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114TH CONGRESS
2^D SESSION

H. R. 5312

[Report No. 114-620]

To amend the High-Performance Computing Act of 1991 to authorize activities for support of networking and information technology research, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 24, 2016

Mr. LAHOOD (for himself, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. SMITH of Texas, Mr. LIPINSKI, Mr. LUCAS, Mrs. COMSTOCK, Mr. MOOLENAAR, and Mr. ABRAHAM) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

JUNE 13, 2016

Additional sponsor: Mr. RODNEY DAVIS of Illinois

JUNE 13, 2016

Committed to the Committee of the Whole House on the State of the Union
and ordered to be printed

A BILL

To amend the High-Performance Computing Act of 1991 to authorize activities for support of networking and information technology research, and for other purposes.

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 “Networking and Infor-

5 mation Technology Research and Development Moderniza-

6 tion Act of 2016”.

7 **SEC. 2. PURPOSES.**

8 Section 3 of the High-Performance Computing Act

9 of 1991 (15 U.S.C. 5502) is amended—

10 (1) in the matter preceding paragraph (1), by

11 striking “high-performance computing” and insert-

12 ing “networking and information technology”;

13 (2) in paragraph (1)—

14 (A) in the matter preceding subparagraph

15 (A), by striking “expanding Federal support for

16 research, development, and application of high-

17 performance computing” and inserting “sup-

18 porting Federal research, development, and ap-

19 plication of networking and information tech-

20 nology”;

21 (B) in subparagraph (A), by striking

22 “high-performance computing” both places it

23 appears and inserting “networking and infor-

24 mation technology”;

1 (C) by striking subparagraphs (C) and
2 (D);

3 (D) by inserting after subparagraph (B)
4 the following:

5 “(C) stimulate research on and promote
6 more rapid development of high-end computing
7 systems software and applications software;”;

8 (E) by redesignating subparagraphs (E)
9 through (H) as subparagraphs (D) through
10 (G), respectively;

11 (F) in subparagraph (D), as so redesign-
12 ated, by inserting “high-end” after “the devel-
13 opment of”;

14 (G) in subparagraphs (E) and (F), as so
15 redesignated, by striking “high-performance
16 computing” each place it appears and inserting
17 “networking and information technology”; and

18 (H) in subparagraph (G), as so redesign-
19 ated, by striking “high-performance” and in-
20 serting “high-end”; and

21 (3) in paragraph (2)—

22 (A) by striking “high-performance com-
23 puting and” and inserting “networking and in-
24 formation technology and”; and

1 (B) by striking “high-performance com-
2 puting network” and inserting “networking and
3 information technology”.

4 **SEC. 3. DEFINITIONS.**

5 Section 4 of the High-Performance Computing Act
6 of 1991 (15 U.S.C. 5503) is amended—

7 (1) by striking paragraphs (3) and (5);

8 (2) by redesignating paragraphs (1), (2), (4),
9 (6), and (7) as paragraphs (2), (3), (5), (7), and
10 (8), respectively;

11 (3) by inserting before paragraph (2), as so re-
12 designated, the following new paragraph:

13 “(1) ‘cyber-physical systems’ means physical or
14 engineered systems whose networking and informa-
15 tion technology functions and physical elements are
16 deeply integrated and are actively connected to the
17 physical world through sensors, actuators, or other
18 means to perform monitoring and control func-
19 tions;”;

20 (4) in paragraph (3), as so redesignated, by
21 striking “high-performance computing” and insert-
22 ing “networking and information technology”;

23 (5) by inserting after paragraph (3), as so re-
24 designated, the following new paragraph:

1 “(4) ‘high-end computing’ means the most ad-
2 vanced and capable computing systems, including
3 their hardware, storage, networking and software,
4 encompassing both massive computational capability
5 and large-scale data analytics;”;

6 (6) by inserting after paragraph (5), as so re-
7 designated, the following new paragraph:

8 “(6) ‘networking and information technology’
9 means high-end computing, communications, and in-
10 formation technologies, high-capacity and high-speed
11 networks, special purpose and experimental systems,
12 high-end computing systems software and applica-
13 tions software, and the management of large data
14 sets;”;

15 (7) in paragraph (7), as so redesignated, by
16 striking “National High-Performance Computing
17 Program” and inserting “Networking and Informa-
18 tion Technology Research and Development Pro-
19 gram”.

20 **SEC. 4. TITLE I HEADING.**

21 The heading of title I of such Act (15 U.S.C. 5511
22 et seq.) is amended by striking “**HIGH-PERFORM-**
23 **ANCE COMPUTING**” and inserting “**NET-**
24 **WORKING AND INFORMATION TECH-**
25 **NOLOGY**”.

1 **SEC. 5. NETWORKING AND INFORMATION TECHNOLOGY**
2 **RESEARCH AND DEVELOPMENT PROGRAM.**

3 Section 101 of the High-Performance Computing Act
4 of 1991 (15 U.S.C. 5511) is amended—

5 (1) in the section heading, by striking “**NA-**
6 **TIONAL HIGH-PERFORMANCE COMPUTING**
7 **PROGRAM**” and inserting “**NETWORKING AND**
8 **INFORMATION TECHNOLOGY RESEARCH AND**
9 **DEVELOPMENT PROGRAM**”;

10 (2) in subsection (a)—

11 (A) in the subsection heading, by striking
12 “**NATIONAL HIGH-PERFORMANCE COMPUTING**
13 **PROGRAM**” and inserting “**NETWORKING AND**
14 **INFORMATION TECHNOLOGY RESEARCH AND**
15 **DEVELOPMENT**”;

16 (B) in paragraph (1)—

17 (i) in the matter preceding subpara-
18 graph (A), by striking “**National High-Per-**
19 **formance Computing Program**” and insert-
20 ing “**Networking and Information Tech-**
21 **nology Research and Development Pro-**
22 **gram**”;

23 (ii) in subparagraph (A), by striking
24 “**high-performance computing, including**
25 **networking**” and inserting “**networking**
26 **and information technology**”;

1 (iii) in subparagraphs (B) and (G), by
2 striking “high-performance” each place it
3 appears and inserting “high-end”;

4 (iv) in subparagraph (C), by striking
5 “high-performance computing and net-
6 working” and inserting “high-end com-
7 puting, distributed, and networking”;

8 (v) by amending subparagraph (D) to
9 read as follows:

10 “(D) provide for efforts to increase software se-
11 curity and reliability;”;

12 (vi) in subparagraph (H)—

13 (I) by inserting “support and
14 guidance” after “provide”; and

15 (II) by striking “and” after the
16 semicolon;

17 (vii) in subparagraph (I)—

18 (I) by striking “improving the se-
19 curity” and inserting “improving the
20 security, reliability, and resilience”;
21 and

22 (II) by striking the period at the
23 end and inserting a semicolon; and

24 (viii) by adding at the end the fol-
25 lowing new subparagraphs:

1 “(J) provide for increased understanding of the
2 scientific principles of cyber-physical systems and
3 improve the methods available for the design, devel-
4 opment, and operation of cyber-physical systems
5 that are characterized by high reliability, safety, and
6 security;

7 “(K) provide for research and development on
8 human-computer interactions, visualization, and big
9 data;

10 “(L) provide for research and development on
11 the enhancement of cybersecurity; and

12 “(M) provide for a research framework to lever-
13 age cyber-physical systems, high capacity and high
14 speed communication networks, and large-scale data
15 analytics to integrate city-scale information tech-
16 nology and physical infrastructures.”;

17 (C) in paragraph (2)—

18 (i) by amending subparagraph (A) to
19 read as follows:

20 “(A) establish the goals and priorities for Fed-
21 eral networking and information technology re-
22 search, development, education, and other activi-
23 ties;”;

24 (ii) by amending subparagraph (C) to
25 read as follows:

1 “(C) provide for interagency coordination of
2 Federal networking and information technology re-
3 search, development, education, and other activities
4 undertaken pursuant to the Program;”;

5 (iii) by amending subparagraph (E) to
6 read as follows:

7 “(E) encourage and monitor the efforts of the
8 agencies participating in the Program to allocate the
9 level of resources and management attention nec-
10 essary to ensure that the strategic plan under sub-
11 section (e) is developed and executed effectively and
12 that the objectives of the Program are met; and”;
13 and

14 (iv) in subparagraph (F), by striking
15 “high-performance” and inserting “high-
16 end”;

17 (D) in paragraph (3)—

18 (i) by redesignating subparagraphs
19 (B), (C), (D), and (E) as subparagraphs
20 (E), (F), (G), and (J), respectively;

21 (ii) by inserting after subparagraph
22 (A) the following new subparagraphs:

23 “(B) provide, as appropriate, a list of the senior
24 steering groups and strategic plans that are planned
25 or underway as addressed under section 104;

1 “(C) provide a description of workshops and
2 other activities conducted under section 104, includ-
3 ing participants and findings;

4 “(D) provide a detailed description of the na-
5 ture and scope of research infrastructure designated
6 as such under the Program;”;

7 (iii) in subparagraph (E), as so redес-
8 igned—

9 (I) by redesignating clauses (vii)
10 through (xi) as clauses (viii) through
11 (xii), respectively; and

12 (II) by inserting after clause (vi)
13 the following:

14 “(vii) the Department of Homeland Secu-
15 rity;”;

16 (iv) in subparagraph (F), as so redес-
17 igned—

18 (I) by striking “is submitted,”
19 and inserting “is submitted, the levels
20 for the previous fiscal year;” and

21 (II) by striking “each Program
22 Component Area;” and inserting
23 “each Program Component Area and
24 research area supported in accordance
25 with section 103;”;

1 (v) by amending subparagraph (G), as
2 so redesignated, to read as follows:

3 “(G) describe the levels of Federal funding for
4 each agency and department participating in the
5 Program, and for each Program Component Area,
6 for the fiscal year during which such report is sub-
7 mitted, the levels for the previous fiscal year, and
8 the levels proposed for the fiscal year with respect
9 to which the budget submission applies;” and

10 (vi) by inserting after subparagraph
11 (G), as so redesignated, the following:

12 “(H) include a description of how the objectives
13 for each Program Component Area, and the objec-
14 tives for activities that involve multiple Program
15 Component Areas, relate to the objectives of the
16 Program identified in the strategic plan required
17 under subsection (e);

18 “(I) include—

19 “(i) a description of the funding required
20 by the National Coordination Office to perform
21 the functions specified under section 102(b) for
22 the current fiscal year;

23 “(ii) a description of the estimated funding
24 required by such Office to perform the func-

1 tions specified under section 102(b) for the next
2 fiscal year; and

3 “(iii) the amount of funding provided for
4 such Office for the current fiscal year by each
5 agency participating in the Program; and”;

6 (3) in subsection (b)—

7 (A) in paragraph (1), in the matter pre-
8 ceding subparagraph (A)—

9 (i) by striking “high-performance
10 computing” both places it appears and in-
11 serting “networking and information tech-
12 nology”; and

13 (ii) after the first sentence, by insert-
14 ing the following: “Each chair of the advi-
15 sory committee shall meet the qualifica-
16 tions of committee membership and may
17 be a member of the President’s Council of
18 Advisors on Science and Technology.”;

19 (B) in paragraph (1)(D), by striking
20 “high-performance computing, networking tech-
21 nology, and related software” and inserting
22 “networking and information technology”; and

23 (C) in paragraph (2)—

24 (i) in the second sentence, by striking
25 “2” and inserting “3”;

1 (ii) by striking “Committee on Science
2 and Technology” and inserting “Com-
3 mittee on Science, Space, and Tech-
4 nology”; and

5 (iii) by striking “The first report shall
6 be due within 1 year after the date of en-
7 actment of the America COMPETES
8 Act.”;

9 (4) in subsection (c)(1)(A), by striking “high-
10 performance computing” and inserting “networking
11 and information technology”; and

12 (5) by adding at the end the following new sub-
13 sections:

14 “(d) PERIODIC REVIEWS.—The agencies identified in
15 subsection (a)(3)(B) shall—

16 “(1) periodically assess and update, as appro-
17 priate, the contents, scope, and funding levels of the
18 Program Component Areas and work through the
19 National Science and Technology Council and with
20 the assistance of the National Coordination Office
21 described under section 102 to restructure the Pro-
22 gram when warranted, taking into consideration any
23 relevant recommendations of the advisory committee
24 established under subsection (b); and

1 “(2) working through the National Science and
2 Technology Council and with the assistance of the
3 National Coordination Office described under section
4 102, ensure that the Program includes large-scale,
5 long-term, interdisciplinary research and develop-
6 ment activities, including activities described in sec-
7 tion 103.

8 “(e) STRATEGIC PLAN.—

9 “(1) IN GENERAL.—The agencies identified in
10 subsection (a)(3)(B), working through the National
11 Science and Technology Council and with the assist-
12 ance of the National Coordination Office described
13 under section 102, shall develop, within 12 months
14 after the date of enactment of the Networking and
15 Information Technology Research and Development
16 Modernization Act of 2016, and update every five
17 years thereafter, a five-year strategic plan for the
18 Program.

19 “(2) CONTENTS.—The strategic plan shall
20 specify near-term and long-term cross-cutting objec-
21 tives for the Program, the anticipated time frame
22 for achieving the near-term objectives, the metrics to
23 be used for assessing progress toward the objectives,
24 and how the Program will—

1 “(A) address long-term challenges of na-
2 tional importance for which solutions require
3 large-scale, long-term, interdisciplinary research
4 and development;

5 “(B) encourage and support mechanisms
6 for interdisciplinary research and development
7 in networking and information technology and
8 for Grand Challenges, including through col-
9 laborations across agencies, across Program
10 Component Areas, with industry, with Federal
11 laboratories (as defined in section 4 of the Ste-
12 venson-Wylder Technology Innovation Act of
13 1980 (15 U.S.C. 3703)), and with international
14 organizations;

15 “(C) foster the transfer of research and
16 development results into new technologies and
17 applications in the national interest, including
18 through cooperation and collaborations with
19 networking and information technology re-
20 search, development, and technology transition
21 initiatives supported by the States;

22 “(D) provide for cyberinfrastructure needs,
23 as appropriate, across federally funded large-
24 scale research facilities that produce or will

1 produce large amounts of data that will need to
2 be stored, curated, and made publicly available;

3 “(E) strengthen all levels of networking
4 and information technology education and
5 training programs to ensure an adequate, well-
6 trained workforce; and

7 “(F) attract individuals identified in sec-
8 tions 33 and 34 of the Science and Engineering
9 Equal Opportunities Act (42 U.S.C. 1885a and
10 1885b) to networking and information tech-
11 nology fields.

12 “(3) RECOMMENDATIONS.—The entities in-
13 volved in developing the strategic plan under para-
14 graph (1) shall take into consideration the rec-
15 ommendations—

16 “(A) of the advisory committee established
17 under subsection (b);

18 “(B) of the Committee on Science and rel-
19 evant subcommittees of the National Science
20 and Technology Council; and

21 “(C) of the stakeholders whose input was
22 solicited by the National Coordination Office, as
23 required under section 102(b)(3).

24 “(4) REPORT TO CONGRESS.—The Director of
25 the National Coordination Office shall transmit the

1 strategic plan required under paragraph (1) to the
2 advisory committee, the Committee on Science,
3 Space, and Technology of the House of Representa-
4 tives, and the Committee on Commerce, Science, and
5 Transportation of the Senate.”.

6 **SEC. 6. NATIONAL COORDINATION OFFICE.**

7 Section 102 of such Act (15 U.S.C. 5512) is amended
8 to read as follows:

9 **“SEC. 102. NATIONAL COORDINATION OFFICE.**

10 “(a) OFFICE.—The Director shall maintain a Na-
11 tional Coordination Office with a Director and full-time
12 staff.

13 “(b) FUNCTIONS.—The National Coordination Office
14 shall—

15 “(1) provide technical and administrative sup-
16 port to—

17 “(A) the agencies participating in planning
18 and implementing the Program, including such
19 support as needed in the development of the
20 strategic plan under section 101(e); and

21 “(B) the advisory committee established
22 under section 101(b), as appropriate;

23 “(2) serve as the primary point of contact on
24 Federal networking and information technology ac-
25 tivities for government organizations, academia, in-

1 industry, professional societies, State computing and
2 networking technology programs, interested citizen
3 groups, and others to exchange technical and pro-
4 grammatic information;

5 “(3) solicit input and recommendations from a
6 wide range of stakeholders during the development
7 of each strategic plan required under section 101(e)
8 and the scope of the Program Component Areas
9 through the convening of at least one workshop with
10 invitees from academia, industry, Federal labora-
11 tories, and other relevant organizations and institu-
12 tions;

13 “(4) conduct and increase outreach, including
14 to academia, industry, other relevant organizations
15 and institutions, and the public, in order to increase
16 awareness of the Program and the benefits of the
17 Program and to increase potential opportunities for
18 collaboration between agencies participating in the
19 Program and the private sector; and

20 “(5) promote access to and early application of
21 the technologies, innovations, and expertise derived
22 from Program activities to agency missions and sys-
23 tems across the Federal Government and to United
24 States industry.

25 “(c) SOURCE OF FUNDING.—

1 “(1) IN GENERAL.—The operation of the Na-
2 tional Coordination Office shall be supported by
3 funds from each agency participating in the Pro-
4 gram.

5 “(2) SPECIFICATIONS.—The portion of the total
6 budget of such Office that is provided by each agen-
7 cy for each fiscal year shall be in the same propor-
8 tion as each such agency’s share of the total budget
9 for the Program for the previous fiscal year, as spec-
10 ified in the report required under section 101(a)(3).

11 “(3) WAIVER.—As appropriate, the Director
12 may consider and approve a reduction or waiver of
13 an agency contribution requirement under paragraph
14 (2).”.

15 **SEC. 7. NEXT GENERATION INTERNET.**

16 Section 103 of such Act (15 U.S.C. 5513) is repealed.

17 **SEC. 8. GRAND CHALLENGES IN AREAS OF NATIONAL IM-**
18 **PORTANCE.**

19 Title I of such Act (15 U.S.C. 5511 et seq.) is amend-
20 ed by adding at the end the following new section:

21 **“SEC. 103. GRAND CHALLENGES IN AREAS OF NATIONAL**
22 **IMPORTANCE.**

23 “(a) IN GENERAL.—The Program shall encourage
24 agencies identified in section 101(a)(3)(E) to support
25 large-scale, long-term, interdisciplinary research and de-

1 velopment activities in networking and information tech-
2 nology directed toward agency mission areas that have the
3 potential for significant contributions to national economic
4 competitiveness and for other significant societal benefits.
5 Such activities, ranging from basic research to the dem-
6 onstration of technical solutions, shall be designed to ad-
7 vance the development of fundamental discoveries. The ad-
8 visory committee established under section 101(b) shall
9 make recommendations to the Program for candidate re-
10 search and development areas for support under this sec-
11 tion.

12 “(b) CHARACTERISTICS.—

13 “(1) IN GENERAL.—Research and development
14 activities under this section shall—

15 “(A) include projects selected on the basis
16 of applications for support through a competi-
17 tive, merit-based process;

18 “(B) involve collaborations among re-
19 searchers in institutions of higher education
20 and industry, and may involve nonprofit re-
21 search institutions and Federal laboratories, as
22 appropriate;

23 “(C) leverage Federal investments through
24 collaboration with related State and private sec-
25 tor initiatives; and

1 “(D) include a plan for fostering the trans-
2 fer of research discoveries and the results of
3 technology demonstration activities, including
4 from institutions of higher education and Fed-
5 eral laboratories, to industry for commercial de-
6 velopment.

7 “(2) COST-SHARING.—In selecting applications
8 for support, the agencies may give special consider-
9 ation to projects that include cost sharing from non-
10 Federal sources.

11 “(3) AGENCY COLLABORATION.—If two or more
12 agencies identified in section 101(a)(3)(E), or other
13 appropriate agencies, are working on large-scale net-
14 working and information technology research and
15 development activities in the same area of national
16 importance, then such agencies shall strive to col-
17 laborate through joint solicitation and selection of
18 applications for support and subsequent funding of
19 projects.

20 “(4) INTERDISCIPLINARY RESEARCH CEN-
21 TERS.—Research and development activities under
22 this section may be supported through interdiscipli-
23 nary research centers that are organized to inves-
24 tigate basic research questions and carry out tech-
25 nology demonstration activities in areas described in

1 subsection (a). Research may be carried out through
2 existing interdisciplinary centers.”.

3 **SEC. 9. WORKSHOPS AND SENIOR STEERING GROUPS.**

4 Title I of such Act (15 U.S.C. 5511 et seq.) is amend-
5 ed further by adding after section 103, as added by section
6 8 of this Act, the following new section:

7 **“SEC. 104. ADDRESSING EMERGING ISSUES.**

8 “(a) IN GENERAL.—In order to address emerging
9 issues, the Director of the National Coordination Office
10 may conduct workshops and other activities on research
11 areas of emerging importance, which may include the
12 grand challenge areas identified under section 103, with
13 participants from institutions of higher education, Federal
14 laboratories, and industry, in order to help guide Program
15 investments and strategic planning in those areas, includ-
16 ing areas identified in subsection (b).

17 “(b) FOCUS AREAS.—In selecting research areas
18 under subsection (a), the Director of the National Coordi-
19 nation Office shall consider the following topics:

20 “(1) Data analytics to identify the current and
21 future state of performing inference, prediction, and
22 other forms of analysis of data, and methods for the
23 collection, management, preservation, and use of
24 data.

1 “(2) The current and future state of the
2 science, engineering, policy, and social under-
3 standing of privacy protection.

4 “(3) The current and future state of funda-
5 mental research on the systems and science of the
6 interplay of people and computing as well as the co-
7 ordination and support being undertaken in areas
8 such as social computing, human-robot interaction,
9 privacy, and health-related aspects in human-com-
10 puter systems.

11 “(c) FUNCTIONS.—The participants in the workshops
12 shall, as appropriate—

13 “(1) develop options for models for research
14 and development partnerships among institutions of
15 higher education, Federal laboratories, and industry,
16 including mechanisms for the support of research
17 and development carried out under these partner-
18 ships;

19 “(2) develop options for research and develop-
20 ment for the specific issue areas that would be ad-
21 dressed through such partnerships;

22 “(3) propose guidelines for assigning intellec-
23 tual property rights and for the transfer of research
24 results to the private sector; and

1 “(4) make recommendations for how Federal
2 agencies participating in the Program can help sup-
3 port research and development partnerships for the
4 specific issue areas.

5 “(d) PARTICIPANTS.—The Director of the National
6 Coordination Office shall ensure that the participants in
7 the workshops—

8 “(1) are individuals with knowledge and exper-
9 tise in the specific issue areas; and

10 “(2) represent a broad mix of relevant stake-
11 holders, including academic and industry researchers
12 and, as appropriate, Federal agencies.

13 “(e) SENIOR STEERING GROUPS AND STRATEGIC
14 PLANS.—As appropriate, the Director of the National Co-
15 ordination Office shall establish senior steering groups and
16 develop focused strategic plans to coordinate and guide ac-
17 tivities under the research areas identified under this sec-
18 tion, taking into consideration the findings and rec-
19 ommendations from any workshops carried out on those
20 research topics.”.

21 **SEC. 10. NATIONAL SCIENCE FOUNDATION ACTIVITIES.**

22 Section 201 of such Act (15 U.S.C. 5521) is amend-
23 ed—

24 (1) in subsection (a)—

25 (A) in paragraph (1)—

1 (i) by inserting “high-end” after “Na-
2 tional Science Foundation shall provide”;
3 and

4 (ii) by striking “high-performance
5 computing” and all that follows through
6 “networking;” and inserting “networking
7 and information technology; and”;

8 (B) by striking paragraphs (2) through
9 (4); and

10 (C) by inserting after paragraph (1) the
11 following new paragraph:

12 “(2) the National Science Foundation shall use
13 its existing programs, in collaboration with other
14 agencies, as appropriate, to improve the teaching
15 and learning of networking and information tech-
16 nology at all levels of education and to increase par-
17 ticipation in networking and information technology
18 fields, including by individuals identified in sections
19 33 and 34 of the Science and Engineering Equal
20 Opportunities Act (42 U.S.C. 1885a and 1885b).”;
21 and

22 (2) by striking subsection (b).

1 **SEC. 11. NATIONAL AERONAUTICS AND SPACE ADMINIS-**
2 **TRATION ACTIVITIES.**

3 Section 202 of such Act (15 U.S.C. 5522) is amend-
4 ed—

5 (1) by striking subsection (b);

6 (2) by striking “(a) GENERAL RESPONSIBIL-
7 ITIES.—”; and

8 (3) by striking “high-performance computing”
9 and inserting “networking and information tech-
10 nology”.

11 **SEC. 12. DEPARTMENT OF ENERGY ACTIVITIES.**

12 Section 203 of such Act (15 U.S.C. 5523) is amend-
13 ed—

14 (1) by striking subsection (b);

15 (2) by striking “(a) GENERAL RESPONSIBIL-
16 ITIES.—”;

17 (3) in paragraph (1), by striking “high-per-
18 formance computing and networking” and inserting
19 “networking and information technology”; and

20 (4) in paragraph (2)(A), by striking “high-per-
21 formance” and inserting “high-end”.

22 **SEC. 13. DEPARTMENT OF COMMERCE ACTIVITIES.**

23 Section 204 of such Act (15 U.S.C. 5524) is amend-
24 ed—

25 (1) in subsection (a)(1)—

1 (A) in subparagraph (A), by striking
2 “high-performance computing systems and net-
3 works” and inserting “networking and informa-
4 tion technology systems and capabilities”;

5 (B) in subparagraph (B), by striking
6 “interoperability of high-performance com-
7 puting systems in networks and for common
8 user interfaces to systems” and inserting
9 “interoperability and usability of networking
10 and information technology systems”; and

11 (C) in subparagraph (C), by striking
12 “high-performance computing” and inserting
13 “networking and information technology”;

14 (2) in subsection (b)—

15 (A) in the heading, by striking “HIGH-
16 PERFORMANCE COMPUTING AND NETWORK”
17 and inserting “NETWORKING AND INFORMA-
18 TION TECHNOLOGY”;

19 (B) by striking “Pursuant to the Com-
20 puter Security Act of 1987 (Public Law 100-
21 235; 101 Stat. 1724), the” and inserting
22 “The”; and

23 (C) by striking “sensitive”; and

24 (3) by striking subsections (c) and (d).

1 **SEC. 14. ENVIRONMENTAL PROTECTION AGENCY ACTIVITIES.**
2 **TIES.**

3 Section 205 of such Act (15 U.S.C. 5525) is amend-
4 ed—

5 (1) by striking subsection (b);

6 (2) by striking “(a) GENERAL RESPONSIBILITIES.—”;

8 (3) by striking “basic and applied”;

9 (4) by striking “computational” and inserting
10 “networking and information technology”; and

11 (5) by inserting “All software and code, along
12 with any subsequent updates to the software and
13 code, developed by the Environmental Protection
14 Agency under the Program and used in conducting
15 scientific research shall be made publically available.

16 In cases where the underlying software or code is
17 proprietary or contains confidential business infor-
18 mation, the Agency shall disclose only the name and
19 vendor of the software and code used for all propri-
20 etary or confidential business information portions
21 of the software or code. The Environmental Protec-
22 tion Agency shall ensure that the research conducted
23 under the Program does not duplicate the scope or
24 aims of similar research and initiatives at other Fed-
25 eral agencies. No Environmental Protection Agency
26 funds shall be used towards research that duplicates

1 the scope or aims of similar research and initiatives
2 at other Federal agencies.” after “dynamics mod-
3 els.”.

4 **SEC. 15. ROLE OF THE DEPARTMENT OF EDUCATION.**

5 Section 206 of such Act (15 U.S.C. 5526) is amend-
6 ed—

7 (1) by striking subsection (b);

8 (2) by striking “(a) GENERAL RESPONSIBIL-
9 ITIES.—”; and

10 (3) by striking “to conduct basic” and all that
11 follows through “software capabilities” and inserting
12 “to support programs and activities to improve the
13 teaching and learning of networking and information
14 technology fields and contribute to the development
15 of a skilled networking and information technology
16 workforce”.

17 **SEC. 16. MISCELLANEOUS PROVISIONS.**

18 Section 207(b) of such Act (15 U.S.C. 5527(b)) is
19 amended by striking “high-performance computing” and
20 inserting “networking and information technology”.

21 **SEC. 17. REPEAL.**

22 Section 208 of such Act (15 U.S.C. 5528) is repealed.

1 **SEC. 18. ADDITIONAL REPEAL.**

2 Section 4 of the Department of Energy High-End
3 Computing Revitalization Act of 2004 (15 U.S.C. 5543)
4 is repealed.

Union Calendar No. 482

114TH CONGRESS
2^D SESSION

H. R. 5312

[Report No. 114-620]

A BILL

To amend the High-Performance Computing Act of 1991 to authorize activities for support of net-working and information technology research, and for other purposes.

JUNE 13, 2016

Committed to the Committee of the Whole House on the State of the Union and ordered to be printed