

GENERAL SERVICES ADMINISTRATION
Washington, DC 20405

CIO P 2100.1E CHGE 1
April 1, 2010

GSA ORDER

SUBJECT: GSA Information Technology (IT) Security Policy

1. Purpose. This Order issues and transmits Handbook (HB), GSA Information Technology Security Policy.
2. Cancellation(s). GSA Order CIO P 2100.1E – GSA Information Technology (IT) Security Policy is hereby cancelled and Change 1 is now in effect.
3. Nature of revision. This Order provides updates for consistency with Federal requirements and reorganizes the material contained in CIO P 2100.1E to reflect the logical sequence of program management requirements and program instruction implementation.
4. Applicability. This IT Security Policy applies to: all GSA employees, contractors, subcontractors, anyone specified in Memoranda of Understanding (MOUs) or other agreement vehicles, government agencies, individual corporations, other organizations that process or handle GSA-owned information, data, all GSA IT systems, or any GSA data processed on IT systems owned and operated by any of the Services, Staff Offices, and Regions (S/SO/R).



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CHAPTER 1. THE GSA INFORMATION TECHNOLOGY SECURITY PROGRAM

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CHAPTER 1. THE GSA INFORMATION TECHNOLOGY SECURITY PROGRAM

1. Introduction. The purpose of this Order is to document and set forth the General Services Administration (GSA) Information Technology (IT) Security Policy. This IT Security Policy establishes policies required to comply with Federal Regulations and Laws, thus ensuring adequate protection of GSA IT resources.

2. Objectives. Security objectives will enable GSA to meet its mission/business objectives by implementing systems with due consideration of IT-related risks to GSA, its partners, and customers. The security objectives for system resources are to provide assurance of confidentiality, integrity, availability, and accountability, by employing management, operational, and technical security controls as part of risk-based management. An important component of risk-based management is to integrate technical and

non-technical security mechanisms into the system to reflect sound fiscal management practices. All incorporated security mechanisms must be well founded, configured to perform in the most effective manner, and add value to GSA's IT-related investments. A risk-based management approach will enable the GSA IT Security Program to meet its goals by better securing IT systems, enabling management to justify IT Security expenditures, and by assisting management in authorizing IT systems for processing. GSA security objectives include the following:

- a. Confidentiality. Private or confidential information is not disclosed to unauthorized individuals while in storage, during processing, or in transit.
- b. Integrity. Safeguards must ensure that information retains its content integrity. Hardware and software resources of the system must operate according to requirements and design documents. Unauthorized personnel must not be able to create, alter, copy, or delete data processed, stored, or handled by the system. System information and application software is considered "official" and trusted to be complete and accurate as the basis for payment actions.
- c. Availability. The system works promptly and service is not denied to authorized users. Systems and data are available for intended use only. The system must be ready for use by authorized users when needed to perform his/her duties.
- d. Accountability. Accountability must be to the individual level. Only personnel with proper authorization and need-to-know must be allowed access to data processed, handled, or stored on IT system components.
- e. Assurance. Confidence that the other four security objectives have been met. The security measures, including technical, managerial and operational, work as intended to protect the system and the information it processes. This is accomplished through monitoring and review of controls.

This Order supports the GSA's IT Security Program objectives by identifying roles and assigning responsibilities in support of GSA's IT Security Program. In addition, the order defines comprehensive and integrated security requirements that are necessary to obtain management authorization (accreditation) to allow GSA IT systems to operate within an acceptable level of security risk.

3. Applicability. This IT Security Policy applies to:

- a. All GSA employees and contractor personnel.
- b. Contractors, subcontractors, and as specified in Memoranda of Understanding (MOUs) or other agreement vehicles, government agencies, individuals, corporations, or other organizations that process or handle any GSA-owned information, data, or IT system equipment.

4. Federal Laws, Regulations, and Policy. The primary focus of this policy is to support the implementation of the following Federal Regulations and GSA directives:

- a. Federal Information Security Management Act (FISMA) of 2002.
- b. Clinger-Cohen Act of 1996 also known as the "Information Technology Management Reform Act of 1996."
- c. Federal Financial Management Improvement Act of 1996 (FFMIA); OMB Implementation Guidance for the FFMIA, issued on January 4, 2001.
- d. Paperwork Reduction Act (PRA) of 1995 (Public Law 104-13).
- e. Federal Managers Financial Integrity Act (FMFIA) (Public Law 97-255), dated September 8, 1982.
- f. Government Paperwork Elimination Act (GPEA) (Public Law 105-277).
- g. Privacy Act of 1974 (5 U.S.C. § 552a).
- h. Homeland Security Presidential Directive (HSPD-20), "National Continuity Policy," May 9, 2007.

- i. Homeland Security Presidential Directive (HSPD-12), "Policy for a Common Identification Standard for Federal Employees and Contractors," August 27, 2004.
- j. Homeland Security Presidential Directive (HSPD-7), "Critical Infrastructure Identification, Prioritization, and Protection," December 17, 2003.
- k. Office of Management and Budget (OMB) Circular A-130, "Management of Federal Information Resources," and Appendix III, "Security of Federal Automated Information Systems as amended."
- l. GSA Order 9297.2A, "GSA Information Breach Notification Policy" February 26, 2009.
- m. GSA Order CIO 2110.2, "GSA Enterprise Architecture Policy," November 26, 2008.
- n. GSA Order CIO 2135.2B, "GSA Information Technology (IT) Capital Planning and Investment Control," dated November 26, 2008.
- o. GSA Order CIO P 2181.1 "GSA HSPD-12 Personal Identity Verification and Credentialing Handbook," dated October 20, 2008.
- p. GSA Order ADM 7800.11A, "Personal Use of Agency Office Equipment," dated October 16, 2008.
- q. GSA Order 2100.2, "GSA Wireless LAN Security," dated May 15, 2008.
- r. GSA Order CIO P 2140.3 "Systems Development Life Cycle (SDLC)," dated September 29, 2006.
- s. GSA Order CIO P 2165.1, "GSA Internal Telecommunications Management," dated August 16, 2005.
- t. GSA Order CIO 2160.2A "GSA Electronic Messaging Policy," dated July 26, 2005.
- u. GSA Order CIO 2104.1, "GSA Information Technology (IT) General Rules of Behavior," dated July 3, 2003.
- v. GSA Order CPO 1878.1, "GSA Privacy Act Program," dated October 27, 2003.
- w. GSA Order ADM P 9732.1C, "Suitability and Personnel Security," dated April 24, 1996.

Additional guidance can be found in the series of CIO-IT Security Procedural Guides. The guides provide more detailed information on how to implement security processes and controls and provide worksheets and forms to meet reporting requirements. The guides are updated as needed to reflect the latest regulations and technologies. A current list of GSA-wide security guides is located at <http://insite.gsa.gov> (click on 'Information Technology' tab, 'IT Security' tab). A current list of government-wide security guidance is located at <http://csrc.nist.gov>.

5. Compliance and Deviations. Compliance is mandatory. This IT Security Policy requires all GSA Services, Staff Offices, Regions (S/SO/R), Federal employees, and authorized users of GSA's IT resources to comply with the security requirements outlined in this Policy. This policy must be properly implemented, enforced, and followed to effectively protect GSA's IT resources and data. Appropriate disciplinary actions must be taken in a timely manner in situations where individuals and/or systems are found non-compliant. Violations of GSA IT Security Policy may result in penalties under criminal and civil statutes and laws.

All deviations from this Order must be approved by the appropriate Authorizing Official with a copy of the approval forwarded to the GSA Senior Agency Information Security Officer (SAISO) in the Office of the Chief Information Officer (OCIO).

6. Maintenance. The GSA Office of the Chief Information Officer (OCIO) will review this policy annually and revise it to:

- a. Reflect any changes in Federal Laws and Regulations.
- b. Satisfy additional business requirements.
- c. Encompass new technology.
- d. Adopt new government IT standards.

7. Definition of Information System. The term information system as defined in this document shall include major applications and general support systems as defined in OMB A-130. Major Applications shall include those information systems with an Exhibit 300 (also referred to as Major Programs) and any Exhibit 53 information systems that are not specifically covered in a general support system security plan. In addition, any IT system that stores privacy act data that is not specifically covered in a general support system shall be considered its own information system.

Smaller information systems (minor applications) may be coalesced together as *subsystems* of a single larger, more comprehensive system for the purposes of security authorization. Subsystems must be under the same management authority, have the same function or mission objective, the same operating characteristics and information security needs, and reside in the same general operating environment(s).

8. NIST and GSA Guidance Documents. All policies shall be implemented using the appropriate procedural guides from NIST and/or GSA to the greatest extent possible. Where there is a conflict between NIST guidance and GSA guidance, contact the GSA Office of the Senior Agency Information Security Officer. Where there are no procedural guides, use industry best practices. Federal Information Processing Standards (FIPS) publication requirements are mandatory for agency use. There are no waivers. NIST special publications (800 Series) are guidance, unless required by a FIPS publication, in which case usage is mandatory.

9. Privacy Act Systems. In addition to the security requirements in this order, systems that contain privacy act data must implement the additional security controls as defined in GSA Order CPO 1878.1 "Privacy Act Program" under "Information Security."

10. IT Security Controls. All IT systems, including those operated by a contractor on behalf of the government, must implement proper security controls according to their security categorization level in accordance with Federal Information Processing Standards (FIPS) Publication 200, "Minimum Security Requirements for Federal Information and Information Systems," the current version of NIST SP 800-53, "Recommended Security Controls for Federal Information Systems," and FIPS PUB 199, "Standards for Security Categorization of Federal Information and Information Systems."

11. Contractor Operations. GSA system program managers and contracting officers shall ensure that the appropriate security requirements of this order are included in task orders and contracts for all IT systems designed, developed, implemented, and operated by a contractor on behalf of the government, including systems operating in a Cloud Computing environment including but not limited to Software as a Service (SaaS). In addition, the government shall ensure that the contract allows the government or their designated representative (i.e. third party contractor) to review, monitor, test, and evaluate the proper implementation, operation, and maintenance of the security controls. This includes, but is not limited to: documentation review, server configuration review, vulnerability scanning, physical data center reviews, and operational process reviews. Contracts and task orders for Information Systems Security Managers (ISSM) and Information Systems Security Officers (ISSO) services in support of GSA systems must include performance goals and requirements for the ISSM and ISSO services.

CHAPTER 2. SECURITY ROLES AND RESPONSIBILITIES

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CHAPTER 2. SECURITY ROLES AND RESPONSIBILITIES

The roles and responsibilities described in the paragraphs below are assigned to the offices and positions identified to ensure effective implementation and management of GSA's IT Security Program. The establishment of a security management structure and assigning of security responsibilities is a requirement of the Federal Information Security Management Act (FISMA).

1. GSA Administrator. The Clinger-Cohen Act assigns the responsibility for ensuring “that the information security policies, procedures, and practices of the executive agency are adequate.” FISMA provides the following details on agency head responsibilities for information security:

- a. Providing information security protections commensurate with the risk and magnitude of the harm resulting from unauthorized access, use, disclosure, disruption, modification, or destruction of information collected or maintained by or on behalf of an agency, and on information systems used or operated by an agency or by a contractor of an agency or other organization on behalf of an agency.

- b. Ensuring that an information security program is developed, documented, and implemented to provide security for all systems, networks, and data that support the operations of the organization.
- c. Ensuring that information security processes are integrated with strategic and operational planning processes to secure the organization's mission.
- d. Ensuring that senior agency officials within the organization are given the necessary authority to secure the operations and assets under their control.
- e. Designating a CIO and delegating authority to that individual to ensure compliance with applicable information security requirements.
- f. Ensuring that the agency has trained personnel to support compliance with information security policies, processes, standards, and guidelines.
- g. Ensuring that the CIO, in coordination with the other senior agency officials, reports annually to the agency head on the effectiveness of the agency information security program, including the progress of remedial actions.

2. GSA Chief Information Officer (CIO). Mandated by the Clinger-Cohen Act of 1996 and FISMA, the GSA Chief Information Officer (CIO) has overall responsibility for the GSA IT Security Program. Responsibilities include:

- a. Developing and maintaining an agency-wide GSA IT Security Program.
- b. Ensuring the agency effectively implements and maintains information security policies and guidelines.
- c. Providing guidance, advice, and assistance to the Heads of Services and Staff Offices (HSSOs), and Regional Administrators (RAs) on implementing GSA's IT Security Policy.
- d. Providing management processes to enable the Authorizing Official to implement the components of the IT Security Program for which they are responsible.
- e. Ensuring information assurance and the protection of GSA's cyber-based critical infrastructure.
- f. Designating a Senior Agency Information Security Officer (SAISO) to assist in carrying out the GSA CIO's agency-wide IT security responsibilities.
- g. Establishing reporting requirements within GSA to assess GSA's IT security posture, verifying compliance with Federal requirements and approved policies, and identifying agency-wide IT security needs.
- h. Conducting independent activities and compliance reviews including oversight of GSA's Certification & Accreditation (C&A) process.
- i. Coordinating and reporting on HSPD-7 critical assets.
- j. Reporting annually, in coordination with the other senior agency officials, to the GSA Administrator on the effectiveness of the agency information security program, including progress of remedial actions.
- k. Reviewing Privacy Impact Assessments prepared by GSA organizations for security considerations.
- l. Ensuring Privacy Impact Assessments are part of GSA's System Development Life Cycle Guidance for Information Technology.
- m. Providing guidance or input for periodic assessments of S/SO/R security measures and goals to assure implementation of GSA policy and procedures.

3. GSA Chief Financial Officer (CFO). The GSA Chief Financial Officer (CFO) also has major statutory security responsibilities under the CFO Act of 1990 and the Clinger-Cohen Act of 1996. Responsibilities include:

- a. Ensuring the sufficiency of management and information security controls pertaining to GSA's financial management systems and compliance with FMFIA and FFMIA requirements.
- b. Supporting the GSA IT Capital Planning Process. To achieve satisfactory assurance levels of information security for the financial systems of GSA, close cooperation between the offices of the CFO and the CIO is necessary, including supporting the GSA IT Capital Planning process.
- c. Reporting financial management information to OMB as part of the President's budget.
- d. Complying with legislative and OMB-defined responsibilities as they relate to IT capital investments.

4. GSA Chief Human Capital Officer (CHCO)/GSA Senior Agency Official for Privacy. The GSA Chief Human Capital Officer (CHCO), also the GSA Senior Agency Official for Privacy has major statutory responsibilities under the Privacy Act of 1974, GSA Order CPO1878.1 "GSA Privacy Act Program," and the Consolidated Appropriations Act of 2005. Responsibilities include:

- a. Establishing and overseeing the Privacy Act Program in GSA.
- b. Ensuring GSA's compliance with privacy laws, regulations and GSA policy in collaboration with the GSA CIO.
- c. Ensuring Privacy Impact Assessments (PIAs) are conducted for electronic information systems and collections and coordinating submission of all GSA Privacy Analysis Worksheets and PIA Summaries to OMB.
- d. Developing, implementing, and overseeing personnel security controls for access to personally identifiable information.
- e. Encouraging awareness of potential privacy issues and policies.
- f. Directing the planning and implementation of the GSA Privacy Program to ensure agency personnel, including contractors, receive appropriate privacy awareness training.
- g. Signing GSA Privacy Act notices for publication for public comment in the Federal Register.
- h. Reporting to OMB and Congress on the establishment or revision of Privacy Act systems.
- i. Reporting periodically to OMB on GSA Privacy Act activities, as required by law and OMB information requests.
- j. Policy making role in the GSA's development and evaluation of legislative, regulatory and other policy proposals which implicate information privacy issues.

5. Senior Agency Information Security Officer (SAISO). The Federal Information Security Management Act (FISMA) establishes the designation of a Senior Agency Information Security Officer (SAISO). The SAISO is the focal point for all GSA IT security and must ensure that the security requirements described in this Order are implemented agency-wide. The SAISO reports directly to the CIO as required by FISMA. Responsibilities include:

- a. Reporting to the CIO on the implementation and maintenance of the GSA's IT Security Program and Security Policies.
- b. Assisting in the oversight of the GSA's IT Security Program and Security Policies.
- c. Reporting to the GSA CIO on activities and trends that may affect the security of systems and applications assigned to GSA.

- d. Implementing and overseeing GSA's IT Security Program by developing and publishing IT Security Procedural Guides that are consistent with this policy.
- e. Ensuring that written agreements assign security-related functions and identify security responsibilities of each S/SO/R or activity when two or more activities use the same IT.
- f. Providing guidance and advice to all S/SO/R on IT security issues.
- g. Assisting S/SO/R in implementing the IT Security Program and Security Policies when requested.
- h. Reporting to management on policy compliance.
- i. Directing the planning and implementation of the GSA IT Security Awareness Training Program to ensure agency personnel, including contractors, receive appropriate information security awareness training.
- j. Managing the CIO Office of the SAISO which implements the GSA IT Security Program as defined in chapter 1 of this order.
- k. Establishing reporting deadlines for IT Security related issues requiring an agency response affecting the GSA IT Security Program.
- l. Performing information security duties as the primary duty.
- m. Periodically assessing risk and magnitude of the harm resulting from unauthorized access, use, disclosure, disruption, modification, or destruction of information and information systems that support the operations and assets of the agency.
- n. Periodically testing and evaluating the effectiveness of information security policies, procedures, and practices.
- o. Establishing and maintaining a process for planning, implementing, evaluating, and documenting remedial action to address any deficiencies in the information security policies, procedures, and practices of the agency.
- p. Developing and implementing procedures for detecting, reporting, and responding to security incidents.
- q. Ensuring preparation and maintenance of plans and procedures to provide continuity of operations for information systems that support the operations and assets of the agency.
- r. Supporting the agency CIO in annual reporting to the agency head on the effectiveness of the agency information security program, including progress of remedial actions.
- s. Developing and implementing IT security performance metrics to evaluate the effectiveness of technical and nontechnical safeguards used to protect GSA information and information systems.
- t. Assessing S/SO/R security measures and goals periodically to assure implementation of GSA policy and procedures.
- u. Concurring ISSM and ISSO appointments.
- v. Administering FISMA requirements and coordinating GSA's annual FISMA security program review and Plan of Action and Milestones (POA&M) implementation.

6. Heads of Services and Staff Offices (HSSOs). The Heads of Services and Staff Offices (HSSOs) are responsible for authorizing the operation of all systems, networks, and applications for which they have responsibility. They may delegate some of their authority, (i.e. the role of Authorizing Official in writing), to appropriately qualified individuals within their organizations (usually, their respective Chief Information Officers).

- a. Ensuring that the systems of records under their jurisdiction meet the requirements of the Privacy Act and GSA privacy policies and procedures.

b. Ensuring that contractors performing services associated with systems of records (such as system development, maintenance, or operation) are subject to the provisions of the Privacy Act and security requirements.

c. Tracking the measures and goals described in Chapter 3, Paragraph 9 (Performance Measures) of this policy and ensuring that AOs, ISSMs, and ISSOs support these measures. Officials must begin tracking measures and goals beginning in FY 2008, Q1.

7. Authorizing Official (AO) (aka. Designated Approving Authority (DAA)). The Authorizing Official (AO) is the federal government management official with the responsibility to identify the level of acceptable risk for an IT system or application and to determine whether the acceptable level of risk has been obtained. Final authority to operate or not operate the system rests with the AO. An AO must be assigned to every information system. Responsibilities include:

a. Ensuring effective implementation of GSA's IT Security Policy.

b. Reviewing and approving security safeguards of information systems and issuing accreditation statements for each information system under their jurisdiction based on the acceptability of the security safeguards of the system (risk-management approach).

c. Ensuring that an Interim Approval To Operate (IATO) is granted only if the necessary security enhancements to bring the system up to the acceptable level of risk have been identified and a formal plan of action and milestones has been developed. Per Chapter 3, Paragraph 5, sub-section d of this policy, an Interim IATO can be issued for no longer than twelve (12) months, but does not count towards a system being certified and accredited per OMB direction.

d. Appointing an Information System Security Manager (ISSM), in writing, maintaining a record of this appointment, and providing an update to the SAISO when there are any changes.

e. Appointing an Information Systems Security Officer (ISSO) for each information system, in writing, maintaining a record of this appointment, and providing an update to the SAISO when there are any changes.

f. Ensuring Information Assurance is included in management planning, programming budgets, and the IT Capital Planning process.

g. Requiring written notification of point(s) of contacts within other Federal agencies or outside organizations that manage GSA systems.

h. Ensuring that the ISSM and ISSO receive applicable training to carry out their duties.

i. Ensuring that IT systems that handle privacy data meet the privacy and security requirements of the Privacy Act and IT information security laws and regulations.

j. Reviewing and approving Privacy Impact Assessments (PIAs) for their organizations.

k. Supporting the security measures and goals described in Chapter 3, Paragraph 9 (Performance Measures) of this policy.

l. Ensuring all incidents involving data breaches which could result in identify theft are coordinated through the GSA OCIO Office of the Senior Agency Information Security Officer (OSAISO) and the GSA Management Incident Response Team (MIRT) using the GSA breach notification plan per OMB Memorandum M-07-16, "Safeguarding Against and Responding to the Breach of Personally Identifiable Information."

m. Ensuring contingency and continuity of support plans are developed and tested annually in accordance with Office of Management and Budget (OMB) Circular No. A-130, NIST SP 800-34, "Contingency Planning Guide for Information Technology Systems, and CIO IT Security 06-29, "Contingency Plan Testing."

n. Implementing detailed separation of duties policies for its IT systems based on the specific processes, roles, permissions, and responsibilities of personnel involved in agency business operations.

- o. Establishing physical and logical access controls to enforce separation of duties policy and alignment with organizational and individual job responsibilities.
- p. Ensuring access to systems by members of the GSA Office of Inspector General as described in paragraph 15 of this chapter.

8. Services, Staff Offices, or Regions (S/SO/R) Information Systems Security Manager (ISSM). The Information Systems Security Manager (ISSM) is responsible to the Authorizing Official for ensuring that security is implemented. There is at least one ISSM per Authorizing Official. The ISSM is the focal point for all IT system security matters for the systems under their authority. The ISSM is appointed in writing by the AO and approved by the SAISO. An individual appointed as ISSM for a system cannot also be assigned as the ISSO for the same system. A current list of ISSMs is located at <http://insite.gsa.gov/graphics/staffoffices/poc.xls>. Responsibilities include:

- a. Providing guidance to the ISSOs in their organization.
- b. Assisting the AO in appointing ISSOs.
- c. Verifying annually the list of ISSOs and providing an updated designation letter to the SAISO when changes occur or designations expire.
- d. Ensuring accreditation support documentation is developed and maintained.
- e. Reviewing and coordinating reporting of Security Advisory Alerts (SAA), compliance reviews, security training, incident reports, contingency plan testing, and other IT security program issues.
- f. Managing system certifications, signing certification statements, and forwarding them to the Authorizing Official.
- g. Forwarding to the SAISO copies of accreditation statements once they have been signed by the Authorizing Official.
- h. Supporting the security measures and goals described in Chapter 3, Paragraph 9 (Performance Measures) of this policy.
- i. Complying with GSA training requirements for individuals with significant security responsibilities.

9. Information Systems Security Officer (ISSO). The Information Systems Security Officer (ISSO) is the focal point for ensuring implementation of adequate system security in order to prevent, detect, and recover from security breaches. An ISSO is assigned to an individual information system. An ISSO must be assigned for every information system. An ISSO may have responsibility for more than one system, provided there is no conflict. An individual assigned as the ISSO cannot also be the ISSM for the same system. The ISSO is appointed in writing by the AO and approved by the SAISO. The ISSO must be knowledgeable of the information and processes supported by the system. A current list of ISSOs is located at <http://insite.gsa.gov/graphics/staffoffices/poc.xls>. Responsibilities include:

- a. Ensuring the system is operated, used, maintained, and disposed of in accordance with internal security policies and procedures. Necessary security controls should be in place and operating as intended.
- b. Advising System Owners of risks to their systems and obtaining assistance from the ISSM, if necessary, in assessing risk.
- c. Assisting System Owners in completing and maintaining the appropriate security documentation including the system security plan.
- d. Assisting the Authorizing Official in the system certification and accreditation (C&A) and creating and maintaining C&A documentation. In coordination with the System Owner, the ISSO develops and updates the system security plan as well as managing and controlling changes to the system and assessing the security impact of those changes.

- e. Assisting the Authorizing Official, Data Owner and Contracting Officer / Contracting Officer Technical Representative in ensuring users have the required background investigations, the required authorization and need-to-know, and are familiar with internal security practices before access is granted to the system.
- f. Promoting information security awareness.
- g. Identifying, reporting and responding to security incidents.
- h. Reviewing Security Advisory Alerts on vulnerabilities.
- i. Administering the user identification and authentication scheme used in the system.
- j. Ensuring media handling procedures are followed.
- k. Reviewing system security audit trails and system security documentation to ensure security measures are implemented effectively.
- l. Evaluating known vulnerabilities to ascertain if additional safeguards are needed; ensuring systems are patched, and security hardened.
- m. Beginning protective or corrective measures if a security breach occurs.
- n. Assisting in the development and maintenance of contingency plan and contingency plan test report documentation.
- o. Supporting the security measures and goals described in Chapter 3, Paragraph 9 (Performance Measures) of this policy.
- p. Complying with GSA training requirements for individuals with significant security responsibilities.
- q. Ensuring Privacy Impact Assessments (PIAs) are completed for IT systems that are new, underdevelopment, or undergoing major modifications which impact Privacy Act data.
- r. Working with the ISSM and System Owners to develop, implement, and manage POA&Ms for assigned systems in accordance with CIO IT Security-09-44, "Plan of Action and Milestones (POA&M)."
- s. Reviewing system role assignments to validate compliance with principles of least privilege.

10. System Owners (aka. System Program Managers/Project Managers). System Owners are management officials within GSA who bear the responsibility for the acquisition, development, maintenance, implementation, and operation of GSA's IT systems. System Owners represent the interests of the system throughout its lifecycle. Primary responsibility for managing risk should rest with the System Owners. Responsibilities include:

- a. Ensuring their systems and the data each system processes have necessary security controls in place and are operating as intended and protected in accordance with GSA regulations and any additional guidelines established by the ISSO or ISSM.
- b. Obtaining the security resources for their respective systems.
- c. Developing and implementing a configuration management plan for their respective systems.
- d. Using the advice of the ISSM and ISSO along with the approval of the Authorizing Official, selecting the mix of controls, technologies, and procedures that best fit the risk profile of the system.
- e. Participating in activities related to the certification and accreditation of the system to include security planning, risk assessments, security and incident response testing, and contingency planning.
- f. Defining and scheduling software patches.
- g. Ensuring IT security requirements are included in IT contracts or contracts including IT.
- h. Ensuring implementation of privacy requirements for their system of records.

- i. Conducting PIAs on systems used to collect information on individuals or when new systems are developed, acquired, or purchased.
- j. Developing, implementing and maintaining an approved IT Contingency Plan which includes an acceptable Business Impact Analysis (BIA).
- k. Ensuring that information and system categorization has been established for their systems and data in accordance with FIPS Publication 199, "Standards for Security Categorization of Federal Information and Information Systems."
- l. Conducting annual reviews and validations of system users' accounts to ensure the continued need for access to a system and verify users' authorizations (rights/privileges).
- m. Ensuring that for each information system, security is planned, documented, and integrated into the system life cycle (SLC) from the information system's initiation phase to the system's disposal phase.
- n. Reviewing the security controls for their systems and networks annually as part of the FISMA review, when significant modifications are made to the system and network, and/or at least every three years.
- o. Defining, implementing, and enforcing detailed separation of duties by ensuring that single individuals do not have control of the entirety of a critical process, roles, permissions, and/or responsibilities.
- p. Ensuring that physical or environmental security requirements are implemented for facilities and equipment used for processing, transmitting, or storing sensitive information based on the level of risk.
- q. Obtaining written authorization from the Authorizing Official prior to connecting with other systems and/or sharing sensitive data/information.
- r. Developing and maintaining the system security plan and ensuring that the system is deployed and operated according to the agreed-upon security requirements.
- s. Ensuring that system users and support personnel receive the requisite security training (e.g., instruction in rules of behavior) and assisting in the identification, implementation, and assessment of the common security controls.
- t. Supporting the security measures and goals described in Chapter 3, Paragraph 9 (Performance Measures) of this policy.
- u. Complying with GSA training requirements for individuals with significant security responsibilities.
- v. Integrating and explicitly identifying security funding for information systems and programs into IT investment and budgeting plans.
- w. Working with program officials and the system developer on the system's privacy issues, preparing a PIA report if needed, obtaining the Program Manager's approval of the PIA report, and submitting the PIA report to CHCO and OCIO officials for review and approval.
- x. Coordinating with IT security personnel including the ISSM and ISSO and Data Owners to ensure implementation of system and data security requirements.
- y. Working with the ISSO and ISSM to develop, implement, and manage POA&Ms for their respective systems in accordance with CIO IT Security-09-44, "Plan of Action and Milestones (POA&M)."
- z. Ensuring proper separation of duties for GSA IT system maintenance, management, and development processes.
- aa. Conducting annual assessments to review the effectiveness of control techniques, with an emphasis on activities that cannot be controlled through logical, physical, or compensating controls. The reviews determine whether in-place control techniques are maintaining risks within acceptable levels (e.g., periodic risk assessments).

bb. Working with the Data Owner, granting access to the information system based on a valid need-to-know/need-to-share that is determined during the account authorization process and the intended system usage.

cc. Working with Data Owners with assistance from the ISSO, will ensure system access is restricted to authorized users that have completed required background investigations, are familiar with internal security practices, and have completed requisite training programs, such as the annual Privacy Act training curriculum. System access authorizations must enforce job function alignment, separation of duties, and be based on the principle of need-to-know.

dd. Working with Data Owners to ensure the appropriate level of auditing and logging data is enabled and generated to support monitoring activities.

ee. Working with Data Owners to ensure that log data is archived for a period of not less than 180 days.

ff. Working with Data Owners to audit user activity for indications of fraud, misconduct, or other irregularities.

gg. Working with Data Owners to document all phases of monitoring activity including monitoring procedures, response processes, and steps performed when reviewing user activity.

11. Data Owners (aka. Functional Business Line Managers). The Data Owner/Functional Business Line Manager owns the information but not the system application or platform on which the information is processed. Responsibilities include:

a. Determining the security categorization of systems based upon the FIPS Publication 199 levels and ensuring that system owners are aware of the sensitivity of data to be handled.

b. Coordinating with System Owners, ISSMs, ISSOs, and Custodians to ensure the data is properly stored, maintained, and protected.

c. Ensuring system access is restricted to authorized users that have completed required background investigations and are familiar with internal security practices. System access authorizations must enforce job function alignment, separation of duties, and be based on the principle of need-to-know.

d. Reviewing access authorization listings and determining whether they remain appropriate at least annually.

e. Ensuring protection of GSA's systems and data in accordance with GSA's IT Security Policy.

f. Ensuring that data is not processed on a system with security controls that are not commensurate with the sensitivity of the data.

g. Assisting in identifying and assessing the common security controls where the information resides.

h. Ensuring information systems that allow authentication of users for the purpose of conducting government business electronically (accessed via the Internet or via other external non-agency controlled networks, such as partner Virtual Private Networks [VPN]) complete an e-authentication risk assessment resulting in an authentication assurance level classification in accordance with OMB Memorandum M-04-04, "E-Authentication Guidance for Federal Agencies."

i. Coordinating with IT security personnel including the ISSM and ISSO and System Owners to ensure implementation of system and data security requirements.\

j. Working with the System Owner, granting access to the information system based on a valid need-to-know/need-to-share that is determined during the account authorization process and the intended system usage.

k. Working with the System Owner with assistance from the ISSO, ensure system access is restricted to authorized users that have completed required background investigations, are familiar with

internal security practices, and have completed requisite training programs, such as the annual Privacy Act training curriculum. System access authorizations must enforce job function alignment, separation of duties, and be based on the principle of need-to-know.

- l. Working with the System Owner to ensure the appropriate level of auditing and logging data is enabled and generated to support monitoring activities.
- m. Working the System Owner to ensure that log data is archived for a period of not less than 180 days.
- n. Working with the System Owner to audit user activity for indications of fraud, misconduct, or other irregularities.
- o. Working with the System Owner to document all phases of monitoring activity including monitoring procedures, response processes, and steps performed when reviewing user activity.

12. Acquisitions/Contracting (Contracting Officers [CO]/Contracting Officers Technical Representative [COTR]). The Acquisitions/Contracting function is responsible for managing contracts and overseeing their implementation. Personnel executing this function have the following responsibilities in regards to information security:

- a. Collaborating with the SAISO or other appropriate official to ensure that the agency's contracting policies adequately address the agency's information security requirements.
- b. Coordinating with the SAISO or other appropriate official as required to ensure that all agency contracts and procurements are compliant with the agency's information security policy.
- c. Ensuring that all personnel with responsibilities in the agency's procurement process are properly trained in information security.
- d. Working with the SAISO to facilitate the monitoring of contract performance for compliance with the agency's information security policy.
- e. Identifying and initiating contractor background investigations in collaboration with the OCHCO.
- f. Ensuring contracts and task orders for ISSM and ISSO services include performance requirements that can be measured.
- g. Ensuring that all IT acquisitions include the appropriate security requirements in each contract and task order.
- h. Ensuring that the appropriate security contracting language is incorporated in each contract and task order.
- i. Maintaining the integrity and quality of the proposal evaluation, negotiation, and source selection processes while ensuring that all terms and conditions of the contract are met.
- j. Ensuring new solicitations include the language below from OMB Memorandum M-07-18, "Ensuring New Acquisitions Include Common Security Configurations."

(1) "The provider of information technology shall certify applications are fully functional and operate correctly as intended on systems using the Federal Desktop Core Configuration (FDCC). This includes Internet Explorer 7 configured to operate on Windows XP and Vista (in Protected Mode on Vista). For the Windows XP settings, see: http://csrc.nist.gov/itsec/guidance_WinXP.html, and for the Windows Vista settings, see: http://csrc.nist.gov/itsec/guidance_vista.html." Browsing sexually explicit, gambling sites or hate-based web sites.

(2) "The standard installation, operation, maintenance, update, and/or patching of software shall not alter the configuration settings from the approved FDCC configuration. The information technology should also use the Windows Installer Service for installation to the default "program files" directory and should be able to silently install and uninstall."

(3) "Applications designed for normal end users shall run in the standard user context without elevated system administration privileges."

k. Ensuring all GSA contracts, Request for Proposals (RFP), and Request for Quotes (RFQ) involving Privacy Act information adhere to the Federal Acquisition Regulations (FAR) Privacy Act provisions (Subparts 24.1) and include the specified contract clauses (Parts 52.224-1 and 52.224-2), as appropriate, to ensure that personal information by contractors who work on GSA-owned systems of records and the system data are protected as mandated. In addition, COs and COTRs shall review the statements of work to ensure IT security controls are put on contract consistent with the current version of NIST SP 800-53. Recommended Security Controls for Federal Information Systems for their FIPS 199 Impact Level.

l. Ensuring industry and government information technology providers use Security Content Automation Protocol (SCAP) validated tools with FDCC Scanner capability to certify their products operate correctly with FDCC configurations and do not alter FDCC settings.

13. Custodians. Custodians own the hardware platforms and equipment on which the data is processed. They are the individuals in physical or logical possession of information from Data Owners. Responsibilities include:

a. Coordinating with Data Owners and System Owners to ensure the data is properly stored, maintained, and protected.

b. Providing and administering general controls such as back-up and recovery systems consistent with the policies and standards issued by the Data Owner.

c. Establishing, monitoring, and operating information systems in a manner consistent with GSA policies and standards as relayed by the Authorizing Official.

d. Accessing data only on a need to know basis as determined by the data owner.

14. Users of IT Resources. Authorized users of GSA IT resources, including all Federal employees and contractors, either by direct or indirect connections, are responsible for complying with GSA's IT Security Policy. Their responsibilities include:

a. Complying with all GSA security policies and procedures.

b. Complying with security training, education, and awareness sessions commensurate with their duties.

c. Reporting any observed or suspected security problems/incidents to their local help desk or ISSO.

d. Complying with background investigating policies.

e. Ensuring sensitive data (i.e., personally identifiable information) is not stored on laptop computers or other portable storage devices (e.g., USB flash drives, external hard drives) unless the data is encrypted with GSA provided encryption.

f. Familiarizing themselves with any special requirements for accessing, protecting, and using data, including Privacy Act requirements, copyright requirements, and procurement-sensitive data.

g. Ensuring that adequate protection is maintained on their workstation, including not sharing passwords with any other person and logging out, locking, or enabling a password protected screen saver before leaving their workstation.

h. Ensuring PII data stored on GSA user workstations or mobile devices including, but not limited to notebook computers, USB drives, CD-ROMs/DVDs, personal digital assistants and Blackberries, is encrypted with GSA provided encryption. An employee or contractor shall not take out PII from GSA

facilities (including GSA managed programs housed at contractor facilities under contract), or access remotely (i.e., from locations other than GSA facilities), without written permission from the employee's supervisor, the data owner, and the IT system authorizing official. Approvals shall be filed with the employee's supervisor. This applies to electronic media (e.g. laptops, Blackberries, USB drives), paper, and any other media (e.g., CDs/DVDs) that may contain PII.

- i. Ensuring GSA managed computers that collect and store PII must adhere to all PII requirements.
- j. Complying with privacy training, education, and awareness sessions commensurate with their duties.
- k. Utilizing assigned privileged access rights (power user, database administrator, web site administrator, etc.) to a computer based on need to know.

15. GSA Inspector General (IG). The GSA IG is a statutory office within an organization that, in addition to other responsibilities, works to assess an organization's information security practices and identifies vulnerabilities and the possible need to modify security measures. The IG completes this task by:

- a. Detecting fraud or instances of waste, abuse, or misuse of an organization's funds.
- b. Identifying operational deficiencies within the organization.
- c. Performing annual independent FISMA evaluations.
- d. Access to GSA and contractor records. OIG auditors, investigators, and attorneys have access to all records, reports, reviews, documents, papers, and materials available to GSA and pertaining to agency programs and activities. When performing reviews of contractor records and proposals, access to information is provided by statute, contract terms, and agreements between the contractor and the Government. To facilitate the process of gaining access to information, auditors, investigators, and attorneys carry credentials identifying them as OIG officials. In addition, the following procedures will be followed to allow OIG personnel access to GSA electronic systems:

(1) There will be a single point of contact for the OIG, the Assistant Inspector General for Auditing (AIGA) or his/her designee. For the Services and Staff Offices within GSA, the points of contact will be the Authorizing Official (AO) (a.k.a. the Designated Approving Authority (DAA)) for each information system.

(2) The AIGA will notify the AO of the electronic system within his or her purview to which OIG personnel need access.

(3) The AO will inform the AIGA what the highest classification level is of information on the system and all security awareness and privacy training that is required of GSA personnel in order to access the system.

(4) The AIGA will designate the OIG personnel who are to be given access and ensure they have appropriate clearance levels.

(5) The AIGA will certify that each OIG person who may have access to the system has completed all training required of GSA personnel before access is granted.

(6) The AIGA will annually certify that each OIG person with access to a GSA system has a continuing need for access and has maintained up-to-date training requirements in connection with the system owner's annual review and validation of systems users' accounts as described in paragraph 10.1 of this chapter.

(7) The AIGA will ensure and state that access is necessary for OIG personnel to accomplish assigned tasks in accordance with the OIG's organizational mission and functions. The following statement from the AIGA will suffice to establish that access is necessary for these purposes:

"This access is requested to fulfill the OIG's statutory responsibility to conduct and supervise audits and investigations relating to the programs and operations of GSA, and

to promote economy, efficiency and effectiveness in the administration of, and to prevent and detect fraud, waste, and abuse in, GSA programs and operations.”

(8) With regard to requests for access to Privacy Act systems of records, the AIGA will ensure and certify that the OIG personnel who will be accessing the system have a need for the records in the performance of their duties. The statement shall suffice to establish that access to the system is consistent with the requirements of the Privacy Act.

(9) The AO will work with the system owner to ensure access is granted promptly after the above steps have been completed. If access cannot be granted within fourteen (14) calendar days after completion of the above steps, the AO will inform his/her HSSO and the AIGA and will work with the AIGA to resolve any impediments to OIG access to the system. The Chief Information Officer, or designee, will assist as requested in resolving any issues.

(10) The system owner will authorize OIG personnel to access GSA-owned information systems from the OIG's accredited system. When possible under contractual terms, OIG personnel will be authorized access to contractor-owned information systems from the OIG's accredited system.

(11) To the extent practicable, OIG personnel will not be granted access to other agencies' owned or controlled records or information about other agencies and their employees that may be maintained in a GSA-controlled system, absent the other agency's permission.

(12) The OIG will advise the AO immediately if circumstances change such that access is no longer needed; for example, if an individual with access leaves the OIG, or upon conclusion of the investigation/audit or other OIG purpose for which systems access was provided.

(13) OIG employees will have “read-only” access to all information in the system. OIG personnel will not be able to add to, delete, or modify the data in the system.

(14) Each OIG employee with access will use a unique identifier and password when accessing the system.

(15) Testing in support of an OIG review, whether manual or automated, shall not have an adverse affect on the operational production status of the IT system being reviewed other than the increase in usage/traffic due to additional users.

(16) Should the system be compromised by a reportable incident, and the access of OIG personnel be implicated in the incident, the system owner will promptly notify the Inspector General in writing, and the Inspector General will take appropriate action against the employee(s) responsible.

16. OCHCO Personnel Security Officer. The OCHCO personnel security officer is responsible for the overall implementation and management of personnel security controls across GSA, to include integration with specific information security controls. As information security programs are developed, senior agency officials should work to ensure this coordination of complementary controls. In consideration of information security, the personnel security officer serves as the senior official responsible for:

- a. Developing, promulgating, implementing, and monitoring the organization's personnel security programs.
- b. Developing and implementing position categorization (including third-party controls), access agreements, and personnel screening, termination, and transfers.
- c. Ensuring consistent and appropriate sanctions for personnel violating management, operation, or technical information security controls.

17. System/Network Administrators. System/Network administrators are responsible for:

- a. Ensuring the appropriate security requirements are implemented consistent with GSA IT security policies and hardening guidelines.

- b. Implementing system backups and patching of security vulnerabilities.
- c. Utilizing privileged access rights (e.g., “administrator,” “root,” etc.) to a computer based on a need to know.
- d. Working with the Custodian/ISSO to ensure appropriate technical security requirements are implemented.
- e. Ensuring System/Network administrators have separate Administrator and User accounts, if applicable (e.g. Microsoft Windows accounts). The Administrator privileged account must only be used when Administrator rights are required to perform a job function. A normal user account should be used at all other times.
- f. Identifying and reporting security incidents and assisting the OSAISO, ISSM, & ISSO in resolving the security incident.

18. Supervisors. Supervisors are responsible for:

- a. Conducting annual review and validation of staff user accounts to ensure the continued need for access to a system.
- b. Conducting annual reviews of staff training records to ensure annual Privacy Act, Security Training, and application specific training was completed for all users. The records shall be forwarded to application ISSO/System Owners as part of the annual recertification efforts.
- c. Coordinating and arranging system access requests for all new or transferring employees and for verifying an individual's need-to-know (authorization).
- d. Coordinating and arranging system access termination for all departing or resigning personnel.
- e. Coordinating and arranging system access modifications for personnel.
- f. Documenting job descriptions and roles to accurately reflect the assigned duties, responsibilities, and separation of duties principles. By clearly documenting position responsibilities and functions, employees are positioned to better execute their duties in accordance with policy.
- g. Establishing formal procedures to guide personnel in performing their duties, with identification of prohibited actions.

CHAPTER 3. POLICY ON MANAGEMENT CONTROLS

Paragraph <u>Titles</u>	Paragraph <u>Numbers</u>
Assign Responsibility for Security	1
Risk Management	2
Review of Security Controls	3
Lifecycle	4
Accreditation (<u>Authorized Processing</u>)	5
System Security Plan (SSP)	6
Rules of the System	7
System Interconnections/Information Sharing	8
Performance Measures.....	9
Plan of Action and Milestones (POAMs)	10
Contractors and Outsourced Operations	11
Privacy Impact Assessments (PIAs)	12
Capital Planning and Investment	13
Enterprise Architecture (EA)	14

CHAPTER 3. POLICY ON MANAGEMENT CONTROLS

This chapter provides the basic management control security policy statements for GSA systems. Management Controls deal with the overall control of the security program for GSA, including networks and systems. The policy statements are derived primarily from OMB Circular A-130 and are integral to an effective IT security program. The manner in which these controls are implemented depends on the risks, sensitivity, and criticality associated with the specific systems and data involved. In some cases, basic security policy controls may need to be modified or supplemented in order to address application-specific or system-specific requirements.

The following paragraphs provide specific policy on controls for the security management of GSA systems.

1. Assign Responsibility for Security.

- a. A security management structure must be established and security responsibilities must be clearly assigned.
- b. Responsibility for the security of the IT system must be assigned to an Authorizing Official.
- c. Responsibility for ensuring security is implemented across the Services, Staff Offices, or Regions must be assigned, in writing, to an ISSM.

d. Responsibility for each major application and general support system within the Services, Staff Offices or Regions must be assigned, in writing, to an ISSO.

2. Risk Management.

a. Authorizing Officials must implement a risk management process for all information systems using NIST SP 800-30 "Risk Management Guide for Information Technology Systems" as a guide.

b. Authorizing Officials must ensure risk assessments are performed and documented every three (3) years for information systems under their control or whenever there is a significant change to their security posture using NIST SP 800-30.

c. All information systems must use NIST SP 800-60 "Guide for Mapping Types of Information and Information Systems to Security Categories" and FIPS Publication 199 "Standards for Security Categorization of Federal Information and Information Systems" to determine their security category (i.e. risk level) for confidentiality, availability and integrity.

d. All information systems that allow authentication of users for the purpose of conducting government business electronically (accessed via the Internet or via other external non-agency controlled networks, such as partner VPN) complete an e-authentication risk assessment resulting in an authentication assurance level classification in accordance with OMB Memorandum M-04-04, "E-Authentication Guidance for Federal Agencies." The Electronic Risk and Requirements Assessment (e-RA) tool shall be used for all e-authentication risk assessments. Download the current version of the e-RA tool from <http://www.cio.gov/eauthentication/era.htm>.

e. Authorizing Officials must ensure that the risk management process includes contingency and continuity of support plans developed and tested annually in accordance with Office of Management and Budget (OMB) Circular No. A-130, NIST SP 800-34, "Contingency Planning Guide for Information Technology Systems, and CIO IT Security 06-29, "Contingency Plan Testing."

f. All information systems must develop and maintain Plan of Action and Milestones (POA&M) in accordance with CIO IT Security-09-44, "Plan of Action and Milestones (POA&M)." POA&Ms are the authoritative agency management tool for managing system risk and used in identifying, assessing, prioritizing, and monitoring the progress of corrective efforts for security weaknesses found in agency programs and systems.

3. Review of Security Controls.

a. Every IT system both government and contractor operated must undergo a security control review annually using the current version of NIST SP 800-53 "Recommended Security Controls for Federal Information Systems," and CIO IT Security-04-26, "FISMA Implementation."

b. POA&M must be submitted to OMB on every information system upon request and summaries must be submitted quarterly. Development and Maintenance of POA&Ms must be in accordance with CIO IT Security-09-44, "Plan of Action and Milestones (POA&M)."

c. The OCIO must submit an agency-wide FISMA Report to OMB and specified congressional committees annually.

d. An entity-wide IT security program must include compliance reviews to determine how well the over-all GSA security program meets the agency performance measures.

4. Lifecycle.

a. GSA IT Security Policy must be incorporated into each phase of the lifecycle, (i.e., initiation, development/acquisition, implementation, operation and disposal) for all GSA information systems.

b. System Owners must use NIST SP 800-64 "Security Considerations in the Information System Development Life Cycle," GSA Order CIO P 2140.3 "Systems Development Life Cycle (SDLC), and the GSA SDLC Guidance Handbook as guides when managing security throughout the system's lifecycle.

5. Accreditation (Authorized Processing).

a. The Authorizing Official must authorize, in writing, all information systems before they go into operation.

b. All GSA information systems must be certified and accredited at least every three (3) years or whenever there is a significant change to the system's security posture in accordance with NIST SP 800-37, "Guide for the Security Certification and Accreditation of Federal Information Systems," and CIO IT Security 06-30, "Managing Enterprise Risk (Security Categorization, Risk Assessment, and Certification and Accreditation)."

c. As part of the certification and accreditation process, all systems must be categorized in accordance with (IAW) FIPS PUB 199, "Standards for Security Categorization of Federal Information and Information Systems" and NIST SP 800-60, "Guide for Mapping types of Information and Information Systems to Security Categories." Risk Assessments must be performed IAW NIST SP 800-30, "Risk Management Guide." E-authentication risk assessments must be performed IAW OMB M-04-04, "E-Authentication Guidance for Federal Agencies" using the e-RA tool. All controls must be implemented IAW FIPS PUB 200, "Minimum Security Requirements for Federal Information and Information Systems" and the current version of NIST SP 800-53, "Recommended Security Controls for Federal Information Systems." All controls must be documented in the system's security plan IAW NIST SP 800-18 Revision 1, "Guide for Developing Security Plans for Information Technology Systems." All controls must be documented and tested IAW NIST SP 800-53A, "Guide for Assessing the Security Controls in Federal Information Systems" and any other supplemental GSA guidance. In addition, contingency plans must be developed IAW NIST SP 800-34, "Contingency Planning Guide for Information Technology Systems," and have been tested IAW CIO IT Security 06-29, "Contingency Plan Testing" within the past year in order for the Authorizing Official to authorize the system to operate (i.e. accredit).

d. An Interim Approval to Operate (IATO) can be issued for no longer than twelve (12) months, but does not count towards a system being certified and accredited per OMB direction.

e. All GSA information systems must complete a Privacy Impact Assessment as part of the certification and accreditation process. This is at least every three (3) years or whenever there is a significant change to the system's privacy posture.

6. System Security Plan (SSP).

a. All information systems must be covered by a security plan in accordance with the current version of NIST SP 800-18 Revision 1 "Guide for Developing Security Plans for Information Technology Systems."

b. Update SSPs at least annually or when significant changes occur to the system.

7. Rules of the System.

a. Authorized users must be provided written Rules of Behavior, GSA Order CIO 2104.1, "GSA IT General Rules of Behavior", before being allowed entry into any GSA, non-public information system.

b. The user must acknowledge receipt of these rules through a positive action.

8. System Interconnections/Information Sharing.

a. Written management authorization for system interconnection, based upon the acceptance of risk to the IT system, must be obtained from the Authorizing Officials of both systems prior to connecting a system not under a single Authorizing Official's control in accordance with NIST SP 800-47, "Security Guide for Interconnecting Information Technology Systems." Per NIST 800-47, an interconnection is the direct connection of two or more IT systems for the purpose of sharing data and other information resources through a pipe, such as ISDN, T1, T3, DS3, VPN, etc.

b. If GSA systems interconnect, they must connect using a secure methodology that provides security commensurate with the acceptable level of risk as defined in the system security plan and that limits access only to the information needed by the other system.

c. All interconnections between GSA and external entities including off-site contractors or Federal agency/departments must be approved by the GSA SAISO.

9. Performance Measures. HSSOs, for their FISMA reportable systems, shall track the measures / goals presented here in sub-paragraphs a-c. AOs, System Owners, ISSMs, and ISSOs shall support these measures. The SAISO shall periodically assess performance and goals.

a. Percentage of FISMA systems with a current C&A IAW GSA policy and guides (Goal – 100%).

b. Percentage of FISMA systems with contingency plans tested in the last 12 months (Goal – 100%).

c. Percentage of servers configured IAW GSA IT security policy and guides (Goal – 96-100%).

10. Plan of Action and Milestones (POAMs). Capture all information security program and system weaknesses that require mitigation in the POA&M in accordance with CIO IT Security-09-44, "Plan of Action and Milestones (POA&M)." POA&Ms shall be updated quarterly.

11. Contractors and Outsourced Operations. Implement appropriate safeguards to protect GSA information and information systems from unauthorized access throughout all phases of a contract. Review contracts to ensure that information security is appropriately addressed in the contracting language. All applicable NIST 800-53 controls should be put on contract (and a reasonable subset continuously monitored using GSA's annual IT Security Program Management Implementation Plan, CIO IT Security 08-39, as a guide) for all contractor and outsourced operations. Given that GSA IT security program is risk-based, it may not always make financial sense to mandate all NIST 800-53 IT security controls on an outsourced system. The System Program Manager and ISSO should make risk-based decisions on which controls could potentially be waived and then get concurrence from the authorizing official and the Senior Agency Information Security Officer.

12. Privacy Impact Assessments (PIAs). Conduct PIAs on all GSA information systems in accordance with OMB Memorandum M-03-22, "OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002," that includes, but is not limited to, the collection of new information in identifiable form (IIF) or when new information systems are developed, acquired, and/or purchased. PIAs are required every three years or when significant changes are made to these systems.

13. Capital Planning and Investment. Integrate and explicitly identify funding for information systems and programs into IT investment and budgeting plans per GSA Order CIO 2135.2B, GSA Information Technology (IT) Capital Planning and Investment Control, dated November 26, 2008. GSA's capital planning and investment control process must be used for the continuous selection, control, and evaluation of IT investments over their life cycles.

14. Enterprise Architecture (EA). Systems shall be implemented per the enterprise architecture principles in GSA Order CIO 2110.2, "GSA Enterprise Architecture Policy," dated November 26, 2008. The principles contained in GSA Order 2110.2 are consistent with OMB Circular A-130 which establishes the framework for architecture to address security controls for components, applications, and systems. In addition to the principles set forth in GSA Order CIO 2110.2, architecture practices cited in OMB's Federal Segment Architecture Methodology must be used during planning a new system or significant capability enhancement.

CHAPTER 4. POLICY ON OPERATIONAL CONTROLS

Paragraph <u>Titles</u>	Paragraph <u>Numbers</u>
Personnel Security	1
Physical and Environmental Protections	2
Production and Input/Output Controls	3
IT Contingency Planning / Continuity of Support Planning	4
Hardware and Software Maintenance	5
Data Integrity	6
Documentation	7
Security and Privacy Awareness, Training, and Education	8
Incident Response Capability	9
Security Advisory Alert Handling	10
Media Protection	11
Configuration Management	12
Firewall Access	13
Monitoring	14
Software and Digital Media Acceptable Use	15
E-Mail and Internet Acceptable Use	16
Mobile Devices	17
Peer-to-Peer Networking and Instant Messaging.....	18
Separation of Duties (FIPS 199 Moderate and High Impact systems only)	19
Least Privilege	20
Remote Access / End Point Security	21
Personally Identifiable information (PII).....	22

CHAPTER 4. POLICY ON OPERATIONAL CONTROLS

This chapter provides the basic operational control security policy statements for GSA systems. Operational Controls concern requirements to design, maintain, and use GSA systems in a secure environment. The policy statements are derived primarily from OMB Circular A-130 and are integral to an effective IT security program. The manner in which these controls are implemented depends on the risks, sensitivity, and criticality associated with the specific systems and data involved. In some cases, basic security policy controls may need to be modified or supplemented in order to address application-specific or system-specific requirements.

The following paragraphs provide specific policy on controls for the operational security of the system.

1. Personnel Security.

- a. Background investigation requirements for access to GSA information systems (including contractor operations containing GSA information) shall comply with GSA Order CIO P 2181.1, "GSA HSPD-12 Personal Identity Verification and Credentialing Handbook" and GSA Handbook ADM 9732.1C, "Suitability and Personnel Security." Contractors requiring non-routine access to IT systems (contractor summoned for an emergency service call) are not required to have a personnel investigation and are treated as visitors and must be escorted while in a GSA facility.
- b. Termination and Transfer Procedures must be incorporated into the authorization process for all information systems.
- c. Supervisors of GSA employees and COTRs of GSA contractors must be responsible for coordinating and arranging system access requests for all new or transferring employees and for verifying an individual's need-to-know (authorization).
- d. Supervisors of GSA employees and COTRs of GSA contractors must be responsible for coordinating and arranging system access termination for all departing or resigning personnel.
- e. User authorizations must be verified annually for all information systems.
- f. The Authorizing Official or their designee must grant remote access (i.e. external to GSA's network) privileges only to those GSA employees and contractors with a legitimate need for such access as approved.

2. Physical and Environmental Protections.

- a. Physical and environmental security controls must be commensurate with the level of risk and must be sufficient to safeguard IT resources against possible loss, theft, destruction, accidental damage, hazardous conditions, fire, malicious actions, and natural disasters.
- b. GSA servers, routers, and other communication hardware essential for maintaining the operability of GSA systems and their connectivity to the GSA Local Area Backbone Network/Wide Area Backbone Network (LABN/WABN), must be placed in an isolated, controlled-access location (i.e., behind locked doors).
- c. Limit access to rooms, work areas/spaces, and facilities that contain agency systems, networks, and data to authorized personnel. A list of current personnel with authorized access shall be maintained and reviewed annually to verify the need for continued access and authorization credentials.
- d. Visitor access records shall be maintained for facilities containing information systems (except for those areas within the facility officially designated as publicly accessible). Visitor access records include: (i) name and organization of the person visiting; (ii) signature of the visitor; (iii) form of identification; (iv) date of access; (v) time of entry and departure; (vi) purpose of visit; (vii) name and organization of person visited, and (viii) signature and name of individual verifying the visitor's credentials. Visitor access records shall be reviewed at least annually.
- e. Ensure that all agency systems and networks are located in areas not in danger of water damage due to leakage from building plumbing lines, shut-off valves, and other similar equipment to support meeting federal and local building codes.
- f. Install and ensure operability of fire suppression devices, such as fire extinguishers and sprinkler systems, and detection devices, such as smoke and water detectors, in all areas where agency information systems are maintained (this includes server rooms, tape libraries, and data centers) to meet federal and local building codes.
- g. Install and ensure operability of air control devices, such as air-conditioners and humidity controls, in all areas where agency information systems are maintained (this includes server rooms, tape libraries, and data centers) to meet federal and local building codes.

3. Production and Input/Output Controls. Data (including relevant and pertinent documentation) must be protected against unauthorized access, tampering, alteration, loss, and destruction during production, input, output, handling, and storage.

4. IT Contingency Planning/Continuity of Support Planning. Contingency planning focuses on the recovery and restoration of an IT system following a disruption. The contingency plan supports the agency Continuity of Operations Plan (COOP) required by HSPD-20, "National Continuity Policy," ensuring that Primary Mission-Essential Functions continue to be performed during a wide range of emergencies. Contingency and continuity of support plans must be developed and tested annually for all IT systems in accordance with Office of Management and Budget (OMB) Circular No. A-130, NIST SP 800-34, "Contingency Planning Guide for Information Technology Systems, and CIO IT Security 06-29, "Contingency Plan Testing."

a. A system specific IT contingency plan must be developed that identifies and addresses preventive controls, damage assessment procedures, plan testing and training procedures.

b. Each contingency plan must include an approved BIA recovery strategy and documented procedures to maintain the plan.

c. Personnel supporting FIPS 199 Moderate and High impact systems with contingency planning responsibilities shall be trained in their contingency roles and responsibilities with respect to the information system annually with refresher training every three years.

d. The contingency plan must be annually tested in accordance with CIO IT Security 06-29, "Contingency Plan Testing."

e. Continuity of operations plan (COOP) contact lists which only contain a person's name and home phone number are exempt from GSA IT security policy requirements in Chapter 2, Paragraph 14, sub-section h and Chapter 4, Paragraph 17, sub-section d of this handbook. COOP contact lists kept on an electronic device that is password protected (Blackberry and other Government approved Smart Phone devices, laptop, USB drive) do not require written permission or encryption. Paper "cascade lists" limited to name and home phone number that are maintained for the purpose of emergency employee accountability are permissible with the approval of those individuals listed. All paper and other media should be kept in a locked facility or an otherwise secure location when not in use.

f. The contingency plan must be updated annually to address system/organizational changes or problems encountered during plan implementation, execution, or testing.

5. Hardware and Software Maintenance.

a. The availability and usability of GSA equipment and software must be maintained and safeguarded to enable agency objectives to be accomplished.

b. Lost or stolen GSA IT assets must be immediately reported to the appropriate ISSO.

c. All information systems must be securely hardened and patched before being put into operation and while in operation.

d. Maintenance of agency hardware and software must be restricted to authorized personnel.

e. Hardware and software must be tested in a non-production environment to identify adverse effects on system functionality, be documented, and approved prior to promotion to production.

f. In GSA facilities, only approved Government Furnished Equipment (GFE) is allowed connection (e.g., Ethernet) to the network unless specifically approved by the General Support System Authorizing Official. All non-GFE will be given Internet only access, if possible.

g. All GFE, to include hardware, software and COT applications, must be approved by the Authorizing Official (or their designated representative) of the system in which it will operated, prior to procurement.

6. Data Integrity.

- a. Data integrity and validation controls must be used on all information systems that require a high degree of integrity.
- b. All information systems must have up-to-date virus protection software.

7. Documentation. Documentation must be obtained or created to describe how security mechanisms are implemented and configured within the IT system.

8. Security and Privacy Awareness, Training, and Education.

- a. A security awareness, training and education program must be established by the OCIO to ensure all GSA, other agency, and contractor support staff involved in the management, design, development, operation, and use of IT systems are aware of their responsibilities for safeguarding GSA systems and information.
- b. All GSA employees and contractors must complete security awareness training and Privacy Training 101 annually.
- c. All GSA employees and contractors must complete security awareness training and Privacy Training 101 within 30 days of employment.
- d. All GSA employees and contractors, who have significant information security responsibilities as defined by OPM 5 CFR Part 930 and GSA IT security training policy, must complete specialized IT security training as defined in the policy.
- e. Failure to comply with annual awareness and specialized IT security training requirements will result in termination of email privileges. Authorizing Officials can terminate system accounts.
- f. All GSA employees and contractors, who work with personally identifiable information or have access to other people's information, must complete Privacy Training 201.

9. Incident Response Capability.

- a. Every S/SO/R must establish a security incident response capability for detecting, reporting, and responding to security incidents.
- b. All authorized IT users must be trained annually to promptly report suspected vulnerabilities, security violations, and security incidents to their help desk or ISSO.
- c. ISSOs must report security incidents through their ISSM to the OCIO SAISO in accordance with CIO Procedural Guide 01-02, "Security Incident Handling."
- d. The SAISO will determine which security incidents should be reported to United States Computer Emergency Readiness Team (US-CERT), Office of Inspector General or external law enforcement.
- e. All incidents involving personally identifiable information must be reported to the GSA OSAISO within one hour of discovering the incident. GSA employees, contractors, and authorize users shall report to their Information Systems Security Officer (ISSO) or the help desk. If the help desk cannot reach the ISSO, then the Information Systems Security Manager (ISSM) and OSAISO should be contacted. All incidents involving personally identifiable information in electronic or physical form must be reported. There should be no distinction between suspected and confirmed breaches. For ISSO, ISSM and OSAISO points of contact go <http://insite.gsa.gov/graphics/staffoffices/poc.xls>.
- f. All incidents involving data breaches which could result in identity theft are coordinated through the OSAISO and the GSA Initial Agency Response Team using GSA Order 9297.2A, GSA Information

Breach Notification Policy per OMB Memorandum M-07-16, "Safeguarding Against and Responding to the Breach of Personally Identifiable Information."

g. FIPS 199 Moderate and High impact systems must test annually the security incident response capability to determine the incident response effectiveness.

h. All incidents involving the loss or theft of GSA hardware, software, and/or information in physical form, occurring in GSA Federal facilities, must be reported to the Federal Protective Service (FPS). Similar incidents occurring outside of Federal facilities must first be reported to the local police that has jurisdiction and to FPS upon returning to the office. Blackberry and other Government approved Smart Phone devices lost or stolen outside of GSA Federal facilities are not required to be reported to local police but must be reported to FPS upon returning to the office. To report an incident to FPS, call the national FPS hotline at 1-877-437-7411. In addition, the incident should always be reported to the ISSO or help desk.

10. Security Advisory Alert Handling.

a. Office of the SAISO must create procedures to share common threats, vulnerabilities, and incident related information with the appropriate organizations.

b. ISSMs and ISSOs must report on the status of security advisory alerts to the Office of the SAISO upon request.

11. Media Protection.

a. All GSA data from information system media, both digital and non-digital must be sanitized in accordance with methods described in CIO IT Security 06-32, "Media Sanitization" before disposal or transfer outside of GSA.

b. Restrict access to information system media (e.g., disk drives, diskettes, internal and external hard drives, and portable devices), including backup media, removable media, and media containing sensitive information to authorized individuals.

c. Physically control and securely store information system media within controlled areas.

d. Protect digital media during transport outside of controlled areas using a certified FIPS 140-2 encryption module; non-digital media shall follow OCHCO procedures.

12. Configuration Management. A system configuration management plan must be developed, implemented, and maintained for every IT system managed by GSA.

a. All information systems must be securely hardened and patched before being put into operation and while in operation.

b. All information systems must use GSA technical guidelines, NIST guidelines, Center for Internet Security guidelines (Level 1), or industry best practice guidelines in hardening their systems, as deemed appropriate by the Authorizing Official.

13. Firewall Access.

a. The Office of the Senior Agency Information Security Officer must approve all requests for access through the GSA Firewall. Firewall change requests must follow the process outlined in CIO IT Security 06-31, "Firewall Change Request." This includes changes to desktop firewall and intrusion prevention systems.

b. The Office of the Senior Agency Information Officer will block access to all external sites deemed to be a security risk to GSA. Exceptions to this policy must be approved by the SAISO.

14. Monitoring.

- a. Obtaining access to GSA resources must constitute acknowledgment that monitoring activities may be conducted.
- b. Users have no expectation of privacy on GSA IT systems. All activity on GSA IT systems is subject to monitoring.
- c. All GSA IT systems must display an approved warning banner to all users attempting to access GSA's computer systems indicating the system is subject to monitoring.
- d. Controls shall be put in place to monitor or detect changes or updates to systems that are outside the parameters of a system's baseline operating characteristics. This includes the ability to monitor resource usage and allocation.
- e. Audit user activity for indications of fraud, misconduct, or other irregularities.
- f. Document all phases of monitoring activity including:
 - (1) Monitoring procedures. The procedures must include specific steps to be taken and protocol to be applied when reviewing audit data.
 - (2) Response processes. Processes for responding to detected irregularities must be documented.
 - (3) Steps performed when reviewing user activity. Thorough documentation on reviews conducted on audit data must be generated and stored for not less than 3 years.

15. Software and Digital Media Acceptable Use.

- a. Users of GSA IT resources must use only software that is properly licensed and registered for GSA use.
- b. All GSA users must abide by software and digital media copyright laws and must not obtain, install, replicate, or use unlicensed software and digital media.
- c. Users of GSA IT resources must obtain all software from GSA sources and must not download software from the Internet without prior permission from the appropriate ISSO, as downloading software from the Internet may introduce viruses/worms to the GSA network.
- d. Users must not install any software or hardware without approval of the appropriate ISSO.
- e. Users must not acquire, possess, trade, or use hardware or software tools that could be employed to evaluate or compromise GSA resources unless authorized by the appropriate ISSO. Examples of such tools include those that defeat software copy protection, discover passwords, identify security vulnerabilities, or decrypt encrypted files.
- f. Users must not install, download, or run peer-to-peer software.

16. E-Mail and Internet Acceptable Use.

- a. Users must use E-mail for government business. However, users may occasionally make personal use of E-Mail that involves minimal expense to the government and does not interfere with government business.
- b. Users must not use E-mail for any activity or purpose involving classified data.
- c. Users must avoid the following prohibited E-mail usages:
 - (1) Transmitting unsolicited commercial announcements or advertising material, unless approved by management in advance.

(2) Transmitting any material pertaining to GSA, the federal government, or any agency employee or official, that is libelous or defamatory.

(3) Transmitting sexually explicit or offensive material, non-business related large attachments, chain letters, unauthorized mass mailings, or intentionally sending a virus/worm.

d. Personal use of government IT systems for Internet access must be kept to a minimum and must not interfere with official system use or access.

e. Users must avoid prohibited Internet usages including:

(1) Unauthorized attempts to break into any computer, whether belonging to GSA or another organization.

(2) Browsing sexually explicit, gambling sites or hate-based web sites.

(3) Using Internet access for personal gain (i.e. making use of GSA resources for commercial purposes or in support of for profit activities such as running a private business).

(4) Theft of copyrighted or otherwise legally protected material, including copying without permission.

(5) Sending or posting sensitive material such as GSA building plans or financial information outside of the GSA network.

(6) Automatically forwarding E-mail messages from GSA E-mail addresses to any non-Federal E-mail account(s) or address(es).

(7) Sending E-mail messages including sensitive information, such as PII, as deemed by the data owner, without GSA provided encryption. Certified encryption modules must be used in accordance with FIPS PUB 140-2, "Security requirements for Cryptographic Modules."

f. If PII needs to be emailed within the GSA network, at a minimum Lotus Notes encryption is required. For additional protection the information also can be encrypted as described in Chapter 5, Paragraph 7 of this IT security policy.

Detailed guidance regarding GSA E-Mail Policy is available in GSA Order CIO 2160.2A "GSA Electronic Messaging Policy," dated July 26, 2005, GSA Order ADM 7800.11A, "Personal Use of Agency Office Equipment," dated October 16, 2008, GSA Order CIO 2104.1, "GSA Information Technology (IT) General Rules of Behavior," dated July 3, 2003, and GSA Order CIO P 2165.1, GSA Internal Telecommunications Management, dated August 15, 2005.

17. Mobile Devices.

a. All agency data on laptop and portable storage devices (e.g., USB flash drives, SD cards, external hard drives) must be encrypted with a FIPS 140-2 certified encryption module.

b. All agency data on GSA furnished laptop computing devices must be protected with GSA approved encryption software.

c. PII or other data deemed sensitive by the data owner shall not be stored on or accessed from personally owned computers or personally owned mobile devices (except when using Citrix with drive mappings turned off). PII or other data deemed sensitive by the data owner shall only be accessed from government furnished equipment (GFE) or contractor maintained computers configured in accordance with GSA IT security policy and technical security standards.

d. If it is a business requirement to store PII on GSA user workstations or mobile devices including, but not limited to notebook computers, USB drives, CD-ROMs/DVDs, personal digital assistants and Blackberries, PII must be encrypted using a FIPS 140-2 certified encryption module. An employee or contractor shall not physically take out PII from GSA facilities (including GSA managed programs housed at contractor facilities under contract), or access remotely (i.e., from locations other than GSA facilities),

without written permission from the employee's supervisor, the data owner, and the IT system authorizing official. Approvals shall be filed with the employee's supervisor. This applies to electronic media (e.g. laptops, Blackberries, USB drives), paper, and any other media (e.g., CDs/DVDs) that may contain PII.

e. CD-ROM and floppy disks will be secured using the same policies and procedures as paper documents and will be proscribed by the Office of the Chief Human Capital Officer policies.

f. Mobile devices should be protected in the same manner as a valuable personal item and should not be left unattended in public places, automobiles, etc.

g. Mobile devices that are lost or stolen must be immediately reported to the appropriate ISSO or help desk. Reference Chapter 4, Paragraph 9, sub-paragraph h for reporting requirements to the Federal Protective Service.

h. All GSA employees and contractors who gain access to GSA IT resources and information through wireless LAN connectivity must follow GSA Order 2100.2, "GSA Wireless LAN Security."

i. All mobile devices shall automatically lock-out within 15 minutes of inactivity.

j. COOP contact lists kept on an electronic device that is password protected (Blackberry and other Government approved Smart Phone devices, laptop, USB drive) do not require written permission or encryption.

18. Peer-to-Peer Networking and Instant Messaging.

a. The installation or use of peer-to-peer networking software is prohibited on GSA computers and the GSA network.

b. The installation or use of unauthorized instant messaging (IM) software is prohibited. (i.e. must use an approved GSA standard).

19. Separation of Duties (FIPS 199 Moderate and High Impact Systems only).

a. Responsibilities with a security impact must be shared among multiple staff by enforcing the concept of separation of duties, which requires that individuals do not have control of the entirety of a critical process.

b. Job descriptions must accurately reflect assigned duties and responsibilities that support separation of duty.

c. Define and implement detailed separation of duties policies for its IT systems based on the specific processes, roles, permissions, and responsibilities of personnel involved in departmental business operations.

d. Every S/SO/R must consider how a separation of duties conflict can arise from shared access to applications and systems. Specifically, application programmers and configuration management personnel should not generally have concurrent access to the development and production environment. Failure to segregate access to source code and production code increase the risk that unauthorized modifications to programs may be implemented into production systems, which could introduce vulnerabilities and negatively impact the integrity and availability of data generated and stored in the system.

e. Document job descriptions and roles to accurately reflect the assigned duties, responsibilities, and separation of duties principles. By clearly documenting position responsibilities and functions, employees are positioned to better execute their duties in accordance with policy.

f. Establish formal procedures to guide personnel in performing their duties, with identification of prohibited actions.

g. Duties shall be segregated among users so that the following functions shall not generally be performed by a single individual:

(1) Data entry and verification of data. Any data entry or input process derived from step (2) that requires a staff member to inspect, review, audit, or test the input to determine that the input meets certain requirements should not permit the same individual to both enter and verify data. The objective is to eliminate self-certification or verification of critical data input or entry procedures. Note that this could be an automated or manual process and is not limited to financial transactions.

(2) Data entry and its reconciliation to output. Any data entry or input process derived from step (2) that requires a staff member to reconcile or match transactions to identify discrepancies should not permit the same individual to both enter and reconcile data.

(3) Input of transactions for incompatible processing functions (e.g., input of vendor invoices and purchasing and receiving information).

(4) Data entry and supervisory authorization functions (e.g., authorizing a rejected transaction to continue processing that exceeds some limit requiring a supervisor's review and approval).

h. Ensure proper separation of duties for GSA IT system maintenance, management, and development processes.

i. Information systems must enforce separation of duties through assigned access authorizations.

j. Since critical processes can span separate and distinct applications and systems, each Service, Staff Office, and Region (S/SO/R) will take a macro view of existing roles to define and establish incompatibilities and separation of duties conflicts across an entire business process. This means examining roles that may span multiple IT systems or applications to uncover conflicts that may not be immediately apparent (e.g., an individual has permissions to create and/or modify vendor data in a General Ledger system and the ability to create invoices and purchase orders in an Accounts Payable system).

k. Every S/SO/R must establish physical and logical access controls to enforce separation of duties policy and alignment with organizational and individual job responsibilities.

l. Conduct annual assessments to review the effectiveness of control techniques, with an emphasis on activities that cannot be controlled through logical, physical, or compensating controls. The reviews determine whether in-place control techniques are maintaining risks within acceptable levels (e.g., periodic risk assessments).

m. Review access authorization listings to determine whether they remain appropriate at least annually.

n. Conduct annual reviews of staff training records to ensure annual Privacy Act, Security Training, and application specific training was completed for all users. The records shall be forwarded to application ISSO/System Owners as part of the annual recertification efforts.

20. Least Privilege.

a. Information systems must operate in such a way that they run with the least amount of system privilege needed to perform a specific function and that system access is granted on a need to know basis.

b. Privileged rights including but not limited to "administrator," "root," and "power user" shall be restricted to authorized employees and contractors as approved by the AO.

c. Information systems must be configured to the most restrictive mode consistent with operational requirements and in accordance with appropriate procedural guides from NIST and/or GSA to the greatest extent possible. Implemented configuration settings should be documented and enforced in all subsystems of the information system.

21. Remote Access/End Point Security.

a. All computers accessing GSA through a GSA Secure Sockets Layer (SSL) or Internet Protocol Security (IPsec) Virtual Private Network (VPN), must allow a clientless agent scan that checks for the presence of a client firewall, up to date virus protection software and up to date patches. The clientless agent scan must also verify the absence of malicious software (e.g., Trojans, worms, malware, spyware, etc) on the client machine. Machines that fail this scan will not be allowed access to the GSA network or any GSA IT resources.

b. All devices connecting remotely to GSA must have anti-virus software running with the latest signature files, a firewall installed and running, and all security patches installed.

c. Only GSA GFE that is determined to be properly secured (based on the scans noted above) will be allowed unrestricted remote access to the GSA network.

d. Personal computers and/or contractor computers will only be allowed access to the Citrix Access Gateway and will not have the ability to map local drives (contingent on passing the security scans noted in paragraph a). No PII or other data deemed sensitive by the data owner shall be stored on non-GFE.

e. In special cases for remote administration and maintenance tasks, contractors will be allowed restricted access to specific GSA IP addresses (contingent on passing the security scans noted in paragraph a).

f. Remote access restrictions noted in paragraphs a-e will begin to be implemented in July 2009 with full implementation by December 2009.

22. Personally Identifiable information (PII). The following security requirements apply to the protection of PII.

a. If it is a business requirement to store PII on GSA user workstations or mobile devices including, but not limited to notebook computers, USB drives, CD-ROMs/DVDs, personal digital assistants and Blackberries, PII must be encrypted using a FIPS 140-2 certified encryption module. An employee or contractor shall not physically take out PII from GSA facilities (including GSA managed programs housed at contractor facilities under contract), or access remotely (i.e., from locations other than GSA facilities), without written permission from the employee's supervisor, the data owner, and the IT system authorizing official. Approvals shall be filed with the employee's supervisor. This applies to electronic media (e.g. laptops, Blackberries, USB drives), paper, and any other media (e.g., CDs/DVDs) that may contain PII.

b. PII shall be stored on network drives and/or in application databases with proper access controls (i.e., User ID/password) and shall be made available only to those individuals with a valid need to know.

c. Log all computer-readable data extracts from databases holding PII and verify each extract including PII has been erased within 90 days or its use is still required.

d. Creation of computer-readable data extracts that include PII shall be maintained in an official log including creator, date, type of information, and user.

e. If PII needs to be transmitted over the Internet, it must be sent using encryption methods defined in Chapter 5, Paragraph 7 of this IT security policy.

f. All incidents involving data breaches which could result in identify theft must be coordinated through the OSAISO and the GSA Management Incident Response Team (MIRT) using the GSA breach notification plan per OMB Memorandum M-07-16, "Safeguarding Against and Responding to the Breach of Personally Identifiable Information."

g. GSA managed computers that collect and store PII must adhere to all PII requirements.

h. If PII needs to be emailed within the GSA network, at a minimum Lotus Notes encryption is required. For additional protection the information also can be encrypted as described in Chapter 5, Paragraph 7 of this IT security policy.

i. If PII needs to be sent by courier, printed, or faxed several steps should be taken. When sending PII by courier mark "signature required" when sending documents. This creates a paper trail in the event

items are misplaced or lost. Don't let PII documents sit on a printer where unauthorized employees or contractors can have access to the information. When faxing information use a secure fax line. If one is not available, contact the office prior to faxing so they know information is coming, and contact them after transmission to ensure they received it. For each event the best course of action is limit access of PII only to those individuals authorized to handle it, create a paper trail, and verify information reached its destination.

CHAPTER 5. POLICY ON TECHNICAL CONTROLS

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CHAPTER 5. POLICY ON TECHNICAL CONTROLS

This chapter provides the basic technical control security policy statements for GSA systems. Technical Controls provide specific guidance on security controls and technical procedures used to protect GSA IT resources. The policy statements are derived primarily from OMB Circular A-130 and are integral to an effective IT security program. The manner in which these controls are implemented depends on the risks, sensitivity, and criticality associated with the specific systems and data involved. In some cases, basic security policy controls may need to be modified or supplemented in order to address application-specific or system-specific requirements. The following paragraphs provide specific policy on controls for identification and authentication, access control, auditing, and others.

1. Identification and Authentication. All GSA systems must incorporate proper user identification and authentication methodology.

a. Passwords must contain a minimum of eight (8) characters and must contain a combination of letters, numbers, and special characters. (Except for mobile devices. Refer to 5.1g below). Accounts used to access Federal Desktop Core Configuration (FDCC) compliant workstations (i.e. Windows XP and Windows Vista) must have twelve (12) character passwords.

b. Information systems must be designed to require passwords to be changed every 90 days. Accounts used to access FDCC compliant workstations must change their passwords every 60 days. For those systems that employ two factor authentication, the password change requirement can be different (or eliminated) with approval from the SAISO.

c. Information systems must automatically lock out users after not more than ten (10) failed access attempts during a 30 minute time period. Accounts must remain locked for a minimum of 30 minutes for the next login prompt.

d. Authentication schemes in lieu of standard passwords may be employed as approved by the Authorizing Official (i.e. biometrics, tokens, smart cards, one time passwords).

e. Authentication methods for applications and systems may use the authentication mechanisms provided by the general support system if deemed appropriate by the Authorizing Official.

f. E-commerce and publicly accessible systems must incorporate identification and authentication mechanisms commensurate with their security risks and business needs and may differ from the security requirements in subparagraphs (a) – (e) of this paragraph.

g. Passwords for mobile storage devices must be a minimum of 4 characters, but do not have to be a combination of letters, numbers, and special characters. (I.e. USB drives, Blackberry and other Government approved Smart Phone devices, personal digital assistants).

h. Passwords must not be stored in forms (i.e. Windows dialog boxes, web forms, etc).

i. All default passwords on network devices, databases, operating systems, etc. must be changed.

j. Other than default or one time use passwords, passwords must never be sent via email, regular mail, or interoffice mail.

k. User IDs and passwords must never be distributed together (i.e. same e-mail, regular mail, interoffice mail, etc.).

l. Users must be authenticated before resetting or distributing a password.

m. User IDs shall be unique to each authorized user.

n. All GSA workstation and mobile devices shall initiate a session lock after 15 minutes of inactivity. The session lock shall remain in effect until the user reestablishes access using appropriate identification and authentication.

o. FIPS 199 Moderate and High impact systems shall automatically terminate temporary and emergency accounts after no more than 90 days.

p. FIPS 199 Moderate and High impact systems shall automatically disable inactive accounts after 90 days.

q. FIPS 199 Moderate and High impact systems shall automatically terminate a remote access connection and Internet accessible application session after 30 minutes of inactivity; 30-60 minutes for non-interactive users, long running batch jobs and other operations are not subject to this time limit. Static web sites are not subject to this requirement.

r. Web sites (internal and public) with logon functions, must implement TLS encryption with a FIPS 140-2 validated encryption module..

2. Logical Access Controls.

a. All GSA systems must implement logical access controls to authorize or restrict the activities of users and system personnel to authorized transactions and functions.

b. Public users must be restricted to using designated public services.

c. Information system accounts must be managed for all systems, including establishing, activating, modifying, reviewing, disabling, and removing accounts. Reviews and validations of system users' and staff user accounts shall be completed annually to ensure the continued need for system access.

d. Information systems must enforce the most restrictive set of rights/privileges or accesses needed by users (or processes acting on behalf of users) for the performance of specified tasks.

3. Audit Records.

- a. Security-activity auditing capabilities must be employed on all GSA information systems using GSA CIO IT Security 01-08, "Auditing & Monitoring Guide" and NIST SP 800-37 as guides.
- b. Audit records must be regularly reviewed/analyzed for indications of inappropriate or unusual activity. Suspicious activity or suspected violations must be investigated. Any findings must be reported to appropriate officials in accordance with CIO Procedural Guide 01-02, "Security Incident Handling."
- c. Intrusion detection systems must be implemented as deemed appropriate by the Authorizing Official.
- d. Information systems must alert appropriate organizational officials in the event of an audit processing failure and take one of the following additional actions: shut down information system, overwrite oldest audit records, or stop generating audit records.
- e. Information systems must produce audit records that contain sufficient information to establish what events occurred, the sources of the events, and the outcomes of the events.
- f. Audit log data must be archived for a period of not less than 180 days.

4. Warning Banners. All internal GSA IT systems must display an approved warning banner to all users attempting to access GSA's computer systems. The warning banner must read as follows:

***** WARNING*****
This is a U.S. General Services Administration Federal Government computer system that is "FOR OFFICIAL USE ONLY." This system is subject to monitoring. Therefore, no expectation of privacy is to be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

For publicly accessible sites (i.e. open to the Internet) the sentence "Therefore, no expectation of privacy is to be assumed" shall be removed.

5. Remote Access. Access to the GSA domain must be restricted to secure methods using approved identification and authentication methods that provide detection of intrusion attempts and protection against unauthorized access.

- a. Individuals other than GSA employees and contractor personnel are not allowed to use GSA furnished computers, GSA VPN connection, or a GSA provided eDSL connection.
- b. Users must not connect to other computers or networks via modem while simultaneously connected to the GSA network (i.e. no dialing outbound to your Internet Service Provider or allowing inbound calls to your computer while at the same time being connected to GSA's network). However, accessing GSA's network via the GSA-provided VPN software is allowed.
- c. When using the OCIO IPsec VPN, users must connect using only IP and must have the client firewall bound to all network adapters.
- d. GSA field sites (i.e. those that are inside the GSA firewalled network) shall not use split tunneling for their Internet access (i.e. Internet access must come through the GSA firewall not go directly through their internet service provider).
- e. Protect GSA dial-up numbers.

f. Allow remote access only with two-factor authentication where one of the factors is provided by a device separate from the computer gaining access. All Citrix and IPsec VPN implementations that have direct access from the Internet must begin implementing 2-factor authentication using smart cards no later than August 2009.

g. All remote access connections shall automatically terminate within 30 minutes of inactivity.

6. Vulnerability Testing.

a. GSA CIO shall conduct vulnerability scanning of operating systems, databases, and web applications quarterly or when significant new vulnerabilities potentially affecting the system are identified and reported.

b. Independent vulnerability testing including penetration testing and system or port scanning conducted by a third party such as the GAO and other external organizations must be specifically authorized by the Authorizing Official and supervised by the ISSM.

c. GSA S/SO/Rs shall scan for unauthorized wireless access points quarterly and take appropriate action if such an access point is discovered.

d. Information systems shall be scanned for vulnerabilities quarterly or when significant new vulnerabilities potentially affecting the system are identified and reported.

7. Encryption.

a. All passwords must be encrypted in storage.

b. All sensitive information, such as PII, as deemed by the data owner, which is transmitted outside the GSA firewall, must be encrypted. Certified encryption modules must be used in accordance with FIPS PUB 140-2, "Security requirements for Cryptographic Modules."

c. When using password generated encryption keys, a password of at least 8 characters with a combination of letters, numbers, and special characters is required. A password of at least 12 characters is recommended.

d. Systems implementing encryption must follow the key management procedures and processes documented in CIO IT Security Procedural guide 09-43, "Key Management."

8. New Technologies. All new technology developments, designs, and implementations shall use industry best practices, government guidelines, and government audit findings as they become available. Examples of new technologies include Internet Protocol v6 (IPv6) and Voice over IP (VoIP). VoIP must use NIST SP 800-58 "Security considerations for Voice over IP Systems" as a guide.

9. Malicious Code Protection. All information systems must implement and enforce a malicious code protection program designed to minimize the risk of introducing malicious code (e.g., viruses, worms, spyware, Trojan horses) into agency systems and networks.

10. Patch Management.

a. System administration and patch implementation must be restricted to authorized personnel.

11. Web Site Privacy Policy Statement. Every Federal web site (internal and public) must include a privacy policy statement, even if the site does not collect any information that results in creating a Privacy

Act record. Reference OMB Memorandum M-99-18, "Guidance and Model Language for Federal Web Site Privacy Policies," for guidance and model language on privacy statements.

12. Account Management.

a. Request and approval routing supporting account management processes must assure:

(1) All access requests require at least one supervisor approval. Access requests submitted directly from a user must not be accepted, regardless of position.

(2) Users complete and send access requests directly to their supervisor or Contracting Officer Technical Representative (COTR), not directly to the Data or System Owner.

(3) Access requests may be aggregated and managed by designated coordinators for efficiency.

(4) Access requests are routed to the data or system owner by a user's supervisor, COTR, director, or designated regional coordinator.

b. Authorizations supporting the account management processes must assure:

(1) Supervisors are responsible for coordinating and arranging system access requests for all new or transferring employees and for verifying an individual's need-to-know.

(2) Data Owners/System Owners, with assistance from the designated ISSO, ensure system access is restricted to authorized users that have completed required background investigations, are familiar with internal security practices, and have completed requisite training programs, such as the annual Privacy Act training curriculum. System access authorizations must enforce job function alignment, separation of duties, and be based on the principle of need-to-know.

c. Establishment and Activations supporting the account management processes must assure:

(1) Data or System owner grants access to the information system based on a valid need-to-know/need-to-share that is determined during the account authorization process and the intended system usage.

(2) The delegation of user roles or permissions for applications, in particular those containing Personally Identifiable Information (PII) and/or sensitive financial data, must be compliant with the principles of least privilege, separation of duties, and need-to-know.

(3) Accounts are created only upon receipt of valid access requests conforming to the GSA access request protocol.

d. Disabling and removal of user accounts supporting account management processes must ensure:

(1) Supervisors are responsible for coordinating and arranging system access termination for all departing or resigning personnel.

(2) Account removal is initiated by a user's supervisor, COTR, or through the issuance of the monthly Senior Agency Information Security Officer (SAISO) separation list.

(3) Removal requests may be aggregated and managed by designated regional coordinators for efficiency.

(4) Termination and transfer procedures must be incorporated into the authorization process for all information systems.

e. Update and modification of user accounts supporting account management processes must ensure:

(1) Supervisors are responsible for coordinating and arranging system access modifications for personnel.

(2) Users complete and send account update requests directly to his or her supervisor or COTR, not directly to the Data or System Owner.

(3) Update requests are aggregated and managed by designated regional coordinators for efficiency.

(4) Update requests are routed to the data or system owner by a user's supervisor, COTR, director, or designated regional coordinator.

f. User authorizations must be verified annually for all information systems.

g. User account privileges must be reviewed across the appropriate Service, Staff Office, and Region application portfolio to assess incompatible and non-compliant role assignments (e.g., review of user access assignments across multiple significant systems that share data or pass transactions to identify conflicts with separation of duties policy).

h. On a regular basis, Data and System Owners must inspect user access entitlements as need to detect the following conditions that warrant termination, revocation, or suspension of account access:

(1) Orphaned Accounts. An orphaned account is defined as a user account that has demonstrated, or is expected to demonstrate, an extensive period of idle time consistent with account abandonment.

a. Federal Information Processing Standards (FIPS) 199 Moderate and High impact systems shall automatically disable inactive accounts after 90 days.

b. FIPS 199 Moderate and High impact systems shall automatically terminate temporary and emergency accounts after no more than 90 days

c. Upon issuance of the SAISO monthly separation reports, Data and System Owners must verify within 30 days that separated personnel no longer maintain access to GSA IT systems or resources.

(2) Role Conflicts. Any accesses or permissions that clearly violate established separation of duties policies must be coordinated with the designated S/SO/R ISSO to correct or resolve conflicting role assignments.

(3) Shared Accounts. Shared user accounts violate the principles of separation of duties and non-repudiation, and must be detected and suspended when discovered.

(4) Suspension or Revocation of GSA Lotus Notes Accounts. Systems that require users to maintain an active Lotus Notes account must suspend or revoke access for users whose Lotus Notes credentials are no longer valid.

13. Trusted Internet Connection (TIC).

a. All network devices that are either owned, managed, maintain a connection to a GSA facility, and/or handle GSA data shall be strategically positioned behind a GSA firewall to provide analysis/correlation, management structure, and minimize threats presented by external attacks. TIC will allow GSA to provide the following security functions for any devices connected to GSA networks:

(1) Monitoring, incident response, vulnerability management, vulnerability assessment, incident reporting, engineering support, and the enforcement of the agency's specific security policy at the hosted facility.

- (2) Trained, qualified, and cleared staff to support security functions 24x7.
- (3) Limited inbound and outbound connections so that only necessary services are allowed.
- (4) Centralized, secured, and unified management of security events in order to protect the integrity of the US Government data and its infrastructure.