

[Discussion Draft]

AUGUST 8, 2014

113TH CONGRESS
2D 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.

IN THE HOUSE OF REPRESENTATIVES

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

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:

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

TITLE I—ADOPTION OF CLOUD COMPUTING BY THE FEDERAL GOVERNMENT

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

TITLE II—EFFICIENCY IN ACQUISITION AND MANAGEMENT FOR CLOUD COMPUTING

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

TITLE III—ADDITIONAL PROVISIONS

- 17 Sec. 301. Definitions.
- 18 Sec. 302. Interagency working group for global cloud computing standards.
- 19 Sec. 303. Access to cloud computing records for law enforcement.
- 20 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 (2) require contracting parties, before entering
2 into a contract, to set a minimum guaranteed sav-
3 ings for each year regardless of the actual outcome;

4 (3) require contracting parties, before entering
5 into a contract, to set a liquidated termination liabil-
6 ity for each year based on unamortized capital in-
7 vestment in case of Government-initiated termi-
8 nation of the contract, except that, in setting the liq-
9 uidated termination liability, no expectancy damage
10 or lost profit shall be recognized; and

11 (4) allow contract duration of up to ten years
12 to provide sufficient time to recoup the initial invest-
13 ments.

14 (c) LIMITATION.—The number of contracts that may
15 be entered into Governmentwide under the pilot program
16 may not exceed 25.

17 (d) TERMINATION.—The pilot program established
18 under this section shall be terminated on the date occur-
19 ring 5 years after the date of the enactment of this Act.

20 **SEC. 205. DESIGNATION OF GOVERNMENTWIDE CLOUD**
21 **BROKERS.**

22 (a) PURPOSE.—The purpose of this section is to de-
23 velop specialized cloud brokers within the Federal Govern-
24 ment to promote—

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.**】**