117TH CONGRESS 1ST SESSION

S. 2902

To modernize Federal information security management, and for other purposes.

IN THE SENATE OF THE UNITED STATES

September 29, 2021

Mr. Peters (for himself and Mr. Portman) introduced the following bill; which was read twice and referred to the Committee on Homeland Security and Governmental Affairs

A BILL

To modernize Federal information security management, 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 "Federal Information
- 5 Security Modernization Act of 2021".
- 6 SEC. 2. TABLE OF CONTENTS.
- 7 The table of contents for this Act is as follows:
 - Sec. 1. Short title.
 - Sec. 2. Table of contents.
 - Sec. 3. Definitions.

- Sec. 101. Title 44 amendments.
- Sec. 102. Amendments to subtitle III of title 40.
- Sec. 103. Actions to enhance Federal incident response.
- Sec. 104. Additional guidance to agencies on FISMA updates.
- Sec. 105. Agency requirements to notify entities impacted by incidents.

TITLE II—IMPROVING FEDERAL CYBERSECURITY

- Sec. 201. Evaluation of effectiveness of standards.
- Sec. 202. Mobile security standards.
- Sec. 203. Quantitative cybersecurity metrics.
- Sec. 204. Data and logging retention for incident response.
- Sec. 205. CISA agency advisors.
- Sec. 206. Federal penetration testing policy.
- Sec. 207. Ongoing threat hunting program.
- Sec. 208. Codifying vulnerability disclosure programs.
- Sec. 209. Implementing presumption of compromise and zero trust architectures.
- Sec. 210. Automation reports.
- Sec. 211. Extension of Federal Acquisition Security Council.

TITLE III—PILOT PROGRAMS TO ENHANCE FEDERAL CYBERSECURITY

- Sec. 301. Continuous independent FISMA evaluation pilot.
- Sec. 302. Active cyber defensive pilot.
- Sec. 303. Security operations center as a service pilot.

1 SEC. 3. DEFINITIONS.

- 2 In this Act, unless otherwise specified:
- 3 (1) Additional cybersecurity proce-
- 4 Dure.—The term "additional cybersecurity proce-
- 5 dure" has the meaning given the term in section
- 6 3552(b) of title 44, United States Code, as amended
- 7 by this Act.
- 8 (2) AGENCY.—The term "agency" has the
- 9 meaning given the term in section 3502 of title 44,
- 10 United States Code.
- 11 (3) Appropriate congressional commit-
- 12 TEES.—The term "appropriate congressional com-
- 13 mittees" means—

1	(A) the Committee on Homeland Security
2	and Governmental Affairs of the Senate;
3	(B) the Committee on Oversight and Re-
4	form of the House of Representatives; and
5	(C) the Committee on Homeland Security
6	of the House of Representatives.
7	(4) Director.—The term "Director" means
8	the Director of the Office of Management and Budg-
9	et.
10	(5) Incident.—The term "incident" has the
11	meaning given the term in section 3552(b) of title
12	44, United States Code.
13	(6) Penetration test.—The term "penetra-
14	tion test" has the meaning given the term in section
15	3552(b) of title 44, United States Code, as amended
16	by this Act.
17	(7) Threat Hunting.—The term "threat
18	hunting" means proactively and iteratively searching
19	for threats to systems that evade detection by auto-
20	mated threat detection systems.
21	(8) Verification specification.—The term
22	"verification specification" means a specification de-
23	veloped under section 11331(f) of title 40, United
24	States Code, as amended by this Act.

1 TITLE I—UPDATES TO FISMA

2	SEC. 101. TITLE 44 AMENDMENTS.
3	(a) Subchapter I Amendments.—Subchapter I of
4	chapter 35 of title 44, United States Code, is amended—
5	(1) in section 3504—
6	(A) in subsection (a)(1)(B)(v), by striking
7	"confidentiality, security, disclosure, and shar-
8	ing of information" and inserting "disclosure,
9	sharing of information, and, in consultation
10	with the Director of the Cybersecurity and In-
11	frastructure Security Agency, confidentiality
12	and security";
13	(B) in subsection (b)(2)(B), by inserting
14	"in coordination with the Director of the Cyber-
15	security and Infrastructure Security Agency"
16	after "standards for security";
17	(C) in subsection (g), by striking para-
18	graph (1) and inserting the following:
19	"(1) with respect to information collected or
20	maintained by or for agencies—
21	"(A) develop and oversee the implementa-
22	tion of policies, principles, standards, and
23	guidelines on privacy, disclosure, and sharing of
24	the information; and

1	"(B) in consultation with the Director of
2	the Cybersecurity and Infrastructure Security
3	Agency, develop and oversee policies, principles,
4	standards, and guidelines on confidentiality and
5	security of the information; and"; and
6	(D) in subsection $(h)(1)$ —
7	(i) in the matter preceding subpara-
8	graph (A)—
9	(I) by inserting "the Director of
10	the Cybersecurity and Infrastructure
11	Security Agency," before "the Direc-
12	tor''; and
13	(II) by inserting a comma before
14	"and the Administrator"; and
15	(ii) in subparagraph (A), by inserting
16	"security and" after "information tech-
17	nology";
18	(2) in section 3505—
19	(A) in paragraph (3) of the first subsection
20	designated as subsection (c)—
21	(i) in subparagraph (B)—
22	(I) by inserting "and the Direc-
23	tor of the Cybersecurity and Infra-
24	structure Security Agency' after
25	"Comptroller General"; and

1	(II) by striking "and" at the end;
2	(ii) in subparagraph (C)(v), by strik-
3	ing the period at the end and inserting ";
4	and"; and
5	(iii) by adding at the end the fol-
6	lowing:
7	"(D) maintained on a continual basis through
8	the use of automation, machine-readable data, and
9	scanning."; and
10	(B) by striking the second subsection des-
11	ignated as subsection (c);
12	(3) in section 3506—
13	(A) in subsection (b)—
14	(i) in paragraph (1)(C), by inserting
15	", availability" after "integrity"; and
16	(ii) in paragraph (4), by inserting
17	"the Director of the Cybersecurity and In-
18	frastructure Security Agency," after "Gen-
19	eral Services,"; and
20	(B) in subsection (h)(3), by inserting "se-
21	curity," after "efficiency,";
22	(4) in section 3513—
23	(A) in subsection (a), by inserting "the Di-
24	rector of the Cybersecurity and Infrastructure

1	Security Agency," before "the Administrator of
2	General Services';
3	(B) by redesignating subsection (c) as sub-
4	section (d); and
5	(C) by inserting after subsection (b) the
6	following:
7	"(c) Each agency providing a written plan under sub-
8	section (b) shall provide any portion of the written plan
9	addressing information security or cybersecurity to the Di-
10	rector of the Cybersecurity and Infrastructure Security
11	Agency."; and
12	(5) in section 3520A(b)—
13	(A) in paragraph (1), by striking ", protec-
14	tion'';
15	(B) by redesignating paragraphs (2), (3),
16	(4), and (5) as paragraphs (3) , (4) , (5) , and
17	(6), respectively; and
18	(C) by inserting after paragraph (1) the
19	following:
20	"(2) in consultation with the Director of the
21	Cybersecurity and Infrastructure Security Agency,
22	establish Governmentwide best practices for the pro-
23	tection of data;".
24	(b) Suchapter II Definitions.—

1	(1) In general.—Section 3552(b) of title 44,
2	United States Code, is amended—
3	(A) by redesignating paragraphs (1), (2),
4	(3), (4), (5), (6), and (7) as paragraphs (2),
5	(3), (4), (5), (6), (9), and (11), respectively;
6	(B) by inserting before paragraph (2), as
7	so redesignated, the following:
8	"(1) The term 'additional cybersecurity proce-
9	dure' means a process, procedure, or other activity
10	that is established in excess of the information secu-
11	rity standards promulgated under section 11331(b)
12	of title 40 to increase the security and reduce the cy-
13	bersecurity risk of agency systems, such as contin-
14	uous threat hunting, increased network segmenta-
15	tion, endpoint detection and response, or persistent
16	penetration testing.";
17	(C) by inserting after paragraph (6), as so
18	redesignated, the following:
19	"(7) The term 'high value asset' means infor-
20	mation or an information system that the head of an
21	agency determines so critical to the agency that the
22	loss or corruption of the information or the loss of
23	access to the information system would have a seri-
24	ous impact on the ability of the agency to perform
25	the mission of the agency or conduct business.

1	"(8) The term 'major incident' has the meaning
2	given the term in guidance issued by the Director
3	under section 3598(a).";
4	(D) by inserting after paragraph (9), as so
5	redesignated, the following:
6	"(10) The term 'penetration test' means a spe-
7	cialized type of assessment that—
8	"(A) is conducted on an information sys-
9	tem or a component of an information system;
10	and
11	"(B) emulates an attack or other exploi-
12	tation capability of a potential adversary, typi-
13	cally under specific constraints, in order to
14	identify any vulnerabilities of an information
15	system or a component of an information sys-
16	tem that could be exploited."; and
17	(E) by inserting after paragraph (11), as
18	so redesignated, the following:
19	"(12) The term 'shared service' means a busi-
20	ness or mission function that is provided for use by
21	multiple organizations within or between agencies.
22	"(13) The term 'verification specification'
23	means a specification developed under section
24	11331(f) of title 40.".
25	(2) Conforming amendments —

1	(A) HOMELAND SECURITY ACT OF 2002.—
2	Section 1001(c)(1)(A) of the Homeland Secu-
3	rity Act of 2002 (6 U.S.C. 511(1)(A)) is
4	amended by striking "section 3552(b)(5)" and
5	inserting "section 3552(b)".
6	(B) TITLE 10.—
7	(i) Section 2222.—Section 2222(i)(8)
8	of title 10, United States Code, is amended
9	by striking "section 3552(b)(6)(A)" and
10	inserting "section 3552(b)(9)(A)".
11	(ii) Section 2223.—Section
12	2223(c)(3) of title 10, United States Code,
13	is amended by striking "section
14	3552(b)(6)" and inserting "section
15	3552(b)".
16	(iii) Section 2315.—Section 2315 of
17	title 10, United States Code, is amended
18	by striking "section 3552(b)(6)" and in-
19	serting "section 3552(b)".
20	(iv) SECTION 2339A.—Section
21	2339a(e)(5) of title 10, United States
22	Code, is amended by striking "section
23	3552(b)(6)" and inserting "section
24	3552(b)".

1	(C) High-performance computing act
2	OF 1991.—Section 207(a) of the High-Perform-
3	ance Computing Act of 1991 (15 U.S.C
4	5527(a)) is amended by striking "section
5	3552(b)(6)(A)(i)" and inserting "section
6	3552(b)(9)(A)(i)".
7	(D) Internet of things cybersecu-
8	RITY IMPROVEMENT ACT OF 2020.—Section 3(5)
9	of the Internet of Things Cybersecurity Im-
10	provement Act of 2020 (15 U.S.C. 278g-3a) is
11	amended by striking "section 3552(b)(6)" and
12	inserting "section 3552(b)".
13	(E) NATIONAL DEFENSE AUTHORIZATION
14	ACT FOR FISCAL YEAR 2013.—Section
15	933(e)(1)(B) of the National Defense Author-
16	ization Act for Fiscal Year 2013 (10 U.S.C
17	2224 note) is amended by striking "section
18	3542(b)(2)" and inserting "section 3552(b)".

(F) IKE SKELTON NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2011.—The Ike Skelton National Defense Authorization Act for Fiscal Year 2011 (Public Law 111–383) is amended—

1	(i) in section 806(e)(5) (10 U.S.C.
2	2304 note), by striking "section 3542(b)"
3	and inserting "section 3552(b)";
4	(ii) in section 931(b)(3) (10 U.S.C.
5	2223 note), by striking "section
6	3542(b)(2)" and inserting "section
7	3552(b)"; and
8	(iii) in section 932(b)(2) (10 U.S.C.
9	2224 note), by striking "section
10	3542(b)(2)" and inserting "section
11	3552(b)".
12	(G) E-GOVERNMENT ACT OF 2002.—Sec-
13	tion 301(c)(1)(A) of the E-Government Act of
14	2002 (44 U.S.C. 3501 note) is amended by
15	striking "section 3542(b)(2)" and inserting
16	"section 3552(b)".
17	(H) NATIONAL INSTITUTE OF STANDARDS
18	AND TECHNOLOGY ACT.—Section 20 of the Na-
19	tional Institute of Standards and Technology
20	Act (15 U.S.C. 278g–3) is amended—
21	(i) in subsection (a)(2), by striking
22	"section 3552(b)(5)" and inserting "sec-
23	tion 3552(b)"; and
24	(ii) in subsection (f)—

1	(I) in paragraph (3), by striking
2	"section 3532(1)" and inserting "sec-
3	tion 3552(b)"; and
4	(II) in paragraph (5), by striking
5	"section 3532(b)(2)" and inserting
6	"section 3552(b)".
7	(c) Subchapter II Amendments.—Subchapter II
8	of chapter 35 of title 44, United States Code, is amend-
9	ed—
10	(1) in section 3551—
11	(A) by redesignating paragraphs (3), (4),
12	(5), and (6) as paragraphs (4), (5), (6), and
13	(7), respectively;
14	(B) by inserting after paragraph (2) the
15	following:
16	"(3) recognize the role of the Cybersecurity and
17	Infrastructure Security Agency as the lead cyberse-
18	curity entity for operational coordination across the
19	Federal Government;";
20	(C) in paragraph (5), as so redesignated,
21	by striking "diagnose and improve" and insert-
22	ing "integrate, deliver, diagnose, and improve";
23	(D) in paragraph (6), as so redesignated,
24	by striking "and" at the end; and
25	(E) by adding at the end the following:

1	"(8) recognize that each agency has specific
2	mission requirements and, at times, unique cyberse-
3	curity requirements to meet the mission of the agen-
4	cy;
5	"(9) recognize that each agency does not have
6	the same resources to secure agency systems, and an
7	agency should not be expected to have the capability
8	to secure the systems of the agency from advanced
9	adversaries alone; and
10	"(10) recognize that—
11	"(A) a holistic Federal cybersecurity model
12	is necessary to account for differences between
13	the missions and capabilities of agencies; and
14	"(B) in accounting for the differences de-
15	scribed in subparagraph (A) and ensuring over-
16	all Federal cybersecurity—
17	"(i) the Office of Management and
18	Budget is the leader for policy development
19	and oversight of Federal cybersecurity;
20	"(ii) the Cybersecurity and Infrastruc-
21	ture Security Agency is the leader for im-
22	plementing operations at agencies; and
23	"(iii) the National Cyber Director is
24	responsible for developing the overall cy-
25	bersecurity strategy of the United States

1	and advising the President on matters re-
2	lating to cybersecurity.";
3	(2) in section 3553, as amended by section
4	1705 of the William M. (Mac) Thornberry National
5	Defense Authorization Act for Fiscal Year 2021
6	(Public Law 116–283)—
7	(A) in subsection (a)—
8	(i) in paragraph (1)—
9	(I) by striking "developing and"
10	and inserting "in coordination with
11	the Director of the Cybersecurity and
12	Infrastructure Security Agency,"; and
13	(II) by inserting "and associated
14	verification specifications' before
15	"promulgated"; and
16	(ii) in paragraph (5), by inserting "
17	in coordination with the Director of the
18	Cybersecurity and Infrastructure Security
19	Agency," before "agency compliance";
20	(B) in subsection (b)—
21	(i) by striking the subsection heading
22	and inserting "Cybersecurity and In-
23	FRASTRUCTURE SECURITY AGENCY";
24	(ii) in the matter preceding paragraph
25	(1), by striking "the Secretary" and insert-

1	ing "the Director of the Cybersecurity and
2	Infrastructure Security Agency";
3	(iii) in paragraph (2)—
4	(I) in subparagraph (A), by in-
5	serting "and reporting requirements
6	under subchapter IV of this title"
7	after "section 3556"; and
8	(II) in subparagraph (D), by
9	striking "the Director or Secretary"
10	and inserting "the Director of the Cy-
11	bersecurity and Infrastructure Secu-
12	rity Agency";
13	(iv) in paragraph (5), by striking "co-
14	ordinating" and inserting "leading the co-
15	ordination of";
16	(v) in paragraph (6)—
17	(I) in the matter preceding sub-
18	paragraph (A), by inserting "and
19	verifications specifications" before
20	"promulgated under";
21	(II) in subparagraph (C), by
22	striking "and" at the end;
23	(III) in subparagraph (D), by
24	adding "and" at the end; and

1	(IV) by adding at the end the fol-
2	lowing:
3	"(E) taking any other action that the Di-
4	rector of the Cybersecurity and Infrastructure
5	Security Agency, in consultation with the Direc-
6	tor—
7	"(i) may determine necessary; and
8	"(ii) is authorized to perform;";
9	(vi) in paragraph (8), by striking "the
10	Secretary's discretion" and inserting "the
11	Director of the Cybersecurity and Infra-
12	structure Security Agency's discretion";
13	and
14	(vii) in paragraph (9), by striking "as
15	the Director or the Secretary, in consulta-
16	tion with the Director," and inserting "as
17	the Director of the Cybersecurity and In-
18	frastructure Security Agency";
19	(C) in subsection (c)—
20	(i) in paragraph (4), by striking
21	"and" at the end;
22	(ii) by redesignating paragraph (5) as
23	paragraph (7); and
24	(iii) by inserting after paragraph (4)
25	the following:

1	"(5) an assessment of agency use of automated
2	verification of standards for the standards promul-
3	gated under section 11331 of title 40 using
4	verification specifications;
5	"(6) a summary of each assessment of Federal
6	risk posture performed under subsection (i); and";
7	(D) in subsection $(f)(2)(B)$, by striking
8	"conflict with" and inserting "reduce the secu-
9	rity posture of agencies established under";
10	(E) by redesignating subsections (i), (j),
11	(k), and (l) as subsections (j), (k), (l), and (m)
12	respectively;
13	(F) by inserting after subsection (h) the
14	following:
15	"(i) Federal Risk Assessments.—The Director of
16	the Cybersecurity and Infrastructure Security Agency, in
17	coordination with the Director, shall perform, on an ongo-
18	ing and continuous basis, assessments of Federal risk pos-
19	ture using any available information on the cybersecurity
20	posture of agencies, including—
21	"(1) the status of agency cybersecurity remedial
22	actions described in section 3554(b)(7);
23	"(2) any vulnerability information relating to
24	the systems of an agency that is known by the agen-
25	ev;

1	"(3) analysis of incident information under sec-
2	tion 3597;
3	"(4) evaluation of penetration testing per-
4	formed under section 3559A;
5	"(5) evaluation of vulnerability disclosure pro-
6	gram information under section 3559B;
7	"(6) evaluation of agency threat hunting re-
8	sults;
9	"(7) evaluation of Federal and non-Federal
10	threat intelligence;
11	"(8) data on compliance with standards issued
12	under section 11331 of title 40 that, when appro-
13	priate, uses verification specifications;
14	"(9) agency system risk assessments performed
15	under section 3554(a)(1)(A); and
16	"(10) any other information the Secretary de-
17	termines relevant."; and
18	(G) in subsection (j), as so redesignated—
19	(i) by striking "regarding the spe-
20	cific" and inserting "that includes a sum-
21	mary of—
22	"(1) the specific";
23	(ii) in paragraph (1), as so des-
24	ignated, by striking the period at the end
25	and inserting ": and" and

1	(iii) by adding at the end the fol-
2	lowing:
3	"(2) the trends identified in the Federal risk
4	assessment performed under subsection (i).";
5	(3) in section 3554—
6	(A) in subsection (a)—
7	(i) in paragraph (1)—
8	(I) by redesignating subpara-
9	graphs (A), (B), and (C) as subpara-
10	graphs (B), (C), and (D), respectively;
11	(II) by inserting before subpara-
12	graph (B), as so redesignated, the fol-
13	lowing:
14	"(A) performing, not less frequently than
15	once every 2 years or based on a significant
16	change to system architecture or security pos-
17	ture, an agency system risk assessment that—
18	"(i) identifies and documents the high
19	value assets of the agency using guidance
20	from the Director;
21	"(ii) evaluates the data assets inven-
22	toried under section 3511 of title 44 for
23	sensitivity to compromises in confiden-
24	tiality, integrity, and availability;

1	"(iii) identifies agency systems that
2	have access to or hold the data assets
3	inventoried under section 3511 of title 44;
4	"(iv) evaluates the threats facing
5	agency systems and data, including high
6	value assets, based on Federal and non-
7	Federal cyber threat intelligence products,
8	where available;
9	"(v) evaluates the vulnerability of
10	agency systems and data, including high
11	value assets, based on—
12	"(I) the results of penetration
13	testing performed by the Department
14	of Homeland Security under section
15	3553(b)(9);
16	"(II) the results of penetration
17	testing performed under section
18	3559A;
19	"(III) information provided to
20	the agency through the vulnerability
21	disclosure program of the agency
22	under section 3559B;
23	"(IV) incidents: and

1	"(V) any other vulnerability in-
2	formation relating to agency systems
3	that is known to the agency;
4	"(vi) assesses the impacts of potential
5	agency incidents to agency systems, data,
6	and operations based on the evaluations
7	described in clauses (ii) and (iv) and the
8	agency systems identified under clause
9	(iii); and
10	"(vii) assesses the consequences of po-
11	tential incidents occurring on agency sys-
12	tems that would impact systems at other
13	agencies, including due to interconnectivity
14	between different agency systems or oper-
15	ational reliance on the operations of the
16	system or data in the system;";
17	(III) in subparagraph (B), as so
18	redesignated—
19	(aa) in the matter preceding
20	clause (i), by striking "providing
21	information" and inserting
22	"using information from the as-
23	sessment conducted under sub-
24	paragraph (A), providing, in co-
25	ordination with the Director of

1	the Cybersecurity and Infrastruc-
2	ture Security Agency, informa-
3	tion";
4	(bb) in clause (i), by striking
5	"and" at the end;
6	(cc) in clause (ii), by adding
7	"and" at the end; and
8	(dd) by adding at the end
9	the following:
10	"(iii) in consultation with the Director
11	and the Director of the Cybersecurity and
12	Infrastructure Security Agency, informa-
13	tion or information systems used by agen-
14	cies through shared services, memoranda
15	of understanding, or other agreements;";
16	(IV) in subparagraph (C), as so
17	redesignated—
18	(aa) in clause (ii) by insert-
19	ing "binding" before "oper-
20	ational"; and
21	(bb) in clause (vi), by strik-
22	ing "and" at the end; and
23	(V) by adding at the end the fol-
24	lowing:

1	"(E) not later than 30 days after the date
2	on which an agency system risk assessment is
3	performed under subparagraph (A), providing
4	the assessment to—
5	"(i) the Director;
6	"(ii) the Director of the Cybersecurity
7	and Infrastructure Security Agency; and
8	"(iii) the National Cyber Director;
9	"(F) in consultation with the Director of
10	the Cybersecurity and Infrastructure Security
11	Agency and not less frequently than annually,
12	performing an evaluation of whether additional
13	cybersecurity procedures are appropriate for se-
14	curing a system of, or under the supervision of,
15	the agency, which shall—
16	"(i) be completed considering the
17	agency system risk assessment performed
18	under subparagraph (A); and
19	"(ii) include a specific evaluation for
20	high value assets; and
21	"(G) not later than 30 days after com-
22	pleting the evaluation performed under sub-
23	paragraph (F), providing the evaluation and an
24	implementation plan for using additional cyber-

1	security procedures determined to be appro-
2	priate to—
3	"(i) the Director of the Cybersecurity
4	and Infrastructure Security Agency;
5	"(ii) the Director; and
6	"(iii) the National Cyber Director.";
7	(ii) in paragraph (2)—
8	(I) in subparagraph (A), by in-
9	serting "in accordance with the agen-
10	cy system risk assessment performed
11	under paragraph (1)(A)" after "infor-
12	mation systems";
13	(II) in subparagraph (B)—
14	(aa) by striking "in accord-
15	ance with standards' and insert-
16	ing "in accordance with—
17	"(i) standards"; and
18	(bb) by adding at the end
19	the following:
20	"(ii) the evaluation performed under
21	paragraph $(1)(F)$; and
22	"(iii) the implementation plan de-
23	scribed in paragraph (1)(G);"; and
24	(III) in subparagraph (D), by in-
25	serting ", through the use of penetra-

1	tion testing, the vulnerability disclo-
2	sure program established under sec-
3	tion 3559B, and other means," after
4	"periodically";
5	(iii) in paragraph (3)—
6	(I) in subparagraph (B), by in-
7	serting ", in coordination with the Di-
8	rector of the Cybersecurity and Infra-
9	structure Security Agency," after
10	"maintaining";
11	(II) in subparagraph (D), by
12	striking "and" at the end;
13	(III) in subparagraph (E), by
14	adding "and" at the end; and
15	(IV) by adding at the end the fol-
16	lowing:
17	"(F) implementing mechanisms for using
18	verification specifications, or alternate
19	verification specifications validated by the Di-
20	rector of the Cybersecurity and Infrastructure
21	Security Agency, in consultation with the Direc-
22	tor of the National Institute of Standards and
23	Technology, to automatically verify the imple-
24	mentation of standards of agency systems pro-
25	mulgated under section 11331 of title 40 or any

1	additional cybersecurity procedures, as applica-
2	ble;"; and
3	(iv) in paragraph (5), by inserting
4	"and the Director of the Cybersecurity and
5	Infrastructure Security Agency" before
6	"on the effectiveness";
7	(B) in subsection (b)—
8	(i) by striking paragraph (1) and in-
9	serting the following:
10	"(1) pursuant to subsection $(a)(1)(A)$, per-
11	forming an agency system risk assessment, which
12	shall include using automated tools consistent with
13	standards, verification specifications, and guidelines
14	promulgated under section 11331 of title 40, as ap-
15	plicable;";
16	(ii) in paragraph (2)(D)—
17	(I) by redesignating clauses (iii)
18	and (iv) as clauses (iv) and (v), re-
19	spectively;
20	(II) by inserting after clause (ii)
21	the following:
22	"(iii) binding operational directives
23	and emergency directives promulgated by
24	the Director of the Cybersecurity and In-

1	frastructure Security Agency under section
2	3553 of title 44;"; and
3	(III) in clause (iv), as so redesig-
4	nated, by striking "as determined by
5	the agency; and" and inserting "as
6	determined by the agency—
7	"(I) in coordination with the Di-
8	rector of the Cybersecurity and Infra-
9	structure Security Agency; and
10	"(II) in consideration of—
11	"(aa) the agency risk assess-
12	ment performed under subsection
13	(a)(1)(A); and
14	"(bb) the determinations of
15	applying more stringent stand-
16	ards and additional cybersecurity
17	procedures pursuant to section
18	11331(c)(1) of title 40; and";
19	(iii) in paragraph (5)—
20	(I) in subparagraph (A), by in-
21	serting ", including penetration test-
22	ing, as appropriate," after "shall in-
23	clude testing"; and

1	(II) in subparagraph (C), by in-
2	serting ", verification specifications,"
3	after "with standards";
4	(iv) in paragraph (6), by striking
5	"planning, implementing, evaluating, and
6	documenting" and inserting "planning and
7	implementing and, in consultation with the
8	Director of the Cybersecurity and Infra-
9	structure Security Agency, evaluating and
10	documenting";
11	(v) by redesignating paragraphs (7)
12	and (8) as paragraphs (9) and (10), re-
13	spectively;
14	(vi) by inserting after paragraph (6)
15	the following:
16	"(7) a process for providing the status of every
17	remedial action and known system vulnerability to
18	the Director and the Director of the Cybersecurity
19	and Infrastructure Security Agency, using automa-
20	tion and machine-readable data to the greatest ex-
21	tent practicable;
22	"(8) a process for providing the verification of
23	the implementation of standards promulgated under
24	section 11331 of title 40 using verification specifica-
25	tions, automation, and machine-readable data, to the

1	Director and the Director of the Cybersecurity and
2	Infrastructure Security Agency;"; and
3	(vii) in paragraph (9)(C), as so redes-
4	ignated—
5	(I) by striking clause (ii) and in-
6	serting the following:
7	"(ii) notifying and consulting with the
8	Federal information security incident cen-
9	ter established under section 3556 pursu-
10	ant to the requirements of section 3594;";
11	(II) by redesignating clause (iii)
12	as clause (iv);
13	(III) by inserting after clause (ii)
14	the following:
15	"(iii) performing the notifications and
16	other activities required under subchapter
17	IV of this title; and"; and
18	(IV) in clause (iv), as so redesig-
19	nated—
20	(aa) in subclause (I), by
21	striking "and relevant Offices of
22	Inspector General";
23	(bb) in subclause (II), by
24	adding "and" at the end;

1	(cc) by striking subclause
2	(III); and
3	(dd) by redesignating sub-
4	clause (IV) as subclause (III);
5	(C) in subsection (c)—
6	(i) in paragraph (1)—
7	(I) in subparagraph (A)—
8	(aa) in the matter preceding
9	clause (i), by striking "on the
10	adequacy and effectiveness of in-
11	formation security policies, proce-
12	dures, and practices, including
13	and inserting "that includes";
14	and
15	(bb) in clause (ii), by insert-
16	ing "unless the Director issues a
17	waiver to the agency under sub-
18	paragraph (B)(iii)," before "the
19	total number''; and
20	(II) by striking subparagraph (B)
21	and inserting the following:
22	"(B) Incident reporting waiver.—
23	"(i) CERTIFICATION OF AGENCY IN-
24	FORMATION SHARING.—If the Director, in
25	consultation with the Director of the Cy-

bersecurity and Infrastructure Security
Agency, determines that an agency shares
any information relating to any incident
pursuant to section 3594(a), the Director
shall certify that the agency is in compliance with that section.

"(ii) CERTIFICATION OF ISSUING REPORT.—If the Director determines that the
Director of the Cybersecurity and Infrastructure Security Agency uses the information described in clause (i) with respect
to a particular agency to submit to Congress an annex required under section
3597(c)(3) for that agency, the Director
shall certify that the Cybersecurity and Infrastructure Security Agency is in compliance with that section with respect to that
agency.

"(iii) WAIVER.—The Director may waive the reporting requirement with respect to the information required to be included in the report under subparagraph (A)(ii) for a particular agency if—

1	"(I) the Director has issued a
2	certification for the agency under
3	clause (i); and
4	"(II) the Director has issued a
5	certification with respect to the annex
6	of the agency under clause (ii).
7	"(iv) Revocation of waiver or
8	CERTIFICATIONS.—
9	"(I) Waiver.—If, at any time,
10	the Director determines that the Di-
11	rector of the Cybersecurity and Infra-
12	structure Security Agency cannot sub-
13	mit to Congress an annex for a par-
14	ticular agency under section
15	3597(e)(3)—
16	"(aa) any waiver previously
17	issued under clause (iii) with re-
18	spect to that agency shall be con-
19	sidered void; and
20	"(bb) the Director shall re-
21	voke the certification for the
22	annex of that agency under
23	clause (ii).
24	"(II) CERTIFICATIONS.—If, at
25	any time, the Director determines

1	that an agency has not provided to
2	the Director of the Cybersecurity and
3	Infrastructure Security Agency the to-
4	tality of incident information required
5	under section 3594(a)—
6	"(aa) any waiver previously
7	issued under clause (iii) with re-
8	spect to that agency shall be con-
9	sidered void; and
10	"(bb) the Director shall re-
11	voke the certification for that
12	agency under clause (i).
13	"(III) REISSUANCE.—If the Di-
14	rector revokes a waiver under this
15	clause, the Director may issue a sub-
16	sequent waiver if the Director issues
17	new certifications under clauses (i)
18	and (ii).";
19	(ii) by redesignating paragraphs (2)
20	through (5) as paragraphs (4) through (7),
21	respectively; and
22	(iii) by inserting after paragraph (1)
23	the following:
24	"(2) BIANNUAL REPORT.—Not later than 180
25	days after the date on which an agency completes an

1	agency system risk assessment under subsection
2	(a)(1)(A) and not less frequently than every 2 years,
3	each agency shall submit to the Director, the Sec-
4	retary, the Committee on Homeland Security and
5	Governmental Affairs of the Senate, the Committee
6	on Oversight and Reform of the House of Represent-
7	atives, the Committee on Homeland Security of the
8	House of Representatives, the appropriate authoriza-
9	tion and appropriations committees of Congress, the
10	National Cyber Director, and the Comptroller Gen-
11	eral of the United States a report that—
12	"(A) summarizes the agency system risk
13	assessment performed under subsection
14	(a)(1)(A);
15	"(B) evaluates the adequacy and effective-
16	ness of information security policies, proce-
17	dures, and practices of the agency to address
18	the risks identified in the system risk assess-
19	ment performed under subsection $(a)(1)(A)$;
20	and
21	"(C) summarizes the evaluations and im-
22	plementation plans described in subparagraphs
23	(F) and (G) of subsection (a)(1) and whether
24	those evaluations and implementation plans call
25	for the use of additional cybersecurity proce-

1	dures determined to be appropriate by the
2	agency.
3	"(3) Unclassified reports.—Each report
4	submitted under paragraphs (1) and (2)—
5	"(A) shall be, to the greatest extent prac-
6	ticable, in an unclassified and otherwise uncon-
7	trolled form; and
8	"(B) may include a classified annex."; and
9	(D) in subsection (d)(1), in the matter pre-
10	ceding subparagraph (A), by inserting "and the
11	Director of the Cybersecurity and Infrastruc-
12	ture Security Agency" after "the Director";
13	(4) in section 3555—
14	(A) in subsection (a)(2)(A), by inserting ",
15	including by penetration testing and analyzing
16	the vulnerability disclosure program of the
17	agency" after "information systems";
18	(B) by striking subsection (f) and inserting
19	the following:
20	"(f) Protection of Information.—(1) Agencies
21	and evaluators shall take appropriate steps to ensure the
22	protection of information which, if disclosed, may ad-
23	versely affect information security.

1	"(2) The protections required under paragraph (1)
2	shall be commensurate with the risk and comply with all
3	applicable laws and regulations.
4	"(3) With respect to information that is not related
5	to national security systems, agencies and evaluators shall
6	make a summary of the information unclassified and pub-
7	licly available, including information that does not iden-
8	tify—
9	"(A) specific information system incidents; or
10	"(B) specific information system
11	vulnerabilities.";
12	(C) in subsection $(g)(2)$ —
13	(i) by striking "this subsection shall"
14	and inserting "this subsection—
15	"(A) shall";
16	(ii) in subparagraph (A), as so des-
17	ignated, by striking the period at the end
18	and inserting "; and; and
19	(iii) by adding at the end the fol-
20	lowing:
21	"(B) identify any entity that performs an inde-
22	pendent audit under subsection (b)."; and
23	(D) in subsection (j), by striking "the Sec-
24	retary" and inserting "the Director of the

1	Cyber Security and Infrastructure Security
2	Agency"; and
3	(5) in section 3556(a)—
4	(A) in the matter preceding paragraph (1),
5	by inserting "within the Cybersecurity and In-
6	frastructure Security Agency" after "incident
7	center"; and
8	(B) in paragraph (4), by striking
9	" 3554 (b)" and inserting " 3554 (a)(1)(A)".
10	(d) Federal System Incident Response.—
11	(1) In General.—Chapter 35 of title 44,
12	United States Code, is amended by adding at the
13	end the following:
14	"SUBCHAPTER IV—FEDERAL SYSTEM
15	INCIDENT RESPONSE
16	"§ 3591. Definitions
17	"(a) In General.—Except as provided in subsection
18	(b), the definitions under sections 3502 and 3552 shall
19	apply to this subchapter.
20	"(b) Additional Definitions.—As used in this
21	subchapter:
22	"(1) Appropriate notification entities.—
23	The term 'appropriate notification entities' means—
24	"(A) the Committee on Homeland Security
25	and Governmental Affairs of the Senate;

1	"(B) the Committee on Oversight and Re-
2	form of the House of Representatives;
3	"(C) the Committee on Homeland Security
4	of the House of Representatives;
5	"(D) the appropriate authorization and ap-
6	propriations committees of Congress;
7	"(E) the Director;
8	"(F) the Director of the Cybersecurity and
9	Infrastructure Security Agency;
10	"(G) the National Cyber Director; and
11	"(H) the Comptroller General of the
12	United States.
13	"(2) Contractor.—The term 'contractor'—
14	"(A) means any person or business that
15	collects or maintains information that includes
16	personally identifiable information or sensitive
17	personal information on behalf of an agency;
18	and
19	"(B) includes any subcontractor of a per-
20	son or business described in subparagraph (A).
21	"(3) Intelligence community.—The term
22	'intelligence community' has the meaning given the
23	term in section 3 of the National Security Act of
24	1947 (50 U.S.C. 3003).

1	"(4) Nationwide consumer reporting
2	AGENCY.—The term 'nationwide consumer reporting
3	agency' means a consumer reporting agency de-
4	scribed in section 603(p) of the Fair Credit Report-
5	ing Act (15 U.S.C. 1681a(p)).
6	"(5) Vulnerability disclosure.—The term
7	'vulnerability disclosure' means a vulnerability iden-
8	tified under section 3559B.
9	"§ 3592. Notification of high risk exposure after
10	major incident
11	"(a) Notification.—As expeditiously as practicable
12	and without unreasonable delay, and in any case not later
13	than 30 days after an agency has a reasonable basis to
14	conclude that a major incident has occurred due to a high
15	risk exposure of personal identifiable information, as de-
16	scribed in section $3598(c)(2)$, the head of the agency shall
17	provide notice of the major incident in accordance with
18	subsection (b) in writing to the last known home mailing
19	address of each individual whom the major incident may
20	have impacted.
21	"(b) Contents of Notice.—Each notice to an indi-
22	vidual required under subsection (a) shall include—
23	
	"(1) a description of the rationale for the deter-

1	risk of exposure of the personal information of the
2	individual;
3	"(2) an assessment of the type of risk the indi-
4	vidual may face as a result of an exposure;
5	"(3) contact information for the Federal Bu-
6	reau of Investigation or other appropriate entity;
7	"(4) the contact information of each nationwide
8	consumer reporting agency;
9	"(5) the contact information for questions to
10	the agency, including a telephone number, e-mail ad-
11	dress, and website;
12	"(6) information on any remedy being offered
13	by the agency;
14	"(7) consolidated Federal Government rec-
15	ommendations on what to do in the event of a major
16	incident; and
17	"(8) any other appropriate information as de-
18	termined by the head of the agency.
19	"(c) Delay of Notification.—
20	"(1) IN GENERAL.—The Attorney General, the
21	Director of National Intelligence, or the Secretary of
22	Homeland Security may impose a delay of a notifica-
23	tion required under subsection (a) if the notification
24	would disrupt a law enforcement investigation, en-

danger national security, or hamper security remedi-1 2 ation actions. 3 "(2) Documentation.— "(A) IN GENERAL.—Any delay under para-4 5 graph (1) shall be reported in writing to the 6 head of the agency, the Director, the Director of the Cybersecurity and Infrastructure Secu-7 8 rity Agency, and the Office of Inspector Gen-9 eral of the agency that experienced the major 10 incident. 11 "(B) Contents.—A statement required 12 under subparagraph (A) shall include a written 13 statement from the entity that delayed the noti-14 fication explaining the need for the delay. "(C) 15 FORM.—The statement required 16 under subparagraph (A) shall be unclassified, 17 but may include a classified annex. 18 "(3) Renewal.—A delay under paragraph (1) 19 shall be for a period of 2 months and may be re-20 newed. 21 "(d) UPDATE NOTIFICATION.—If an agency determines there is a change in the reasonable basis to conclude that a major incident occurred, or that there is a change in the details of the information provided to impacted individuals as described in subsection (b), the agency shall as

- 1 expeditiously as practicable and without unreasonable
- 2 delay, and in any case not later than 30 days after such
- 3 a determination, notify all such individuals who received
- 4 a notification pursuant to subsection (a) of those changes.
- 5 "(e) Rule of Construction.—Nothing in this sec-
- 6 tion shall be construed to limit—
- 7 "(1) the Director from issuing guidance regard-
- 8 ing notifications or the head of an agency from
- 9 sending notifications to individuals impacted by inci-
- dents not determined to be major incidents; or
- 11 "(2) the Director from issuing guidance regard-
- ing notifications of major incidents or the head of an
- agency from issuing notifications to individuals im-
- pacted by major incidents that contain more infor-
- mation than described in subsection (b).

16 "§ 3593. Congressional notifications and reports

- 17 "(a) Initial Report.—
- 18 "(1) IN GENERAL.—Not later than 5 days after
- the date on which an agency has a reasonable basis
- to conclude that a major incident occurred, the head
- of the agency shall submit a written notification and,
- 22 to the extent practicable, provide a briefing, to the
- appropriate notification entities, taking into ac-
- 24 count—

1	"(A) the information known at the time of
2	the notification;
3	"(B) the sensitivity of the details associ-
4	ated with the major incident; and
5	"(C) the classification level of the informa-
6	tion contained in the notification.
7	"(2) Contents.—A notification required under
8	paragraph (1) shall include—
9	"(A) a summary of the information avail-
10	able about the major incident, including how
11	the major incident occurred, based on informa-
12	tion available to agency officials as of the date
13	on which the agency submits the report;
14	"(B) if applicable, an estimate of the num-
15	ber of individuals impacted by the major inci-
16	dent, including an assessment of the risk level
17	to impacted individuals based on the guidance
18	promulgated under section 3598(c)(1) and any
19	information available to agency officials on the
20	date on which the agency submits the report;
21	"(C) if applicable, a description and any
22	associated documentation of any circumstances
23	necessitating a delay in or exemption to notifi-
24	cation granted under subsection (c) or (d) of
25	section 3592; and

1	"(D) if applicable, an assessment of the
2	impacts to the agency, the Federal Government
3	or the security of the United States, based or
4	information available to agency officials on the
5	date on which the agency submits the report.
6	"(b) Supplemental Report.—Within a reasonable
7	amount of time, but not later than 45 days after the date
8	on which additional information relating to a major inci-
9	dent for which an agency submitted a written notification
10	under subsection (a) is discovered by the agency, the head
11	of the agency shall submit to the appropriate notification
12	entities updates to the written notification that include
13	summaries of—
14	"(1) the threats and threat actors
15	vulnerabilities, means by which the major incident
16	occurred, and impacts to the agency relating to the
17	major incident;
18	"(2) any risk assessment and subsequent risk-
19	based security implementation of the affected infor-
20	mation system before the date on which the major
21	incident occurred;
22	"(3) the status of compliance of the affected in-
23	formation system with applicable security require-
24	ments at the time of the major incident;

- 1 "(4) an estimate of the number of individuals 2 affected by the major incident based on information 3 available to agency officials as of the date on which 4 the agency submits the update;
 - "(5) an update to the assessment of the risk of harm to impacted individuals affected by the major incident based on information available to agency officials as of the date on which the agency submits the update;
 - "(6) an update to the assessment of the risk to agency operations, or to impacts on other agency or non-Federal entity operations, affected by the major incident based on information available to agency officials as of the date on which the agency submits the update; and
 - "(7) the detection, response, and remediation actions of the agency, including any support provided by the Cybersecurity and Infrastructure Security Agency under section 3594(d) and status updates on the notification process described in section 3592(a), including any delay or exemption described in subsection (c) or (d), respectively, of section 3592, if applicable.
- 24 "(c) UPDATE REPORT.—If the agency determines 25 that there is any significant change in the understanding

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- 1 of the agency of the scope, scale, or consequence of a
- 2 major incident for which an agency submitted a written
- 3 notification under subsection (a), the agency shall provide
- 4 an updated report to the appropriate notification entities
- 5 that includes information relating to the change in under-
- 6 standing.
- 7 "(d) Annual Report.—Each agency shall submit as
- 8 part of the annual report required under section
- 9 3554(c)(1) of this title a description of each major inci-
- 10 dent that occurred during the 1-year period preceding the
- 11 date on which the report is submitted.
- 12 "(e) Delay and Exemption Report.—The Direc-
- 13 tor shall submit to the appropriate notification entities an
- 14 annual report on all notification delays and exemptions
- 15 granted pursuant to subsections (c) and (d) of section
- 16 3592.
- 17 "(f) Report Delivery.—Any written notification or
- 18 report required to be submitted under this section may
- 19 be submitted in a paper or electronic format.
- 20 "(g) Rule of Construction.—Nothing in this sec-
- 21 tion shall be construed to limit—
- 22 "(1) the ability of an agency to provide addi-
- tional reports or briefings to Congress; or

1	"(2) Congress from requesting additional infor-
2	mation from agencies through reports, briefings, or
3	other means.
4	"(h) BINDING OPERATIONAL DIRECTIVE.—If the Di-
5	rector of the Cybersecurity and Infrastructure Security
6	Agency issues a binding operational directive or an emer-
7	gency directive under section 3553, not later than 2 days
8	after the date on which the binding operational directive
9	requires an agency to take an action, each agency shall
10	provide to the appropriate notification entities the status
11	of the implementation of the binding operational directive
12	at the agency.
	"§ 3594. Government information sharing and inci-
13 14	"§ 3594. Government information sharing and inci- dent response
13 14	
13	dent response
13 14 15	dent response "(a) In General.—
13 14 15 16	dent response "(a) In General.— "(1) Incident reporting.—The head of each
13 14 15 16 17	dent response "(a) IN GENERAL.— "(1) INCIDENT REPORTING.—The head of each agency shall provide any information relating to any
13 14 15 16 17	dent response "(a) IN GENERAL.— "(1) INCIDENT REPORTING.—The head of each agency shall provide any information relating to any incident, whether the information is obtained by the
13 14 15 16 17 18	dent response "(a) IN GENERAL.— "(1) INCIDENT REPORTING.—The head of each agency shall provide any information relating to any incident, whether the information is obtained by the Federal Government directly or indirectly, to the Cy-
13 14 15 16 17 18 19 20	dent response "(a) IN GENERAL.— "(1) INCIDENT REPORTING.—The head of each agency shall provide any information relating to any incident, whether the information is obtained by the Federal Government directly or indirectly, to the Cybersecurity and Infrastructure Security Agency and
13 14 15 16 17 18 19 20 21	dent response "(a) IN GENERAL.— "(1) INCIDENT REPORTING.—The head of each agency shall provide any information relating to any incident, whether the information is obtained by the Federal Government directly or indirectly, to the Cybersecurity and Infrastructure Security Agency and the Office of Management and Budget.

1	"(A) include detailed information about
2	the safeguards that were in place when the inci-
3	dent occurred;
4	"(B) whether the agency implemented the
5	safeguards described in subparagraph (A) cor-
6	rectly; and
7	"(C) in order to protect against a similar
8	incident, identify—
9	"(i) how the safeguards described in
10	subparagraph (A) should be implemented
11	differently; and
12	"(ii) additional necessary safeguards.
13	"(b) Compliance.—The information provided under
14	subsection (a) shall—
15	"(1) take into account the level of classification
16	of the information and any information sharing limi-
17	tations relating to law enforcement; and
18	"(2) be in compliance with the requirements
19	limiting the release of information under section
20	552a of title 5 (commonly known as the 'Privacy Act
21	of 1974').
22	"(c) Responding to Information Requests
23	FROM AGENCIES EXPERIENCING INCIDENTS.—An agency
24	that receives a request from another agency or Federal
25	entity for information specifically intended to assist in the

1	remediation or notification requirements due to an inci-
2	dent shall provide that information to the greatest extent
3	possible, in accordance with guidance issued by the Direc-
4	tor and taking into account classification, law enforce-
5	ment, national security, and compliance with section 552a
6	of title 5 (commonly known as the 'Privacy Act of 1974').
7	"(d) Incident Response.—Each agency that has a
8	reasonable basis to conclude that a major incident oc-
9	curred, regardless of delays from notification granted for
10	a major incident, shall consult with the Cybersecurity and
11	Infrastructure Security Agency regarding—
12	"(1) incident response and recovery; and
13	"(2) recommendations for mitigating future in-
14	cidents.
15	"§ 3595. Responsibilities of contractors and grant re-
16	cipients
17	
17	"(a) Notification.—
18	"(a) Notification.— "(1) In general.—Subject to paragraph (3),
18	"(1) In general.—Subject to paragraph (3),
18 19	"(1) In general.—Subject to paragraph (3), any contractor of an agency or recipient of a grant
18 19 20	"(1) In General.—Subject to paragraph (3), any contractor of an agency or recipient of a grant from an agency that has a reasonable basis to con-
18 19 20 21	"(1) In General.—Subject to paragraph (3), any contractor of an agency or recipient of a grant from an agency that has a reasonable basis to conclude that an incident involving Federal information
18 19 20 21 22	"(1) In General.—Subject to paragraph (3), any contractor of an agency or recipient of a grant from an agency that has a reasonable basis to conclude that an incident involving Federal information has occurred shall immediately notify the agency.

1	cipient of a grant under paragraph (1), an
2	agency, in consultation with the contractor or
3	grant recipient, as applicable, shall carry out
4	the requirements under sections 3592, 3593,
5	and 3594 with respect to the major incident.
6	"(B) Incident.—Following notification of
7	an incident by a contractor or recipient of a
8	grant under paragraph (1), an agency, in con-
9	sultation with the contractor or grant recipient,
10	as applicable, shall carry out the requirements
11	under section 3594 with respect to the incident.
12	"(3) APPLICABILITY.—This subsection shall
13	apply to a contractor of an agency or a recipient of
14	a grant from an agency that—
15	"(A) receives information from the agency
16	that the contractor or recipient, as applicable, is
17	not contractually authorized to receive;
18	"(B) experiences an incident relating to
19	Federal information on an information system
20	of the contractor or recipient, as applicable; or
21	"(C) identifies an incident involving a Fed-
22	eral information system.
23	"(b) Incident Response.—Any contractor of an
24	agency or recipient of a grant from an agency that has
25	a reasonable basis to conclude that a major incident oc-

- 1 curred shall, in coordination with the agency, consult with
- 2 the Cybersecurity and Infrastructure Security Agency re-
- 3 garding—
- 4 "(1) incident response assistance; and
- 5 "(2) recommendations for mitigating future in-
- 6 cidents at the agency.
- 7 "(c) Effective Date.—This section shall apply on
- 8 and after the date that is 1 year after the date of enact-
- 9 ment of the Federal Information Security Modernization
- 10 Act of 2021.

11 **"§ 3596. Training**

- 12 "(a) IN GENERAL.—Each agency shall develop train-
- 13 ing for individuals at the agency with access to Federal
- 14 information or information systems on how to identify and
- 15 respond to an incident, including—
- 16 "(1) the internal process at the agency for re-
- 17 porting an incident; and
- 18 "(2) the obligation of the individual to report to
- the agency a confirmed major incident and any sus-
- 20 pected incident, involving information in any me-
- 21 dium or form, including paper, oral, and electronic.
- 22 "(b) Applicability.—The training developed under
- 23 subsection (a) shall—

1	"(1) be required for an individual before the in-
2	dividual may access Federal information or informa-
3	tion systems; and
4	"(2) apply to individuals with temporary access
5	to Federal information or information systems, such
6	as detailees, contractors, subcontractors, grantees,
7	volunteers, and interns.
8	"(c) Inclusion in Annual Training.—The train-
9	ing developed under subsection (a) may be included as
10	part of an annual privacy or security awareness training
11	of the agency, as applicable.
12	"§ 3597. Analysis and report on Federal incidents
13	"(a) Definition of Compromise.—In this section,
14	the term 'compromise' means—
15	"(1) an incident;
16	"(2) a result of a penetration test in which the
17	tester successfully gains access to a system within
18	the standards under section 3559A;
19	"(3) a vulnerability disclosure; or
20	"(4) any other event that the Director of the
21	Cybersecurity and Infrastructure Security Agency
22	determines identifies an exploitable vulnerability in
23	an agency system.
24	"(b) Analysis of Federal Incidents —

1	"(1) In General.—The Director of the Cyber-
2	security and Infrastructure Security Agency shall
3	perform continuous monitoring of compromises of
4	agencies.
5	"(2) Quantitative and qualitative anal-
6	YSES.—The Director of the Cybersecurity and Infra-
7	structure Security Agency, in consultation with the
8	Director, shall develop and perform continuous mon-
9	itoring and quantitative and qualitative analyses of
10	compromises of agencies, including—
11	"(A) the causes of successful compromises,
12	including—
13	"(i) attacker tactics, techniques, and
14	procedures; and
15	"(ii) system vulnerabilities, including
16	zero days, unpatched systems, and infor-
17	mation system misconfigurations;
18	"(B) the scope and scale of compromises of
19	agencies;
20	"(C) cross Federal Government root causes
21	of compromises of agencies;
22	"(D) agency response, recovery, and reme-
23	diation actions and effectiveness of incidents, as
24	applicable; and

1	"(E) lessons learned and recommendations
2	in responding, recovering, remediating, and
3	mitigating future incidents.
4	"(3) Automated analysis.—The analyses de-
5	veloped under paragraph (2) shall, to the greatest
6	extent practicable, use machine readable data, auto-
7	mation, and machine learning processes.
8	"(4) Sharing of data and analysis.—
9	"(A) In General.—The Director shall
10	share on an ongoing basis the analyses required
11	under this subsection with agencies to—
12	"(i) improve the understanding of
13	agencies with respect to risk; and
14	"(ii) support the cybersecurity im-
15	provement efforts of agencies.
16	"(B) Format.—In carrying out subpara-
17	graph (A), the Director shall share the anal-
18	yses—
19	"(i) in human-readable written prod-
20	ucts; and
21	"(ii) to the greatest extent practicable,
22	in machine-readable formats in order to
23	enable automated intake and use by agen-
24	cies.

- 1 "(c) Annual Report on Federal Com-
- 2 PROMISES.—Not later than 2 years after the date of en-
- 3 actment of this section, and not less frequently than annu-
- 4 ally thereafter, the Director of the Cybersecurity and In-
- 5 frastructure Security Agency, in consultation with the Di-
- 6 rector, shall submit to the appropriate notification entities
- 7 a report that includes—
- 8 "(1) a summary of causes of compromises from
- 9 across the Federal Government that categorizes
- those compromises by the items described in para-
- graphs (1) through (4) of subsection (a);
- 12 "(2) the quantitative and qualitative analyses of
- compromises developed under subsection (b)(2) on
- an agency-by-agency basis and comprehensively; and
- 15 "(3) an annex for each agency that includes the
- total number of compromises of the agency and cat-
- egorizes those compromises by the items described in
- paragraphs (1) through (4) of subsection (a).
- 19 "(d) Publication.—A version of each report sub-
- 20 mitted under subsection (c) shall be made publicly avail-
- 21 able on the website of the Cybersecurity and Infrastruc-
- 22 ture Security Agency during the year in which the report
- 23 is submitted.
- 24 "(e) Information Provided by Agencies.—The
- 25 analysis required under subsection (b) and each report

- 1 submitted under subsection (c) shall utilize information
- 2 provided by agencies pursuant to section 3594(d).
- 3 "(f) Requirement To Anonymize Informa-
- 4 TION.—In publishing the public report required under
- 5 subsection (d), the Director of the Cybersecurity and In-
- 6 frastructure Security Agency shall sufficiently anonymize
- 7 and compile information such that no specific incidents
- 8 of an agency can be identified, except with the concurrence
- 9 of the Director of the Office of Management and Budget
- 10 and in consultation with the impacted agency.

11 "§ 3598. Major incident guidance

- 12 "(a) IN GENERAL.—Not later than 90 days after the
- 13 date of enactment of the Federal Information Security
- 14 Management Act of 2021, the Director, in coordination
- 15 with the Director of the Cybersecurity and Infrastructure
- 16 Security Agency, shall develop and promulgate guidance
- 17 on the definition of the term 'major incident' for the pur-
- 18 poses of subchapter II and this subchapter.
- 19 "(b) Requirements.—With respect to the guidance
- 20 issued under subsection (a), the definition of the term
- 21 'major incident' shall—
- 22 "(1) include, with respect to any information
- collected or maintained by or on behalf of an agency
- or an information system used or operated by an

1	agency or by a contractor of an agency or another
2	organization on behalf of an agency—
3	"(A) any incident the head of the agency
4	determines is likely to have an impact on the
5	national security, homeland security, or eco-
6	nomic security of the United States;
7	"(B) any incident the head of the agency
8	determines is likely to have an impact on the
9	operations of the agency, a component of the
10	agency, or the Federal Government, including
11	an impact on the efficiency or effectiveness of
12	agency information systems;
13	"(C) any incident that the head of an
14	agency, in consultation with the Chief Privacy
15	Officer of the agency, determines involves a
16	high risk incident in accordance with the guid-
17	ance issued under subsection (c)(1);
18	"(D) any incident that involves the unau-
19	thorized disclosure of personally identifiable in-
20	formation of not less than 500 individuals, re-
21	gardless of the risk level determined under the
22	guidance issued under subsection $(c)(1)$;
23	"(E) any incident the head of the agency
24	determines involves a high value asset owned or
25	operated by the agency; and

1	"(F) any other type of incident determined
2	appropriate by the Director;
3	"(2) stipulate that every agency shall be consid-
4	ered to have experienced a major incident if the Di-
5	rector of the Cybersecurity and Infrastructure Secu-
6	rity Agency determines that an incident that occurs
7	at not less than 2 agencies—
8	"(A) is enabled by a common technical
9	root cause, such as a supply chain compromise,
10	a common software or hardware vulnerability;
11	or
12	"(B) is enabled by the related activities of
13	a common actor; and
14	"(3) stipulate that, in determining whether an
15	incident constitutes a major incident because that
16	incident—
17	"(A) is any incident described in para-
18	graph (1), the head of an agency shall consult
19	with the Director of the Cybersecurity and In-
20	frastructure Security Agency;
21	"(B) is an incident described in paragraph
22	(1)(A), the head of the agency shall consult
23	with the National Cyber Director; and

1	"(C) is an incident described in subpara-
2	graph (C) or (D) of paragraph (1), the head of
3	the agency shall consult with—
4	"(i) the Privacy and Civil Liberties
5	Oversight Board; and
6	"(ii) the Executive Director of the
7	Federal Trade Commission.
8	"(c) Guidance on Risk to Individuals.—
9	"(1) In general.—Not later than 90 days
10	after the date of enactment of the Federal Informa-
11	tion Security Modernization Act of 2021, the Direc-
12	tor, in coordination with the Director of the Cyber-
13	security and Infrastructure Security Agency, the
14	Privacy and Civil Liberties Oversight Board, and the
15	Executive Director of the Federal Trade Commis-
16	sion, shall develop and issue guidance to agencies
17	that establishes a risk-based framework for deter-
18	mining the level of risk that an incident involving
19	personally identifiable information could result in
20	substantial harm, physical harm, embarrassment, or
21	unfairness to an individual.
22	"(2) Risk levels and considerations.—The
23	risk-based framework included in the guidance
24	issued under paragraph (1) shall—

1	"(A) include a range of risk levels, includ-
2	ing a high risk level; and
3	"(B) consider—
4	"(i) any personally identifiable infor-
5	mation that was exposed as a result of an
6	incident;
7	"(ii) the circumstances under which
8	the exposure of personally identifiable in-
9	formation of an individual occurred; and
10	"(iii) whether an independent evalua-
11	tion of the information affected by an inci-
12	dent determines that the information is
13	unreadable, including, as appropriate, in-
14	stances in which the information is—
15	"(I) encrypted; and
16	"(II) determined by the Director
17	of the Cybersecurity and Infrastruc-
18	ture Security Agency to be of suffi-
19	ciently low risk of exposure.
20	"(3) Approval.—
21	"(A) In General.—The guidance issued
22	under paragraph (1) shall include a process by
23	which the Director, jointly with the Director of
24	the Cybersecurity and Infrastructure Security
25	Agency and the Attorney General, may approve

1	the designation of an incident that would be
2	considered high risk as lower risk if information
3	exposed by the incident is unreadable, as de-
4	scribed in paragraph (2)(B)(iii).
5	"(B) DOCUMENTATION.—The Director
6	shall report any approval of an incident granted
7	by the Director under subparagraph (A) to—
8	"(i) the head of the agency that expe-
9	rienced the incident;
10	"(ii) the inspector general of the agen-
11	cy that experienced the incident; and
12	"(iii) the Director of the Cybersecu-
13	rity and Infrastructure Security Agency.
14	"(d) Evaluation and Updates.—Not later than 2
15	years after the date of enactment of the Federal Informa-
16	tion Security Modernization Act of 2021, and not less fre-
17	quently than every 2 years thereafter, the Director shall
18	submit to the Committee on Homeland Security and Gov-
19	ernmental Affairs of the Senate and the Committee on
20	Oversight and Reform of the House of Representatives an
21	evaluation, which shall include—
22	"(1) an update, if necessary, to the guidance
23	issued under subsections (a) and (c);
24	"(2) the definition of the term 'major incident'
25	included in the guidance issued under subsection (a):

- "(3) an explanation of, and the analysis that led to, the definition described in paragraph (2); and "(4) an assessment of any additional datasets or risk evaluation criteria that should be included in
- the risk-based framework included in the guidance issued under subsection (c)(1).".
- 7 (2) CLERICAL AMENDMENT.—The table of sec-8 tions for chapter 35 of title 44, United States Code, 9 is amended by adding at the end the following:

"SUBCHAPTER IV—FEDERAL SYSTEM INCIDENT RESPONSE

10 SEC. 102. AMENDMENTS TO SUBTITLE III OF TITLE 40.

- 11 (a) Information Technology Modernization
- 12 Centers of Excellence Program Act.—Section
- 13 2(c)(4)(A)(ii) of the Information Technology Moderniza-
- 14 tion Centers of Excellence Program Act (40 U.S.C. 11301
- 15 note) is amended by striking the period at the end and
- 16 inserting ", which shall be provided in coordination with
- 17 the Director of the Cybersecurity and Infrastructure Secu-
- 18 rity Agency.".
- 19 (b) Modernizing Government Technology.—
- 20 Subtitle G of title X of Division A of the National Defense

[&]quot;3591. Definitions.

[&]quot;3592. Notification of high risk exposure after major incident.

[&]quot;3593. Congressional notifications and reports.

[&]quot;3594. Government information sharing and incident response.

[&]quot;3595. Responsibilities of contractors and grant recipients.

[&]quot;3596. Training.

[&]quot;3597. Analysis and report on Federal incidents.

[&]quot;3598. Major incident guidance.".

1	Authorization Act for Fiscal Year 2018 (40 U.S.C. 11301
2	note) is amended—
3	(1) in section 1077(b)—
4	(A) in paragraph (5)(A), by inserting "im-
5	proving the cybersecurity of systems and" be-
6	fore "cost savings activities"; and
7	(B) in paragraph (7)—
8	(i) in the paragraph heading, by strik-
9	ing "CIO" and inserting "CIO";
10	(ii) by striking "In evaluating
11	projects" and inserting the following:
12	"(A) Consideration of Guidance.—In
13	evaluating projects";
14	(iii) in subparagraph (A), as so des-
15	ignated, by striking "under section
16	1094(b)(1)" and inserting "guidance
17	issued by the Director"; and
18	(iv) by adding at the end the fol-
19	lowing:
20	"(B) Consultation.—In using funds
21	under paragraph (3)(A), the Chief Information
22	Officer of the covered agency shall consult with
23	the Director of the Cybersecurity and Infra-
24	structure Security Agency."; and
25	(2) in section 1078—

1	(A) by striking subsection (a) and insert-
2	ing the following:
3	"(a) Definitions.—In this section:
4	"(1) AGENCY.—The term 'agency' has the
5	meaning given the term in section 551 of title 5,
6	United States Code.
7	"(2) High value asset.—The term 'high
8	value asset' has the meaning given the term in sec-
9	tion 3552 of title 44, United States Code.";
10	(B) in subsection (b), by adding at the end
11	the following:
12	"(8) Proposal Evaluation.—The Director
13	shall—
14	"(A) give consideration for the use of
15	amounts in the Fund to improve the security of
16	high value assets; and
17	"(B) require that any proposal for the use
18	of amounts in the Fund includes a cybersecu-
19	rity plan, including a chain risk management
20	plan, to be reviewed by the member of the
21	Technology Modernization Board described in
22	subsection $(c)(5)(C)$."; and
23	(C) in subsection (c)—
24	(i) in paragraph (2)(A)(i), by insert-
25	ing ", including a consideration of the im-

1	pact on high value assets" after "oper-
2	ational risks";
3	(ii) in paragraph (5)—
4	(I) in subparagraph (A), by strik-
5	ing "and" at the end;
6	(II) in subparagraph (B), by
7	striking the period at the end and in-
8	serting "and"; and
9	(III) by adding at the end the
10	following:
11	"(C) a senior official from the Cybersecu-
12	rity and Infrastructure Security Agency of the
13	Department of Homeland Security, appointed
14	by the Director."; and
15	(iii) in paragraph (6)(A), by striking
16	"shall be—" and all that follows through
17	"4 employees" and inserting "shall be 4
18	employees".
19	(c) Subchapter I.—Subchapter I of subtitle III of
20	title 40, United States Code, is amended—
21	(1) in section 11302—
22	(A) in subsection (b), by striking "use, se-
23	curity, and disposal of" and inserting "use, and
24	disposal, and, in coordination with the Director
25	of the Cybersecurity and Infrastructure Secu-

1	rity Agency, promote and improve the security,
2	of";
3	(B) in subsection (c)—
4	(i) in paragraph (2), by inserting "in
5	consultation with the Director of the Cy-
6	bersecurity and Infrastructure Security
7	Agency" before ", and results of";
8	(ii) in paragraph (3)—
9	(I) in subparagraph (A), by strik-
10	ing ", and performance" and inserting
11	"security, and performance"; and
12	(II) in subparagraph (C)—
13	(aa) by striking "For each
14	major" and inserting the fol-
15	lowing:
16	"(i) In general.—For each major";
17	and
18	(bb) by adding at the end
19	the following:
20	"(ii) Cybersecurity.—In catego-
21	rizing an investment according to risk
22	under clause (i), the Chief Information Of-
23	ficer of the covered agency shall consult
24	with the Director of the Cybersecurity and

1	Infrastructure Security Agency on the cy-
2	bersecurity or supply chain risk.
3	"(iii) Security risk guidance.—
4	The Director, in coordination with the Di-
5	rector of the Cybersecurity and Infrastruc-
6	ture Security Agency, shall issue guidance
7	for the categorization of an investment
8	under clause (i) according to the cyberse-
9	curity or supply chain risk."; and
10	(iii) in paragraph (4)—
11	(I) in subparagraph (A)—
12	(aa) in clause (ii), by strik-
13	ing "and" at the end;
14	(bb) in clause (iii), by strik-
15	ing the period at the end and in-
16	serting "; and; and
17	(cc) by adding at the end
18	the following:
19	"(iv) in consultation with the Director
20	of the Cybersecurity and Infrastructure Se-
21	curity Agency, the cybersecurity risks of
22	the investment."; and
23	(II) in subparagraph (B), in the
24	matter preceding clause (i), by insert-
25	ing "not later than 30 days after the

1	date on which the review under sub-
2	paragraph (A) is completed," before
3	"the Administrator";
4	(C) in subsection (f)—
5	(i) by striking "heads of executive
6	agencies to develop" and inserting "heads
7	of executive agencies to—
8	"(1) develop";
9	(ii) in paragraph (1), as so des-
10	ignated, by striking the period at the end
11	and inserting "; and"; and
12	(iii) by adding at the end the fol-
13	lowing:
14	"(2) consult with the Director of the Cybersecu-
15	rity and Infrastructure Security Agency for the de-
16	velopment and use of supply chain security best
17	practices."; and
18	(D) in subsection (h), by inserting ", in-
19	cluding cybersecurity performances," after "the
20	performances"; and
21	(2) in section 11303(b)(2)(B)—
22	(A) in clause (i), by striking "or" at the
23	end;
24	(B) in clause (ii), by adding "or" at the
25	end; and

1	(C) by adding at the end the following:
2	"(iii) whether the function should be
3	performed by a shared service offered by
4	another executive agency;".
5	(d) Subchapter II.—Subchapter II of subtitle III
6	of title 40, United States Code, is amended—
7	(1) in section 11312(a), by inserting ", includ-
8	ing security risks" after "managing the risks";
9	(2) in section 11313(1), by striking "efficiency
10	and effectiveness" and inserting "efficiency, security,
11	and effectiveness";
12	(3) in section 11317, by inserting "security,"
13	before "or schedule"; and
14	(4) in section 11319(b)(1), in the paragraph
15	heading, by striking "CIOS" and inserting "CHIEF
16	INFORMATION OFFICERS".
17	(e) Subchapter III.—Section 11331 of title 40,
18	United States Code, is amended—
19	(1) in subsection (a), by striking "section
20	3532(b)(1)" and inserting "section 3552(b)";
21	(2) in subsection $(b)(1)(A)$ —
22	(A) by striking "in consultation" and in-
23	serting "in coordination";
24	(B) by striking "the Secretary of Home-
25	land Security" and inserting "the Director of

1	the Cybersecurity and Infrastructure Security
2	Agency"; and
3	(C) by inserting "and associated
4	verification specifications developed under sub-
5	section (g)" before "pertaining to Federal";
6	(3) by striking subsection (c) and inserting the
7	following:
8	"(c) Application of More Stringent Stand-
9	ARDS.—
10	"(1) IN GENERAL.—The head of an agency
11	shall—
12	"(A) evaluate the need to employ stand-
13	ards for cost-effective, risk-based information
14	security for all systems, operations, and assets
15	within or under the supervision of the agency
16	that are more stringent than the standards pro-
17	mulgated by the Director under this section, if
18	such standards contain, at a minimum, the pro-
19	visions of those applicable standards made com-
20	pulsory and binding by the Director; and
21	"(B) to the greatest extent practicable and
22	if the head of the agency determines that the
23	standards described in subparagraph (A) are
24	necessary, employ those standards.

1	"(2) Evaluation of more stringent stand-
2	ARDS.—In evaluating the need to employ more strin-
3	gent standards under paragraph (1), the head of an
4	agency shall consider available risk information, in-
5	cluding—
6	"(A) the status of cybersecurity remedial
7	actions of the agency;
8	"(B) any vulnerability information relating
9	to agency systems that is known to the agency
10	"(C) incident information of the agency;
11	"(D) information from—
12	"(i) penetration testing performed
13	under section 3559A of title 44; and
14	"(ii) information from the verification
15	disclosure program established under sec-
16	tion 3559B of title 44;
17	"(E) agency threat hunting results under
18	section 207 of the Federal Information Security
19	Modernization Act of 2021;
20	"(F) Federal and non-Federal threat intel-
21	ligence;
22	"(G) data on compliance with standards
23	issued under this section, using the verification
24	specifications developed under subsection (f)
25	when appropriate;

1	"(H) agency system risk assessments of
2	the agency performed under section
3	3554(a)(1)(A) of title 44; and
4	"(I) any other information determined rel-
5	evant by the head of the agency.";
6	(4) in subsection $(d)(2)$ —
7	(A) by striking the paragraph heading and
8	inserting "Consultation, Notice, and com-
9	MENT'';
10	(B) by inserting "promulgate," before
11	"significantly modify"; and
12	(C) by striking "shall be made after the
13	public is given an opportunity to comment on
14	the Director's proposed decision." and inserting
15	"shall be made—
16	"(A) for a decision to significantly modify
17	or not promulgate such a proposed standard,
18	after the public is given an opportunity to com-
19	ment on the Director's proposed decision;
20	"(B) in consultation with the Chief Infor-
21	mation Officers Council, the Director of the Cy-
22	bersecurity and Infrastructure Security Agency,
23	the National Cyber Director, the Comptroller
24	General of the United States, and the Council

1	of the Inspectors General on Integrity and Effi-
2	ciency;
3	"(C) considering the Federal risk assess-
4	ments performed under section 3553(i) of title
5	44; and
6	"(D) considering the extent to which the
7	proposed standard reduces risk relative to the
8	cost of implementation of the standard."; and
9	(5) by adding at the end the following:
10	"(e) Review of Promulgated Standards.—
11	"(1) In general.—Not less frequently than
12	once every 2 years, the Director of the Office of
13	Management and Budget, in consultation with the
14	Chief Information Officers Council, the Director of
15	the Cybersecurity and Infrastructure Security Agen-
16	cy, the National Cyber Director, the Comptroller
17	General of the United States, and the Council of the
18	Inspectors General on Integrity and Efficiency shall
19	review the efficacy of the standards in effect promul-
20	gated under this section in reducing cybersecurity
21	risks and determine whether any changes to those
22	standards are appropriate based on—
23	"(A) the Federal risk assessment developed
24	under section 3553(i) of title 44;
25	"(B) public comment; and

1	"(C) an assessment of the extent to which
2	the proposed standards reduce risk relative to
3	the cost of implementation of the standards.
4	"(2) UPDATED GUIDANCE.—Not later than 90
5	days after the date of the completion of the review
6	under paragraph (1), the Director of the Office of
7	Management and Budget shall issue guidance to
8	agencies to make any necessary updates to the
9	standards in effect promulgated under this section
10	based on the results of the review.
11	"(3) Congressional Report.—Not later than
12	30 days after the date on which a review is com-
13	pleted under paragraph (1), the Director shall sub-
14	mit to the Committee on Homeland Security and
15	Governmental Affairs of the Senate and the Com-
16	mittee on Oversight and Reform of the House of
17	Representatives a report that includes—
18	"(A) the review of the standards in effect
19	promulgated under this section conducted under
20	paragraph (1);
21	"(B) the risk mitigation offered by each
22	standard described in subparagraph (A); and
23	"(C) a summary of—

1	"(i) the standards to which changes
2	were determined appropriate during the re-
3	view; and
4	"(ii) anticipated changes to the stand-
5	ards under this section in guidance issued
6	under paragraph (2).
7	"(f) Verification Specifications.—Not later than
8	1 year after the date on which the Director of the National
9	Institute of Standards and Technology issues a proposed
10	standard pursuant to paragraphs (2) and (3) of section
11	20(a) of the National Institute of Standards and Tech-
12	nology Act (15 U.S.C. 278g-3(a)), the Director of the Cy-
13	bersecurity and Infrastructure Security Agency, in con-
14	sultation with the Director of the National Institute of
15	Standards and Technology, as practicable, shall develop
16	technical specifications to enable the automated
17	verification of the implementation of the controls within
18	the standard.".
19	SEC. 103. ACTIONS TO ENHANCE FEDERAL INCIDENT RE-
20	SPONSE.
21	(a) Responsibilities of the Cybersecurity and
22	Infrastructure Security Agency.—
23	(1) Recommendations.—Not later than 180
24	days after the date of enactment of this Act, the Di-
25	rector of the Cybersecurity and Infrastructure Secu-

1	rity Agency, in coordination with the Chair of the
2	Federal Trade Commission, the Chair of the Securi-
3	ties and Exchange Commission, the Secretary of the
4	Treasury, the Director of the Federal Bureau of In-
5	vestigation, the Director of the National Institute of
6	Standards and Technology, and the head of any
7	other appropriate Federal or non-Federal entity,
8	shall consolidate, maintain, and make publicly avail-
9	able recommendations for individuals whose personal
10	information, as defined in section 3591 of title 44,
11	United States Code, as added by this Act, is inap-
12	propriately exposed as a result of a high risk inci-
13	dent described in section 3598(c)(2) of title 44,
14	United States Code.
15	(2) Plan for analysis of, and report on,
16	FEDERAL INCIDENTS.—
17	(A) In General.—Not later than 180
18	days after the date of enactment of this Act,
19	the Director of the Cybersecurity and Infra-
20	structure Security Agency shall—
21	(i) develop a plan for the development
22	of the analysis required under section
23	3597(b) of title 44, United States Code, as
24	added by this Act, and the report required

1	under subsection (c) of that section that
2	includes—
3	(I) a description of any chal-
4	lenges the Director anticipates en-
5	countering; and
6	(II) the use of automation and
7	machine-readable formats for col-
8	lecting, compiling, monitoring, and
9	analyzing data; and
10	(ii) provide to the appropriate con-
11	gressional committees a briefing on the
12	plan developed under clause (i).
13	(B) Briefing.—Not later than 1 year
14	after the date of enactment of this Act, the Di-
15	rector of the Cybersecurity and Infrastructure
16	Security Agency shall provide to the appro-
17	priate congressional committees a briefing on—
18	(i) the execution of the plan required
19	under subparagraph (A); and
20	(ii) the development of the report re-
21	quired under section 3597(c) of title 44,
22	United States Code, as added by this Act.
23	(b) Responsibilities of the Director of the
24	Office of Management and Budget.—

1	(1) FISMA.—Section 2 of the Federal Informa-
2	tion Security Modernization Act of 2014 (44 U.S.C.
3	3554 note) is amended—
4	(A) by striking subsection (b); and
5	(B) by redesignating subsections (c)
6	through (f) as subsections (b) through (e), re-
7	spectively.
8	(2) Incident data sharing.—
9	(A) In general.—The Director shall de-
10	velop guidance, to be updated not less fre-
11	quently than once every 2 years, on the content,
12	timeliness, and format of the information pro-
13	vided by agencies under section 3594(a) of title
14	44, United States Code, as added by this Act.
15	(B) REQUIREMENTS.—The guidance devel-
16	oped under subparagraph (A) shall—
17	(i) prioritize the availability of data
18	necessary to understand and analyze—
19	(I) the causes of incidents;
20	(II) the scope and scale of inci-
21	dents within the agency networks and
22	systems;
23	(III) cross Federal Government
24	root causes of incidents;

1	(IV) agency response, recovery,
2	and remediation actions; and
3	(V) the effectiveness of incidents;
4	(ii) enable the efficient development
5	of—
6	(I) lessons learned and rec-
7	ommendations in responding to, recov-
8	ering from, remediating, and miti-
9	gating future incidents; and
10	(II) the report on Federal com-
11	promises required under section
12	3597(c) of title 44, United States
13	Code, as added by this Act;
14	(iii) include requirements for the time-
15	liness of data production; and
16	(iv) include requirements for using
17	automation and machine-readable data for
18	data sharing and availability.
19	(3) Guidance on responding to informa-
20	TION REQUESTS.—Not later than 1 year after the
21	date of enactment of this Act, the Director shall de-
22	velop guidance for agencies to implement the re-
23	quirement under section 3594(c) of title 44, United
24	States Code, as added by this Act, to provide infor-
25	mation to other agencies experiencing incidents.

(4) STANDARD GUIDANCE AND TEMPLATES.—
Not later than 1 year after the date of enactment of this Act, the Director, in coordination with the Director of the Cybersecurity and Infrastructure Security Agency, shall develop guidance and templates, to be reviewed and, if necessary, updated not less frequently than once every 2 years, for use by Federal agencies in the activities required under sections 3592, 3593, and 3596 of title 44, United States Code, as added by this Act.

(5) Contractor and grantee guidance.—

(A) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Director, in coordination with the Secretary of Homeland Security, the Secretary of Defense, the Administrator of General Services, and the heads of other agencies determined appropriate by the Director, shall issue guidance to Federal agencies on how to deconflict existing regulations, policies, and procedures relating to the responsibilities of contractors and grant recipients established under section 3595 of title 44, United States Code, as added by this Act.

(B) Existing processes.—To the greatest extent practicable, the guidance issued

- under subparagraph (A) shall allow contractors and grantees to use existing processes for notifying Federal agencies of incidents involving information of the Federal Government.
- 5 (6) UPDATED BRIEFINGS.—Not less frequently
 6 than once every 2 years, the Director shall provide
 7 to the appropriate congressional committees an up8 date on the guidance and templates developed under
 9 paragraphs (2) through (4).
- 10 (c) UPDATE TO THE PRIVACY ACT OF 1974.—Sec-11 tion 552a(b) of title 5, United States Code (commonly 12 known as the "Privacy Act of 1974") is amended—
- 13 (1) in paragraph (11), by striking "or" at the end;
- 15 (2) in paragraph (12), by striking the period at 16 the end and inserting "; and"; and
- 17 (3) by adding at the end the following:
- 18 "(13) to another agency in furtherance of a re-19 sponse to an incident (as defined in section 3552 of 20 title 44) and pursuant to the information sharing re-21 quirements in section 3594 of title 44 if the head of 22 the requesting agency has made a written request to 23 the agency that maintains the record specifying the 24 particular portion desired and the activity for which 25 the record is sought.".

1	SEC. 104. ADDITIONAL GUIDANCE TO AGENCIES ON FISMA
2	UPDATES.
3	Not later than 1 year after the date of enactment
4	of this Act, the Director, in coordination with the Director
5	of the Cybersecurity and Infrastructure Security Agency,
6	shall issue guidance for agencies on—
7	(1) completing the agency system risk assess-
8	ment required under section 3554(a)(1)(A) of title
9	44, United States Code, as amended by this Act;
10	(2) implementing additional cybersecurity pro-
11	cedures, which shall include resources for shared
12	services;
13	(3) establishing a process for providing the sta-
14	tus of each remedial action under section 3554(b)(7)
15	of title 44, United States Code, as amended by this
16	Act, to the Director and the Cybersecurity and In-
17	frastructure Security Agency using automation and
18	machine-readable data, as practicable, which shall
19	include—
20	(A) specific standards for the automation
21	and machine-readable data; and
22	(B) templates for providing the status of
23	the remedial action;
24	(4) interpreting the definition of "high value
25	asset" in section 3552 of title 44, United States
26	Code, as amended by this Act:

1	(5) implementing standards in agency author-
2	ization processes to encourage the tailoring of proc-
3	esses to agency and system risk that are propor-
4	tionate to the sensitivity of systems, which shall in-
5	clude—
6	(A) a clarification of—
7	(i) the acceptable use and develop-
8	ment of customization of standards pro-
9	mulgated under section 11331 of title 40,
10	United States Code; and
11	(ii) the acceptable use of risk-based
12	authorization procedures authorized on the
13	date of enactment of this Act; and
14	(B) a requirement to coordinate with In-
15	spectors Generals of agencies to ensure con-
16	sistent understanding and application of agency
17	policies for the purpose of Inspector General
18	audits; and
19	(6) requiring, as practicable and pursuant to
20	section 203, an evaluation of agency cybersecurity
21	using metrics that are—
22	(A) based on outcomes; and
23	(B) based on time.

1	SEC. 105. AGENCY REQUIREMENTS TO NOTIFY ENTITIES
2	IMPACTED BY INCIDENTS.
3	Not later than 180 days after the date of enactment
4	of this Act, the Director shall issue guidance that requires
5	agencies to notify entities that are compelled to share sen-
6	sitive information with the agency of an incident that im-
7	pacts—
8	(1) sensitive information shared with the agen-
9	cy by the entity; or
10	(2) the systems used to the transmit sensitive
11	information described in paragraph (1) to the agen-
12	ey.
13	TITLE II—IMPROVING FEDERAL
14	CYBERSECURITY
14 15	CYBERSECURITY SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS.
15	SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS.
15 16 17	SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS. (a) IN GENERAL.—As a component of the evaluation
15 16 17	SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS. (a) IN GENERAL.—As a component of the evaluation and report required under section 3555(h) of title 44,
15 16 17 18	SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS. (a) IN GENERAL.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the
15 16 17 18 19	sec. 201. Evaluation of Effectiveness of Standards. (a) In General.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the date of enactment of this Act, the Comptroller General
15 16 17 18 19 20	SEC. 201. EVALUATION OF EFFECTIVENESS OF STANDARDS. (a) IN GENERAL.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall perform a study that—
15 16 17 18 19 20 21	sec. 201. Evaluation of Effectiveness of standards. (a) In General.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall perform a study that— (1) assesses the standards promulgated under
15 16 17 18 19 20 21 22	sec. 201. Evaluation of Effectiveness of standards. (a) In General.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall perform a study that— (1) assesses the standards promulgated under section 11331(b) of title 40, United States Code to
15 16 17 18 19 20 21 22 23	sec. 201. Evaluation of Effectiveness of Standards. (a) In General.—As a component of the evaluation and report required under section 3555(h) of title 44, United States Code, and not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall perform a study that— (1) assesses the standards promulgated under section 11331(b) of title 40, United States Code to determine the degree to which agencies use the au-

1	(2) assesses the effectiveness of the standards
2	described in paragraph (1), including any standards
3	customized by agencies under section 11331(c)(1) of
4	title 40, United States Code, at improving agency
5	cybersecurity;
6	(3) examines the quantification of cybersecurity
7	risk in the private sector for any applicability for use
8	by the Federal Government;
9	(4) examines cybersecurity metrics existing as
10	of the date of enactment of this Act used by the Di-
11	rector, the Director of the Cybersecurity and Infra-
12	structure Security Agency, and the heads of other
13	agencies to evaluate the effectiveness of information
14	security policies and practices; and
15	(5) with respect to the standards described in
16	paragraph (1), provides recommendations for—
17	(A) the addition or removal of standards;
18	or
19	(B) the customization of—
20	(i) the standards by agencies under
21	section 11331(c)(1) of title 40, United
22	States Code; or
23	(ii) specific controls within the stand-
24	ards.

- 1 (b) Incorporation of Study.—The Director shall
- 2 incorporate the results of the study performed under sub-
- 3 section (a) into the review of standards required under
- 4 section 11331(e) of title 40, United States Code.
- 5 (c) Briefing.—Not later than 30 days after the date
- 6 on which the study performed under subsection (a) is com-
- 7 pleted, the Comptroller General of the United States shall
- 8 provide to the appropriate congressional committees a
- 9 briefing on the study.
- 10 SEC. 202. MOBILE SECURITY STANDARDS.
- 11 (a) IN GENERAL.—Not later than 1 year after the
- 12 date of enactment of this Act, the Director shall—
- (1) evaluate mobile application security stand-
- ards promulgated under section 11331(b) of title 44,
- 15 United States Code; and
- 16 (2) issue guidance to implement mobile security
- standards in effect on the date of enactment of this
- 18 Act promulgated under section 11331(b) of title 40,
- 19 United States Code, including for mobile applica-
- 20 tions, for every agency.
- 21 (b) Contents.—The guidance issued under sub-
- 22 section (a)(2) shall include—
- 23 (1) a requirement, pursuant to section
- 3506(b)(4) of title 44, United States Code, for every

1	agency to maintain a continuous inventory of
2	every—
3	(A) mobile device operated by or on behalf
4	of the agency;
5	(B) mobile application installed on a mo-
6	bile device described in subparagraph (A); and
7	(C) vulnerability identified by the agency
8	associated with a mobile device or mobile appli-
9	cation described in subparagraphs (A) and (B);
10	and
11	(2) a requirement for every agency to perform
12	continuous evaluation of the vulnerabilities described
13	in paragraph (1)(C) and other risks.
14	(c) Information Sharing.—The Director, in co-
15	ordination with the Director of the Cybersecurity and In-
16	frastructure Security Agency, shall issue guidance to
17	agencies for sharing the inventory of the agency required
18	under subsection $(b)(1)$ with the Director of the Cyberse-
19	curity and Infrastructure Security Agency, using automa-
20	tion and machine-readable data to the greatest extent
21	practicable.
22	(d) Briefing.—Not later than 60 days after the date
23	on which the Director issues guidance under subsection
24	(a)(2), the Director, in coordination with the Director of
25	the Cybersecurity and Infrastructure Security Agency,

1	shall provide to the appropriate congressional committees
2	a briefing on the guidance.
3	SEC. 203. QUANTITATIVE CYBERSECURITY METRICS.
4	(a) Establishing Time-Based Metrics.—
5	(1) IN GENERAL.—Not later than 1 year after
6	the date of enactment of this Act, the Director of
7	the Cybersecurity and Infrastructure Security Agen-
8	cy shall—
9	(A) update the metrics used to measure se-
10	curity under section 3554 of title 44, United
11	States Code, including any metrics developed
12	pursuant to section 224(c) of the Cybersecurity
13	Act of 2015 (6 U.S.C. 1522(c)), to include
14	standardized metrics to quantitatively evaluate
15	and identify trends in agency cybersecurity per-
16	formance, including performance for incident
17	response; and
18	(B) evaluate the metrics described in sub-
19	paragraph (A).
20	(2) QUALITIES.—With respect to the updated
21	metrics required under paragraph (1)—
22	(A) not less than 2 of the metrics shall be
23	time-based; and
24	(B) the metrics may include other measur-
25	able outcomes.

1	(3) Evaluation.—The evaluation required
2	under paragraph (1)(B) shall evaluate—
3	(A) the amount of time it takes for an
4	agency to detect an incident; and
5	(B) the amount of time that passes be-
6	tween—
7	(i) the detection and remediation of
8	an incident; and
9	(ii) the remediation of an incident and
10	the recovery from the incident.
11	(b) Implementation.—
12	(1) In general.—The Director, in coordina-
13	tion with the Director of the Cybersecurity and In-
14	frastructure Security Agency, shall promulgate guid-
15	ance that requires the use of the updated metrics de-
16	veloped under subsection (a)(1)(A) by every agency
17	over a 4-year period beginning on the date on which
18	the metrics are developed to track trends in the inci-
19	dent response capabilities of agencies.
20	(2) Penetration tests.—On not less than 2
21	occasions during the 2-year period following the date
22	on which guidance is promulgated under paragraph
23	(1), not less than 3 agencies shall be subjected to
24	substantially similar penetration tests in order to

1	validate the utility of the metrics developed under
2	subsection $(a)(1)(A)$.
3	(3) Database.—The Director of the Cyberse-
4	curity and Infrastructure Security Agency shall de-
5	velop and use a database that—
6	(A) stores agency metrics information; and
7	(B) allows for the performance of cross-
8	agency comparison of agency incident response
9	capability trends.
10	(c) Updated Metrics.—
11	(1) In general.—The Director may issue
12	guidance that updates the metrics developed under
13	subsection (a)(1)(A) if the updated metrics—
14	(A) have the qualities described in sub-
15	section $(a)(2)$; and
16	(B) can be evaluated under subsection
17	(a)(3).
18	(2) Data sharing.—The guidance issued
19	under paragraph (1) shall require agencies to share
20	with the Director of the Cybersecurity and Infra-
21	structure Security Agency data demonstrating the
22	performance of the agency with the updated metrics
23	included in that guidance against the metrics devel-
24	oped under subsection (a)(1)(A).
25	(d) Congressional Reports —

- 1 (1) UPDATED METRICS.—Not later than 30 2 days after the date on which the Director of the Cy-3 bersecurity and Infrastructure Security completes 4 the evaluation required under subsection (a)(1)(B), 5 the Director of the Cybersecurity and Infrastructure 6 Security Agency shall submit to the appropriate con-7 gressional committees a report on the updated 8 metrics developed under subsection (a)(1)(A).
- 9 (2) PROGRAM.—Not later than 180 days after 10 the date on which guidance is promulgated under 11 subsection (b)(1), the Director shall submit to the 12 appropriate congressional committees a report on 13 the results of the use of the updated metrics devel-14 oped under subsection (a)(1)(A) by agencies.

15 SEC. 204. DATA AND LOGGING RETENTION FOR INCIDENT 16 RESPONSE.

17 (a) RECOMMENDATIONS.—Not later than 60 days
18 after the date of enactment of this Act, the Director of
19 the Cybersecurity and Infrastructure Security Agency, in
20 consultation with the Attorney General and the National
21 Cyber Director, shall submit to the Director recommenda22 tions on requirements for logging events on agency sys23 tems and retaining other relevant data within the systems
24 and networks of an agency.

1	(b) Contents.—The recommendations provided
2	under subsection (a) shall include—
3	(1) the types of logs to be maintained;
4	(2) the time periods to retain the logs and other
5	relevant data;
6	(3) the time periods for agencies to enable rec-
7	ommended logging and security requirements;
8	(4) how to ensure the confidentiality, integrity,
9	and availability of logs;
10	(5) requirements to ensure that, upon request,
11	agencies provide logs to—
12	(A) the Director of the Cybersecurity and
13	Infrastructure Security Agency for a cybersecu-
14	rity purpose; and
15	(B) the Federal Bureau of Investigation to
16	investigate potential criminal activity; and
17	(6) ensuring the highest level security oper-
18	ations center of each agency has visibility into all
19	agency logs.
20	(c) Guidance.—Not later than 90 days after receiv-
21	ing the recommendations submitted under subsection (a),
22	the Director, in consultation with the Director of the Cy-
23	bersecurity and Infrastructure Security Agency and the
24	Attorney General, shall promulgate guidance to agencies
25	to establish requirements for logging, log retention, log

- 1 management, and sharing of log data with other appro-
- 2 priate agencies.
- 3 (d) Periodic Review.—Not later than 2 years after
- 4 the date on which the Director of the Cybersecurity and
- 5 Infrastructure Security Agency submits the recommenda-
- 6 tions required under subsection (a), and not less fre-
- 7 quently than every 2 years thereafter, the Director of the
- 8 Cybersecurity and Infrastructure Security Agency, in con-
- 9 sultation with the Attorney General, shall evaluate the rec-
- 10 ommendations and provide an update on the recommenda-
- 11 tions to the Director as necessary.
- 12 SEC. 205. CISA AGENCY ADVISORS.
- 13 (a) IN GENERAL.—Not later than 120 days after the
- 14 date of enactment of this Act, the Director of the Cyberse-
- 15 curity and Infrastructure Security Agency shall assign not
- 16 less than 1 cybersecurity professional employed by the Cy-
- 17 bersecurity and Infrastructure Security Agency to be the
- 18 Cybersecurity and Infrastructure Security Agency advisor
- 19 to the Chief Information Officer of each agency.
- 20 (b) QUALIFICATIONS.—Each advisor assigned under
- 21 subsection (a) shall have knowledge of—
- 22 (1) cybersecurity threats facing agencies, in-
- cluding any specific threats to the assigned agency;
- 24 (2) performing risk assessments of agency sys-
- 25 tems; and

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(3) other Federal cybersecurity initiatives.

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1	"(2) Rules of engagement.—The term
2	'rules of engagement' means a set of rules estab-
3	lished by an agency for the use of penetration test-
4	ing.
5	"(b) Guidance.—
6	"(1) In general.—Not later than 180 days
7	after the date of enactment of this Act, the Director
8	shall issue guidance that—
9	"(A) requires agencies to use, when and
10	where appropriate, penetration testing on agen-
11	cy systems; and
12	"(B) requires agencies to develop an agen-
13	cy operational plan and rules of engagement
14	that meet the requirements under subsection
15	(e).
16	"(2) Penetration testing guidance.—The
17	guidance issued under this section shall—
18	"(A) permit an agency to use, for the pur-
19	pose of performing penetration testing—
20	"(i) a shared service of the agency or
21	another agency; or
22	"(ii) an external entity, such as a ven-
23	dor;
24	"(B) include templates and frameworks for
25	reporting the results of penetration testing.

1	without regard to the status of the entity that
2	performs the penetration testing; and
3	"(C) require agencies to provide the rules
4	of engagement and results of penetration test-
5	ing to the Director and the Director of the Cy-
6	bersecurity and Infrastructure Security Agency,
7	without regard to the status of the entity that
8	performs the penetration testing.
9	"(c) Agency Plans and Rules of Engage-
10	MENT.—The agency operational plan and rules of engage-
11	ment of an agency shall—
12	"(1) require the agency to perform penetration
13	testing on the high value assets of the agency;
14	"(2) establish guidelines for avoiding, as a re-
15	sult of penetration testing—
16	"(A) adverse impacts to the operations of
17	the agency;
18	"(B) adverse impacts to operational net-
19	works and systems of the agency; and
20	"(C) inappropriate access to data;
21	"(3) require the results of penetration testing
22	to include feedback to improve the cybersecurity of
23	the agency; and
24	"(4) include mechanisms for providing consist-
25	ently formatted, and, if applicable, automated and

1	machine-readable, data to the Director and the Di-
2	rector of the Cybersecurity and Infrastructure Secu-
3	rity Agency.
4	"(d) Responsibilities of CISA.—The Director of
5	the Cybersecurity and Infrastructure Security Agency
6	shall—
7	"(1) establish a certification process for the
8	performance of penetration testing by both Federal
9	and non-Federal entities that establishes minimum
10	quality controls for penetration testing;
11	"(2) develop operational guidance for insti-
12	tuting penetration testing programs at agencies;
13	"(3) develop and maintain a centralized capa-
14	bility to offer penetration testing as a service to
15	Federal and non-Federal entities; and
16	"(4) provide guidance to agencies on the best
17	use of penetration testing resources.
18	"(e) Responsibilities of OMB.—The Director, in
19	coordination with the Director of the Cybersecurity and
20	Infrastructure Security Agency, shall—
21	"(1) not less frequently than annually, inven-
22	tory all Federal penetration testing assets; and
23	"(2) develop and maintain a Federal strategy
24	for the use of penetration testing.

"(f) Prioritization of Penetration Testing Re-
SOURCES.—
"(1) In General.—The Director, in coordina-
tion with the Director of the Cybersecurity and In-
frastructure Security Agency, shall develop a frame-
work for prioritizing Federal penetration testing re-
sources among agencies.
"(2) Considerations.—In developing the
framework under this subsection, the Director shall
consider—
"(A) agency system risk assessments per-
formed under section 3554(a)(1)(A);
"(B) the Federal risk assessment per-
formed under section 3553(i);
"(C) the analysis of Federal incident data
performed under section 3597; and
"(D) any other information determined ap-
propriate by the Director or the Director of the
Cybersecurity and Infrastructure Security
Agency.".
(b) Clerical Amendment.—The table of sections
for chapter 35 of title 44, United States Code, is amended
by adding after the item relating to section 3559 the fol-
lowing:

[&]quot;3559A. Federal penetration testing.".

1	(c) PENETRATION TESTING BY THE SECRETARY OF
2	HOMELAND SECURITY.—Section 3553(b) of title 44,
3	United States Code, as amended by section 1705 of the
4	William M. (Mac) Thornberry National Defense Author-
5	ization Act for Fiscal Year 2021 (Public Law 116–283)
6	and section 101, is further amended—
7	(1) in paragraph (8)(B), by striking "and" at
8	the end;
9	(2) by redesignating paragraph (9) as para-
10	graph (10); and
11	(3) by inserting after paragraph (8) the fol-
12	lowing:
13	"(9) performing penetration testing with or
14	without advance notice to, or authorization from,
15	agencies, to identify vulnerabilities within Federal
16	information systems; and".
17	SEC. 207. ONGOING THREAT HUNTING PROGRAM.
18	(a) Threat Hunting Program.—
19	(1) In general.—Not later than 540 days
20	after the date of enactment of this Act, the Director
21	of the Cybersecurity and Infrastructure Security
22	Agency shall establish a program to provide ongoing,
23	hypothesis-driven threat-hunting services on the net-
24	work of each agency.

1	(2) Plan.—Not later than 180 days after the
2	date of enactment of this Act, the Director of the
3	Cybersecurity and Infrastructure Security Agency
4	shall develop a plan to establish the program re-
5	quired under paragraph (1) that describes how the
6	Director of the Cybersecurity and Infrastructure Se-
7	curity Agency plans to—
8	(A) determine the method for collecting,
9	storing, accessing, and analyzing appropriate
10	agency data;
11	(B) provide on-premises support to agen-
12	cies;
13	(C) staff threat hunting services;
14	(D) allocate available human and financial
15	resources to implement the plan; and
16	(E) provide input to the heads of agencies
17	on the use of—
18	(i) more stringent standards under
19	section 11331(c)(1) of title 40, United
20	States Code; and
21	(ii) additional cybersecurity proce-
22	dures under section 3554 of title 44,
23	United States Code.

1	(b) Reports.—The Director of the Cybersecurity
2	and Infrastructure Security Agency shall submit to the ap-
3	propriate congressional committees—

- (1) not later than 30 days after the date on which the Director of the Cybersecurity and Infrastructure Security Agency completes the plan required under subsection (a)(2), a report on the plan to provide threat hunting services to agencies;
- (2) not less than 30 days before the date on which the Director of the Cybersecurity and Infrastructure Security Agency begins providing threat hunting services under the program, a report providing any updates to the plan developed under subsection (a)(2); and
- (3) not later than 1 year after the date on which the Director of the Cybersecurity and Infrastructure Security Agency begins providing threat hunting services to agencies other than the Cybersecurity and Infrastructure Security Agency, a report describing lessons learned from providing those services.

1	SEC. 208. CODIFYING VULNERABILITY DISCLOSURE PRO-
2	GRAMS.
3	(a) In General.—Chapter 35 of title 44 of United
4	States Code is amended by inserting after section 3559A,
5	as added by section 206 of this Act, the following:
6	"§ 3559B. Federal vulnerability disclosure programs
7	"(a) Definitions.—In this section:
8	"(1) Report.—The term 'report' means a vul-
9	nerability disclosure made to an agency by a re-
10	porter.
11	"(2) Reporter.—The term 'reporter' means
12	an individual that submits a vulnerability report
13	pursuant to the vulnerability disclosure process of an
14	agency.
15	"(b) Responsibilities of OMB.—
16	"(1) Limitation on legal action.—The Di-
17	rector, in consultation with the Attorney General,
18	shall issue guidance to agencies to not recommend or
19	pursue legal action against a reporter or an indi-
20	vidual that conducts a security research activity that
21	the head of the agency determines—
22	"(A) represents a good faith effort to fol-
23	low the vulnerability disclosure policy developed
24	under subsection $(d)(2)$ of the agency: and

1	"(B) is authorized under the vulnerability
2	disclosure policy developed under subsection
3	(d)(2) of the agency.
4	"(2) Sharing information with cisa.—The
5	Director, in coordination with the Director of the
6	Cybersecurity and Infrastructure Security Agency,
7	shall issue guidance to agencies on sharing relevant
8	information in a consistent, automated, and machine
9	readable manner with the Cybersecurity and Infra-
10	structure Security Agency, including—
11	"(A) any valid or credible reports of newly
12	discovered or not publicly known vulnerabilities
13	(including misconfigurations) on an agency in-
14	formation system that uses commercial software
15	or services;
16	"(B) information relating to vulnerability
17	disclosure, coordination, or remediation activi-
18	ties of an agency, particularly as those activities
19	relate to outside organizations—
20	"(i) with which the head of the agency
21	believes the Director of the Cybersecurity
22	and Infrastructure Security can assist; or
23	"(ii) about which the head of the
24	agency believes the Director of the Cyber-

1	security and Infrastructure Security should
2	know; and
3	"(C) any other information with respect to
4	which the head of the agency determines helpful
5	or necessary to involve the Cybersecurity and
6	Infrastructure Security Agency.
7	"(3) Agency vulnerability disclosure
8	POLICIES.—
9	"(A) In General.—The Director shall
10	issue guidance to agencies on the required min-
11	imum scope of agency systems covered by the
12	vulnerability disclosure policy of an agency re-
13	quired under subsection (d)(2).
14	"(B) DEADLINE.—Not later than 2 years
15	after the date of enactment of the Federal In-
16	formation Security Modernization Act of 2021,
17	the Director shall update the guidance issued
18	under subparagraph (A) to require that every
19	agency system that is connected to the internet
20	is covered by the vulnerability disclosure policy
21	of the agency.
22	"(c) Responsibilities of CISA.—The Director of
23	the Cybersecurity and Infrastructure Security Agency
24	shall—

1	"(1) provide support to agencies with respect to
2	the implementation of the requirements of this sec-
3	tion;
4	"(2) develop tools, processes, and other mecha-
5	nisms determined appropriate to offer agencies capa-
6	bilities to implement the requirements of this sec-
7	tion; and
8	"(3) upon a request by an agency, assist the
9	agency in the disclosure to vendors of newly identi-
10	fied vulnerabilities in vendor products and services.
11	"(d) Responsibilities of Agencies.—
12	"(1) Public information.—The head of each
13	agency shall make publicly available, with respect to
14	each internet domain under the control of the agen-
15	cy that is not a national security system—
16	"(A) an appropriate security contact; and
17	"(B) the component of the agency that is
18	responsible for the internet accessible services
19	offered at the domain.
20	"(2) Vulnerability disclosure policy.—
21	The head of each agency shall develop and make
22	publicly available a vulnerability disclosure policy for
23	the agency, which shall—
24	"(A) describe—

1	"(i) the scope of the systems of the
2	agency included in the vulnerability disclo-
3	sure policy;
4	"(ii) the type of information system
5	testing that is authorized by the agency;
6	"(iii) the type of information system
7	testing that is not authorized by the agen-
8	cy; and
9	"(iv) the disclosure policy of the agen-
10	cy for sensitive information;
11	"(B) include a provision that authorizes
12	the anonymous submission of a vulnerability by
13	a reporter;
14	"(C) with respect to a report to an agency,
15	describe—
16	"(i) how the reporter should submit
17	the report; and
18	"(ii) if the report is not anonymous
19	under subparagraph (B), when the re-
20	porter should anticipate an acknowledg-
21	ment of receipt of the report by the agen-
22	cy; and
23	"(D) include any other relevant informa-
24	tion.

1	"(3)	IDENTIFIED	VULNERABILITIES.—	-The	head	ĺ
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- 2 of each agency shall incorporate any vulnerabilities
- 3 reported under paragraph (2) into the vulnerability
- 4 management process of the agency in order to track
- 5 and remediate the vulnerability.
- 6 "(e) Paperwork Reduction Act Exemption.—
- 7 The requirements of subchapter I (commonly known as
- 8 the 'Paperwork Reduction Act') shall not apply to a vul-
- 9 nerability disclosure program established under this sec-
- 10 tion.
- 11 "(f) Congressional Reporting.—Not later than
- 12 90 days after the date of enactment of the Federal Infor-
- 13 mation Security Modernization Act of 2021, and annually
- 14 thereafter for a 3-year period, the Director shall provide
- 15 to the Committee on Homeland Security and Govern-
- 16 mental Affairs of the Senate and the Committee on Over-
- 17 sight and Reform of the House of Representatives a brief-
- 18 ing on the status of the use of vulnerability disclosure poli-
- 19 cies under this section at agencies, including, with respect
- 20 to the guidance issued under subsection (b)(3), an identi-
- 21 fication of the agencies that are compliant and not compli-
- 22 ant.".
- 23 (b) CLERICAL AMENDMENT.—The table of sections
- 24 for chapter 35 of title 44, United States Code, is amended

1	by adding after the item relating to section 3559A the fol-
2	lowing:
	"3559B. Federal vulnerability disclosure programs.".
3	SEC. 209. IMPLEMENTING PRESUMPTION OF COMPROMISE
4	AND ZERO TRUST ARCHITECTURES.
5	(a) Recommendations.—Not later than 60 days
6	after the date of enactment of this Act, the Director of
7	the Cybersecurity and Infrastructure Security Agency, in
8	consultation with the Director of the National Institute
9	of Standards and Technology, shall develop recommenda-
10	tions to increase the internal defenses of agency systems
11	to—
12	(1) limit the ability of entities that cause inci-
13	dents to move laterally through or between agency
14	systems;
15	(2) identify incidents more quickly;
16	(3) isolate and remove unauthorized entities
17	from agency systems more quickly;
18	(4) implement zero trust architecture; and
19	(5) otherwise increase the resource costs for en-
20	tities that cause incidents; and
21	(b) OMB GUIDANCE.—Not later than 180 days after
22	the date on which the recommendations under subsection
23	(a) are completed, the Director shall issue guidance to
24	agencies that requires the implementation of the rec-
25	ommendations.

- 1 (c) AGENCY IMPLEMENTATION PLANS.—Not later
- 2 than 60 days after the date on which the Director issues
- 3 guidance under subsection (b), the head of each agency
- 4 shall submit to the Director a plan to implement zero trust
- 5 architecture that includes—
- 6 (1) a description of any steps the agency has
- 7 completed;
- 8 (2) an identification of activities that will have
- 9 the most immediate security impact; and
- 10 (3) a schedule to implement the plan.
- 11 (d) Report and Briefing.—Not later than 90 days
- 12 after the date on which the Director issues guidance re-
- 13 quired under subsection (b), the Director shall provide a
- 14 briefing to the appropriate congressional committees on
- 15 the guidance and the agency implementation plans sub-
- 16 mitted under subsection (c).
- 17 SEC. 210. AUTOMATION REPORTS.
- 18 (a) OMB REPORT.—Not later than 180 days after
- 19 the date of enactment of this Act, the Director shall sub-
- 20 mit to the appropriate congressional committees a report
- 21 on the use of automation under paragraphs (1), (5)(C)
- 22 and (7)(B) of section 3554(b) of title 44, United States
- 23 Code.
- 24 (b) GAO REPORT.—Not later than 1 year after the
- 25 date of enactment of this Act, the Comptroller General

1	of the United States shall perform a study on the use of
2	automation and machine readable data across the Federal
3	Government for cybersecurity purposes, including the
4	automated updating of cybersecurity tools, sensors, or
5	processes by agencies.
6	SEC. 211. EXTENSION OF FEDERAL ACQUISITION SECURITY
7	COUNCIL.
8	Section 1328 of title 41, United States Code, is
9	amended by striking "the date" and all that follows and
10	inserting "December 31, 2026.".
11	TITLE III—PILOT PROGRAMS TO
12	ENHANCE FEDERAL CYBER-
13	SECURITY
14	SEC. 301. CONTINUOUS INDEPENDENT FISMA EVALUATION
15	PILOT.
16	(a) In General.—Not later than 2 years after the
17	date of enactment of this Act, the Director, in coordina-
18	tion with the Director of the Cybersecurity and Infrastruc-
19	ture Security Agency, shall establish a pilot program to
20	perform continual agency auditing of the standards pro-
21	mulgated under section 11331 of title 40, United States
22	Code.
23	(b) Purpose.—
24	

program established under subsection (a) shall be to

- develop the capability to continuously audit agency cybersecurity postures, rather than performing an annual audit.
 - (2) USE OF INFORMATION.—It is the sense of Congress that information relating to agency cybersecurity postures should be used, on an ongoing basis, to increase agency understanding of cybersecurity risk and improve agency cybersecurity.

(c) Participating Agencies.—

- (1) In GENERAL.—The Director, in coordination with the Council of the Inspectors General on Integrity and Efficiency and in consultation with the Director of the Cybersecurity and Infrastructure Security Agency, shall identify not less than 1 agency and the Inspector General of each identified agency to participate in the pilot program established under subsection (a).
- (2) Capabilities of agency.—An agency selected under paragraph (1) shall have advanced cybersecurity capabilities, including the capability to implement verification specifications and other automated and machine-readable means of sharing information.
- (3) Capabilities of inspector general.—

 The Inspector General of an agency selected under

1	paragraph (1) shall have advanced cybersecurity ca-
2	pabilities, including the ability—
3	(A) to perform real-time or almost real-
4	time and continuous analysis of the use of
5	verification specifications by the agency to as-
6	sess compliance with standards promulgated
7	under section 11331 of title 40, United States
8	Code; and
9	(B) to assess the impact and deployment
10	of additional cybersecurity procedures.
11	(d) Duties.—The Director, in coordination with the
12	Council of the Inspectors General on Integrity and Effi-
13	ciency, the Director of the Cybersecurity and Infrastruc-
14	ture Security Agency, and the head of each agency partici-
15	pating in the pilot program under subsection (c), shall de-
16	velop processes and procedures to perform a continuous
17	independent evaluation of—
18	(1) the compliance of the agency with—
19	(A) the standards promulgated under sec-
20	tion 11331 of title 40, United States Code,
21	using verification specifications to the greatest
22	extent practicable; and
23	(B) any additional cybersecurity proce-
24	dures implemented by the agency as a result of
25	the evaluation performed under section

1	3554(a)(1)(F) of title 44, United States Code;
2	and
3	(2) the overall cybersecurity posture of the
4	agency, which may include an evaluation of—
5	(A) the status of cybersecurity remedial ac-
6	tions of the agency;
7	(B) any vulnerability information relating
8	to agency systems that is known to the agency;
9	(C) incident information of the agency;
10	(D) penetration testing performed by an
11	external entity under section 3559A of title 44,
12	United States Code;
13	(E) information from the vulnerability dis-
14	closure program information established under
15	section 3559B of title 44, United States Code;
16	(F) agency threat hunting results; and
17	(G) any other information determined rel-
18	evant by the Director.
19	(e) Independent Evaluation Waiver.—With re-
20	spect to an agency that participates in the pilot program
21	under subsection (a) during any year other than the first
22	year during which the pilot program is conducted, the Di-
23	rector, with the concurrence of the Director of the Cyber-
24	security and Infrastructure Security Agency, may waive
25	any requirement of the agency with respect to the annual

- 1 independent evaluation under section 3555 of title 44,
- 2 United States Code.
- 3 (f) DURATION.—The pilot program established under
- 4 this section—
- 5 (1) shall be performed over a period of not less
- 6 than 2 years at each agency that participates in the
- 7 pilot program under subsection (c), unless the Direc-
- 8 tor, in consultation with the Director of the Cyberse-
- 9 curity and Infrastructure Security Agency and the
- 10 Council of the Inspectors General on Integrity and
- 11 Efficiency, determines that continuing the pilot pro-
- gram would reduce the cybersecurity of the agency;
- 13 and
- 14 (2) may be extended by the Director, in con-
- sultation with the Director of the Cybersecurity and
- 16 Infrastructure Security Agency and the Council of
- the Inspectors General on Integrity and Efficiency,
- if the Director makes the determination described in
- paragraph (1).
- 20 (g) Reports.—
- 21 (1) PILOT PROGRAM PLAN.—Before identifying
- any agencies to participate in the pilot program
- under subsection (c), the Director, in coordination
- with the Director of the Cybersecurity and Infra-
- 25 structure Security Agency and the Council of the In-

- spectors General on Integrity and Efficiency, shall submit to the appropriate congressional committees a plan for the pilot program that outlines selection criteria and preliminary plans to implement the pilot program.
 - (2) Briefing.—Before commencing a continuous independent evaluation of any agency under the pilot program established under subsection (a), the Director shall provide to the appropriate congressional committees a briefing on—
 - (A) the selection of agencies to participate in the pilot program; and
 - (B) processes and procedures to perform a continuous independent evaluation of agencies.
 - (3) PILOT RESULTS.—Not later than 60 days after the final day of each year during which an agency participates in the pilot program established under subsection (a), the Director, in coordination with the Director of the Cybersecurity and Infrastructure Security Agency and the Council of the Inspectors General on Integrity and Efficiency, shall submit to the appropriate congressional committees a report on the results of the pilot program for each agency that participates in the pilot program during that year.

1 SEC. 302. ACTIVE CYBER DEFENSIVE PILOT.

2	(a) Definition.—In this section, the term "active
3	defense technique''—
4	(1) means an action taken on the systems of an
5	entity to increase the security of information on the
6	network of an agency by misleading an adversary;
7	and
8	(2) includes a honeypot, deception, or purpose-
9	fully feeding false or misleading data to an adver-
10	sary when the adversary is on the systems of the en-
11	tity.
12	(b) STUDY.—Not later than 180 days after the date
13	of enactment of this Act, the Director of the Cybersecurity
14	and Infrastructure Security Agency shall perform a study
15	on the use of active defense techniques to enhance the se-
16	curity of agencies, which shall include—
17	(1) a review of legal restrictions on the use of
18	different active cyber defense techniques on Federal
19	networks;
20	(2) an evaluation of—
21	(A) the efficacy of a selection of active de-
22	fense techniques determined by the Director of
23	the Cybersecurity and Infrastructure Security
24	Agency; and

1	(B) factors that impact the efficacy of the
2	active defense techniques evaluated under sub-
3	paragraph (A); and
4	(3) the development of a framework for the use
5	of different active defense techniques by agencies.
6	(c) PILOT PROGRAM.—Not later than 180 days after
7	the date of enactment of this Act, the Director, in coordi-
8	nation with the Director of the Cybersecurity and Infra-
9	structure Security Agency, shall establish a pilot program
10	at not less than 2 agencies to implement, and assess the
11	effectiveness of, not less than 1 active cyber defense tech-
12	nique.
13	(d) Purpose.—The purpose of the pilot program es-
14	tablished under subsection (c) shall be to—
15	(1) identify any statutory or policy limitations
16	on using active defense techniques;
17	(2) understand the efficacy of using active de-
18	fense techniques; and
19	(3) implement the use of effective techniques to
20	improve agency systems.
21	(e) Plan.—Not later than 360 days after the date
22	of enactment of this Act, the Director of the Cybersecurity
23	and Infrastructure Security Agency, in coordination with
24	the Director, shall develop a plan to offer any active de-
25	fense technique determined to be successful during the

1	pilot program established under subsection (c) as a shared
2	service to other agencies.
3	(f) Reports.—Not later than 1 year after the date
4	of enactment of this Act, the Director of the Cybersecurity
5	and Infrastructure Security Agency shall—
6	(1) provide to the appropriate congressional
7	committees a briefing on—
8	(A) the results of the study performed
9	under subsection (b); and
10	(B) the agencies selected to participate in
11	the pilot program established under subsection
12	(e);
13	(2) submit to the appropriate congressional
14	committees a report on the results of the pilot pro-
15	gram established under subsection (c), including any
16	recommendations developed from the results of the
17	pilot program; and
18	(3) submit to the appropriate congressional
19	committees a copy of the plan developed under sub-
20	section (e).
21	(g) Sunset.—
22	(1) In general.—The requirements of this
23	section shall terminate on the date that is 3 years
24	after the date of enactment of this Act.

1	(2) AUTHORITY TO CONTINUE USE OF TECH-
2	NIQUES.—Notwithstanding paragraph (1), after the
3	date described in paragraph (1), the Director of the
4	Cybersecurity and Infrastructure Security Agency
5	may continue to offer any active defense technique
6	determined to be successful during the pilot program
7	established under subsection (c) as a shared service
8	to agencies.
9	SEC. 303. SECURITY OPERATIONS CENTER AS A SERVICE
10	PILOT.
11	(a) Purpose.—The purpose of this section is for the
12	Cybersecurity and Infrastructure Security Agency to run
13	a security operation center on behalf of another agency
14	alleviating the need to duplicate this function at every
15	agency, and empowering a greater centralized cybersecu-
16	rity capability.
17	(b) Plan.—Not later than 1 year after the date of
18	enactment of this Act, the Director of the Cybersecurity
19	and Infrastructure Security Agency shall develop a plan
20	to establish a centralized Federal security operations cen-
21	ter shared service offering within the Cybersecurity and
22	Infrastructure Security Agency.
23	(c) Contents.—The plan required under subsection
24	(b) shall include considerations for—

- 121 1 (1) collecting, organizing, and analyzing agency 2 information system data in real time; 3 (2) staffing and resources; and 4 (3) appropriate interagency agreements, con-5 cepts of operations, and governance plans. 6 (d) Pilot Program.— 7 (1) IN GENERAL.—Not later than 180 days 8 after the date on which the plan required under sub-9 section (b) is developed, the Director of the Cyberse-10 curity and Infrastructure Security Agency, in con-11 sultation with the Director, shall enter into a 1-year 12 agreement with not less than 2 agencies to offer a 13 security operations center as a shared service. 14 (2) Additional agreements.—After the date 15 on which the briefing required under subsection 16 (e)(1) is provided, the Director of the Cybersecurity 17 and Infrastructure Security Agency, in consultation
 - on which the briefing required under subsection (e)(1) is provided, the Director of the Cybersecurity and Infrastructure Security Agency, in consultation with the Director, may enter into additional 1-year agreements described in paragraph (1) with agencies.

(e) Briefing and Report.—

(1) Briefing.—Not later than 260 days after the date of enactment of this Act, the Director of the Cybersecurity and Infrastructure Security Agency shall provide to the Committee on Homeland Se-

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1	curity and Governmental Affairs of the Senate and
2	the Committee on Homeland Security and the Com-
3	mittee on Oversight and Reform of the House of
4	Representatives a briefing on the parameters of any
5	1-year agreements entered into under subsection
6	(d)(1).
7	(2) Report.—Not later than 90 days after the
8	date on which the first 1-year agreement entered
9	into under subsection (d) expires, the Director of the
10	Cybersecurity and Infrastructure Security Agency
11	shall submit to the Committee on Homeland Secu-
12	rity and Governmental Affairs of the Senate and the

16 (A) the agreement; and

Representatives a report on—

17 (B) any additional agreements entered into with agencies under subsection (d).

Committee on Homeland Security and the Com-

mittee on Oversight and Reform of the House of

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