18          (d) ASSISTED ACQUISITION DEFINED.—In this sec-  
19          tion, the term “assisted acquisition” means a type of  
20          interagency acquisition in which the parties enter into an  
21          interagency agreement pursuant to which—

22                 (1) the servicing agency performs acquisition  
23                 activities on the requesting agency’s behalf, such as  
24                 awarding, administering, or closing out a contract,

1 task order, delivery order, or blanket purchase  
2 agreement; and

3 (2) funding is provided through a franchise  
4 fund, sections 1535 and 1536 of title 31, or other  
5 available methods.

6 **SEC. 206. MODULAR CONTRACTING AND AGILE AP-  
7 PROACHES TO TECHNOLOGY ACQUISITIONS.**

8 (a) TRAINING FOR ACQUISITION WORKFORCE.— The  
9 Federal Acquisition Institute and the Defense Acquisition  
10 University, in consultation with the Administrator for  
11 Federal Procurement Policy, shall jointly develop training  
12 for the acquisition workforce on modular contracting and  
13 agile approaches.

14 (b) MATTERS COVERED.—For purposes of the train-  
15 ing under subsection (a)—

16 (1) modular contracting includes a method of  
17 awarding contracts in which requirements are bro-  
18 ken into smaller increments that are more manage-  
19 able for contractors and more affordable for agen-  
20 cies; and

21 (2) agile approaches include procedures or  
22 methods in technology acquisitions that facilitate  
23 continual testing of creative commercial ideas.

1 **SEC. 207. REQUIREMENT FOR OPERATIONAL ASSESSMENT**  
2 **OF LEGACY INFORMATION TECHNOLOGY IN-**  
3 **VESTMENTS.**

4 (a) FINDINGS.—Congress finds the following:

5 (1) Each year, over two thirds of the total in-  
6 formation technology (IT) budget of the Federal  
7 Government is spent on the operations and mainte-  
8 nance of existing legacy IT systems, commonly re-  
9 ferred to as steady state investments.

10 (2) Given the size and magnitude of these in-  
11 vestments, it is essential that Federal agencies effec-  
12 tively manage them to not only ensure they continue  
13 to meet agency needs but also reassess the available  
14 commercial technology to explore better ways to de-  
15 liver at a more economical and consistent manner.

16 (b) EXAMINATION OF CLOUD COMPUTING OPPORTU-  
17 NITIES.—The Director of the Office of Management and  
18 Budget shall require in the annual information technology  
19 capital planning guidance of the Office of Management  
20 and Budget that the Chief Information Officer of an agen-  
21 cy listed in section 901(b) of title 31, United States Code,  
22 examine the IT budget amounts spent on the operations  
23 and maintenance of existing legacy IT systems and certify  
24 that adequate consideration and application of cloud com-  
25 puting solutions have been conducted.

1                   **TITLE III—ADDITIONAL**  
2                   **PROVISIONS**

3 **SEC. 301. DEFINITIONS.**

4       In this Act—

5               (1) CHIEF INFORMATION OFFICERS COUNCIL.—

6       The term “Chief Information Officers Council”  
7       means the Chief Information Officers Council estab-  
8       lished by section 3603(a) of title 44, United States  
9       Code.

10              (2) CHIEF INFORMATION OFFICER.—The term

11       “Chief Information Officer” means a Chief Informa-  
12       tion Officer (as designated under section 3506(a)(2)  
13       of title 44, United States Code) of an agency listed  
14       in section 901(b) of title 31, United States Code.

15              (3) CLOUD COMPUTING.—The term “cloud

16       computing” means a model for enabling convenient,  
17       on-demand network access to a shared pool of  
18       configurable computing resources (such as networks,  
19       servers, storage, applications, and services) that can  
20       be rapidly provisioned and released with minimal  
21       management effort or service provider interaction, as  
22       further defined or modified by the National Institute  
23       of Standards and Technology.

1 (4) CLOUD SERVICES PROVIDERS.—The term  
2 “cloud services providers” means entities that pro-  
3 vide cloud computing services.

4 (5) CLOUD BROKER.—The term “cloud broker”  
5 means a third-party Government organization that is  
6 designated pursuant to section 205(b) and that acts  
7 as an intermediary between a Government buyer of  
8 a cloud computing service and a seller of that serv-  
9 ice.

10 (6) EXECUTIVE AGENCY.—The term “executive  
11 agency” has the meaning provided in section 133 of  
12 title 41, United States Code..

13 (7) FEDERAL RISK AND AUTHORIZATION MAN-  
14 AGEMENT PROGRAM.—The “Federal Risk and Au-  
15 thorization Management Program” or “FedRAMP”  
16 is a Governmentwide program that provides a stand-  
17 ardized approach to security assessment, operational  
18 authorization, and continuous monitoring for cloud  
19 computing products and services.

20 (8) ATO.—The term “ATO” means authority  
21 to operate.

22 **SEC. 302. INTERAGENCY WORKING GROUP FOR GLOBAL**  
23 **CLOUD COMPUTING STANDARDS.**

24 The Administrator of the Office of Electronic Govern-  
25 ment, in collaboration with the National Institute of

1 Standards and Technology, shall establish an interagency  
2 working group to engage with standards-making bodies of  
3 the European Union and Latin America regarding global  
4 cloud computing standards for interoperability, privacy,  
5 and security.

6 **SEC. 303. ACCESS TO CLOUD COMPUTING RECORDS FOR**  
7 **LAW ENFORCEMENT.**

8 (a) GUIDANCE.—The Director of the Office of Man-  
9 agement and Budget, not later than 180 days after the  
10 date of the enactment of this Act, shall issue guidance to  
11 executive agencies requiring contract clauses for all acqui-  
12 sitions of an agency involving cloud computing services to  
13 ensure that cloud services providers grant Inspectors Gen-  
14 eral prompt and full access to records and information  
15 systems of the contractor concerned and any subcon-  
16 tractor of the contractor for the performance of audits and  
17 investigations related to the agency, including audits and  
18 investigations related to the integrity and security of agen-  
19 cy information systems and technology.

20 (b) STANDARD CONTRACT CLAUSE.—The Adminis-  
21 trator for Federal Procurement Policy, in consultation  
22 with the Council of the Inspectors General on Integrity  
23 and Efficiency, shall develop a standard contract clause  
24 to assist executive agencies in complying with the require-  
25 ments under subsection (a).

1 **SEC. 304. CHIEF DATA OFFICER.**

2       **【**To be drafted: establish a new officer across the 24  
3 CFO Act agencies - the new office of a “Chief Data Offi-  
4 cer”. This new office would help the agency make better  
5 use of its data. It would reduce the silos around govern-  
6 ment data. It would be tasked to create department-wide  
7 standards for data collection and adopt new technology in  
8 which to do that. It would also establish a Data Advisory  
9 Council.**】**