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Communications and Information

**LICENSING NETWORK USERS AND
CERTIFYING NETWORK PROFESSIONALS**

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This Air Force instruction (AFI) implements Air Force Policy Directive (AFPD) 33-1, *Command, Control, Communications, and Computer (C4) Systems*; AFI 33-204, *Information Assurance (IA) Awareness Program*; Office of Management and Budget (OMB) Circular No. A-130, *Management of Federal Information Resources*; Department of Defense (DoD) Directive (DoDD) 8500.1 *Information Assurance (IA)*, October 24, 2002, and Department of Defense Instruction (DoDI) 8500.2, *Information Assurance (IA) Implementation*, February 6, 2003. It provides the policy and procedures for certifying network professionals who manage and operate government-provided information systems on Air Force networks and the training and licensing of Air Force network users. The *Paperwork Reduction Act (PRA) of 1980*, as amended by Public Law (PL) 104-13, *Paperwork Reduction Act of 1995* (44 United States Code [U.S.C.] 3504); and AFI 33-360, Volume 2, *Forms Management Program*, affect this publication. This instruction requires collecting and maintaining information protected by the *Privacy Act of 1974* (5 U.S.C. 552a). System of records notices F036 AF PC C, Military Personnel Records System, and OPM/GOVT-1, General Personnel Records, apply. Direct questions or comments on the contents of this instruction through appropriate command channels to Headquarters Air Force Communications Agency (HQ AFCA/GCLO), 203 W. Losey Street, Room 3100, Scott AFB IL 62225-5222. Send recommended changes or comments to HQ AFCA/ITXD, 203 W. Losey Street, Room 1100, Scott AFB IL 62225-5222, through appropriate channels, using Air Force (AF) Form 847, **Recommendation for Change of Publication**. See **Attachment 1** for a glossary of references and supporting information. Maintain and dispose of records created as a result of prescribed processes in accordance with Air Force Manual (AFMAN) 37-139, *Records Disposition Schedule*.

SUMMARY OF REVISIONS

This document updates the role of the career field managers in paragraph 4. It completely revises the Network Professional Certification Program outlined in paragraph 6. Paragraph 6.2. clarifies program applicability to contracted network professionals. The certification process at paragraph 6.3. includes

over-the-shoulder evaluations and step-by-step procedures for certifying network professionals. Paragraph 7. is updated to include information management tools (IMT). A bar (|) indicates revision from the previous edition.

1. Introduction. The Air Force network is like a mission-critical weapon system. Communications and information resources have become force multipliers, and Air Force information systems and networks must evolve to effectively implement the Expeditionary Aerospace Force vision. To achieve the light, lean, and lethal forces our national military strategy depends on, the DoD and United States Air Force (USAF) must ensure fully qualified personnel operate and maintain these systems and networks.

1.1. This instruction defines the policy and procedures for training and licensing all users and Air Force network professionals who access the Air Force network (af.mil) domain. Compliance with this AFI meets the DoD initiative to train and certify all computer users and to certify those network professionals who actively manage, configure, and control the network to a consistent, verifiable skill level ensuring the DoD information assurance (IA) posture is uncompromised.

2. Background. The Air Force has initiated an aggressive drive to operationalize and professionalize its networks. Certification is now included in the operational status of resources and training system described in AFI 10-201, *Status of Resources and Training System*. Certification and licensing will also be included in the Inspector General agenda. This instruction builds on the guidance provided in AFI 33-115, Volume 1, *Network Management*. Standard licensing criteria will ensure all personnel who access the Air Force network are knowledgeable of their roles and responsibilities for protecting information flow. Standard certification criteria will ensure network professionals maintain a demonstrable set of core skills and knowledge across the Air Force.

3. Network License and Certification. This guidance and policy applies to: All military, civilian, and contractor employees using or providing professional network services in the Air Force network (af.mil or af.smil) domain on any Air Force system, network, or Air Force-operated joint system as a part of their official duties. See AFI 33-202, *Computer Security (will become Networking and Computer Security)*, for guidance on granting local/foreign nationals access to the network and/or information systems.

4. Roles and Responsibilities.

4.1. HQ USAF Deputy Chief of Staff (DCS) Installations and Logistics/Communications Operations Directorate (HQ USAF/ILC) will:

4.1.1. Establish policy and guidance for the Network Professional Certification Program and the Network User Licensing Program.

4.1.2. Convene utilization and training workshops with Headquarters Air Education and Training Command (HQ AETC), major command (MAJCOM) functional managers, and subject matter experts to include certification criteria and Air Force Job Qualification Standards (AF JQS) in formal technical training courses and the Career Field Education and Training Plan.

4.1.3. Direct HQ AETC in production of any required training documentation to aid operations.

4.1.4. Coordinate the Air Force certification and licensing programs with DoD efforts to certify proficiency of computer systems users and network professionals.

4.2. HQ AFCA will:

4.2.1. Develop, maintain, and manage the Network Professional Certification Program and Network User Licensing Program to control and promote program integrity.

4.2.2. Coordinate criteria and certification methodology with MAJCOMs, field operating agencies (FOA), and direct reporting units (DRU) to ensure standard program administration.

4.2.3. Assist career field managers to develop AF JQS and recommend certification policy, guidance, criteria, and training methodology to certify all personnel subject to this instruction.

4.3. HQ AETC. HQ AETC will work with career field managers to inject certification criteria in formal technical training courses during utilization and training workshops.

4.4. MAJCOMs, FOAs, and DRUs will:

4.4.1. Implement the Network Professional Certification Program and Network User Licensing Program.

4.4.2. Ensure subordinate units fulfill their responsibilities as outlined in this instruction.

4.4.3. Ensure contracted network professionals meet the same skill set and knowledge requirements as Air Force military and civilian network professionals.

4.4.4. Monitor the certification program and consolidate training data from their subordinate units as needed.

4.4.5. Supplement the position certification criteria to reflect MAJCOM specific mission needs.

4.4.6. Supplement this instruction, as required.

4.5. Subordinate Units:

4.5.1. Administer the position certification curricula to Air Force military and civilian network professionals assigned to their installations, whether host or tenant.

4.5.2. Ensure contracted network professionals meet the skill set and knowledge requirements consistent with Air Force military and civilian network professionals.

4.5.3. Assist unit training managers, supervisors, certifiers, trainers, and trainees in accomplishing their responsibilities.

4.5.4. The communications squadron commander should assign a primary and alternate network control center (NCC) or unit training manager to administer the certification program. These trainers also assist workgroup managers (WM) to implement the licensing program for their network users.

5. Network User Licensing Program.

5.1. Introduction. Every individual who has access to the af.mil or af.smil domain, specialized systems, and mission systems is a network user. Before becoming an Air Force network user an individual must have a favorable background investigation (paragraph 5.3.), be trained, and licensed. WMs will assist network users in getting the necessary training to meet all licensing requirements. Upon verification of favorable background check and successful completion of appropriate training, the user is licensed to use the network and granted access to required network resources. This process of train-

ing and licensing ensures every Air Force network user is trained and aware of the basic principles of network security and their role in IA.

5.2. Contractors as Network Users. Communications and information systems officer must ensure that all contract personnel requiring access to the Air Force network meet the requirements of paragraph 5. and subordinate paragraphs.

5.3. Favorable Background Investigation: All individuals accessing the Air Force Enterprise Network must meet the investigative requirements of AFI 31-501, *Personnel Security Program Management*. WMs will check with local security forces to verify proper security clearance and background investigation checks (National Agency Check, Single Scope Background Investigation) have been completed prior to granting a network user license. In cases where an individual loses their security clearance and/or favorable investigation requirement, the Designated Approval Authority (DAA) will also suspend network access.

5.4. Procedures. Training required to obtain a network user license is standardized in the "Network User Licensing" Computer-Based Training (CBT) course. Successful completion of this course satisfies the Air Force training requirement for a network user license. Additional user training may be developed locally to reflect local needs and concerns. WMs administer all required training to their network users, track users completion of training, and document training in accordance with AFI 36-2201, Volume 3, *Air Force Training Program On The Job Training Program*. WMs make training available to new or suspended users on an as-needed basis. When a user completes user licensing training and has a favorable background investigation, the WM ensures their network access is granted. At this point, consider users licensed with access to the Air Force network barring any other restrictions.

5.5. Permanent Change of Station and/or Temporary Duty. Whenever a user requires a new user identification (due to permanent change of station, permanent change of assignment, temporary duty, etc.), the gaining WM must license the user before allowing the user access to the network. This means the WM will need to verify the proper background investigation has been conducted (paragraph 5.2.), and any required training has taken place. Users do not need to re-take the "Network User Licensing" CBT, only show proof that it has been completed. In emergency or deployment situations, the WM may rely on a training record review to license a user.

5.6. License Suspension. If a user engages in conduct inconsistent with the licensing principles, the WM may, with the approval of the user's supervisor, recommend the user's license be suspended. Network license suspension is a non-punitive action and the suspension alone, as opposed to the underlying conduct, may not provide the basis for adverse action. The DAA or designated DAA representative may, based on the WM's recommendation, suspend a user's license when deemed necessary in the interest of information operations. Actions inconsistent with licensing principles include, but are not limited to: failure to maintain an acceptable level of proficiency on a critical program; actions that threaten the security of a network or a governmental communications system; actions that may result in damage or harm to a network or governmental communications system; or actions that constitute unauthorized use under the provisions of AFI 33-119, *Electronic Mail (E-Mail) Management and Use*, or AFI 33-129, *Transmission of Information Via the Internet*.

5.6.1. Procedural Requirements: On discovery of an action inconsistent with the terms of the user license, the WM will recommend to the user's supervisor that the user's access to a network be suspended. With supervisor concurrence, the WM will notify the user immediately, in writing, of

the pending access suspension, including the specific reason for the suspension and the steps the user must take to have access reinstated.

5.6.1.1. The user may accept the suspension or dispute the grounds for the suspension by providing a written request within three duty days. If the user accepts the suspension, the user's access to the network is suspended and the WM has two duty days to make available to the user whatever appropriate remedial training is necessary for the user to qualify for re-licensing.

5.6.1.2. If the user disputes the suspension, the WM has two duty days following receipt of the user's request to reconsider suspension. The WM, after consultation with the user's supervisor, will either notify the user in writing that the pending suspension was inappropriate or refer the matter to the DAA for final action by sending a copy of the case file. The DAA will consider the case file to determine if suspension is appropriate. The DAA may determine the user's license should be retained; suspend the user's license and mandate remedial training; or take other necessary actions. After receiving the documentation, the DAA will notify the user in writing, within six duty days, of the final determination.

5.6.2. Security Infractions. Report any action that threatens the security of, or damages/harms network or government communications systems to the NCC officer in charge (OIC). The NCC OIC will take appropriate actions in accordance with Air Force Systems Security Instruction (AFSSI) 5021, *Time Compliance Network Order (TCNO) Management and Vulnerability and Incident Reporting*. This may include suspending the user's network access, notifying authorities such as security forces or the Air Force Office of Special Investigations, and/or other actions consistent with local IA policies and procedures.

5.7. Reinstatement. Ordinarily, a suspended user will be required to participate in remedial training. Upon satisfactorily completing retraining, the WM reinstates the user's license. However, there may be situations that indicate to the WM and the user's supervisor that even with remedial training the user would pose a threat to the security of the system or operations. Under such circumstances, the DAA, following full review of the case file and all associated documents, may suspend a user's privileges indefinitely.

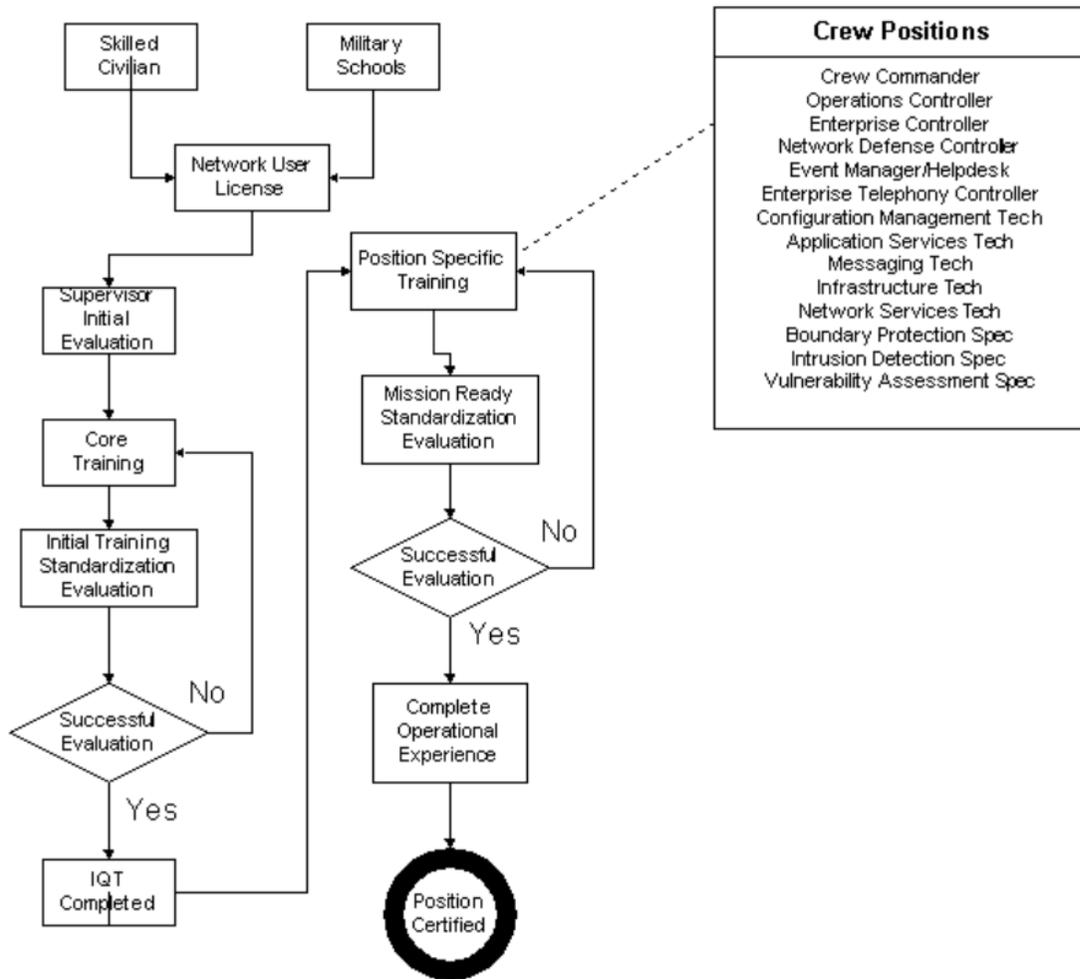
6. Network Professional Certification Program.

6.1. Introduction. The objective of this program is to train all network professionals to standardized criteria. Network professionals are those military, DoD civilians, or local nationals, who perform one of the following functions: network administration, information protection operations, network management, help desk services, WM, and functional system administration. The program ensures network professionals maintain a demonstrable knowledge level and a set of core skills across the Air Force. The certification process outlines knowledge training, performance tasks, and evaluation requirements network professionals must complete to receive position certification. Award of position certification is achieved by completing all knowledge-level training, qualification and certification of performance tasks, successfully completing training standardization evaluations, and meeting operational experience requirements. Failure to maintain task proficiency or becoming decertified on any task required for certification in the Position Certification for Network Professionals AF JQS will result in loss of position certification. Career field managers will develop and field AF JQSs outlining training requirements for each of the network professional positions.

6.2. Contractors as Network Professionals. Contractors who provide professional network services (all crew positions) to the Air Force are bound by the requirements stated in contractual agreements. Contractual agreements should include a reference to the Network Professional Certification Program. Contractor personnel are to be trained in all aspects of the performance for the contract prior to contract award. Measure contractors on their knowledge, skills, and abilities by performance metrics associated with the network services and support to the MAJCOM/wing/base customers.

6.3. Process. Supervisors will use the Position Certification for Network Professionals AF JQS to train network professionals. The AF JQS identifies core training requirements and crew position-specific training requirements. MAJCOMs/bases may add locally unique training requirements to ensure position certification is comprehensive and meets mission needs. All network professionals must complete the network user licensing program (paragraph 5.) before beginning the appropriate crew-position certification curriculum. Figure 1. depicts the Network Professional Certification Program process.

Figure 1. Network Professional Certification Program Process.



6.3.1. Procedures. Supervisors of network professionals will determine the appropriate crew position based on the trainee's duties. Training required for each crew position is identified using a crew position code in the Position Certification for Network Professionals AF JQS. If the individual is assigned to a new position, not previously certified, the supervisor will initiate certification requirements for the new position. **NOTE:** Core training requirements are the same for all crew positions.

6.3.1.1. Supervisors will maintain training records on all individuals serving as network professionals, regardless of rank. Supervisors will monitor progress of the individual using the Position Certification for Network Professionals AF JQS and AF Form 797, **Job Qualification Standard Continuation/Command JQS**.

6.3.1.2. DoD civilians follow local civilian personnel flight (CPF) procedures, such as completing a Department of Defense (DD) Form 1556, **Request, Authorization Agreement, Certification of Training, and Reimbursement**, prior to starting position certification training. The final position certificate will be submitted by CPF to Air Force Personnel Center for inclusion in the civilian's personnel record and a copy for the supervisor's record (AF Form 971, **Supervisor's Employee Brief**)(see paragraph 6.2.4).

6.3.2. Core Training and Position-Specific Training Requirements. Core training and position-specific training requirements are outlined in the Position Certification for Network Professionals AF JQS. The core training provides the basic knowledge and skills necessary to work any network professional position. Core training requirements are the same for all crew positions. Position-specific training is unique training required to perform a specific network position. Supervisors and trainers will ensure trainees accomplish all core-training requirements before starting position-specific training.

6.3.2.1. Core Training Requirements. Trainers will plan and conduct core training in accordance with AFI 36-2201 and upon completion of the training, sign off tasks in the trainee's training record. Task certifiers will certify all critical core tasks and sign off on the training record. Supervisors will request an initial training standardization evaluation when the trainee has been trained and certified on all core tasks outlined in the Position Certification for Network Professionals AF JQS.

6.3.2.1.1. Initial Training Standardization Evaluation. The initial training standardization evaluation will be a comprehensive over-the-shoulder evaluation that will encompass a minimum of 10 percent of all core tasks. This evaluation will assess knowledge and performance tasks. The evaluation may also incorporate written examinations. The trainee must perform evaluated tasks unassisted and pass all written evaluations. Tasks are assessed as either "Satisfactory" or "Unsatisfactory." Tasks assessed as "Unsatisfactory" result in an unsuccessful evaluation. Upon successful completion of the initial training standardization evaluation the trainee has completed the initial qualification training (IQT) and has the basic knowledge and skills necessary to work any network professional position.

6.3.2.2. Position-Specific Training. Upon completion of IQT, the trainee starts position-specific training. Trainers will plan and conduct position-specific training in accordance with AFI 36-2201 and upon completion of the training, sign off tasks in the trainee's training record. Task certifiers will certify all position-specific critical tasks and sign off on the training record. Supervisors will request a mission ready standardization evaluation when the trainee has been

trained on all position-specific tasks outlined in the Position Certification for Network Professionals AF JQS.

6.3.2.2.1. Mission-Ready Standardization Evaluation. The mission-ready standardization evaluation will be a comprehensive over-the-shoulder evaluation that will encompass a minimum of 10 percent of position-specific tasks and a minimum of 25 percent of position-specific critical tasks. This evaluation will assess knowledge and performance tasks. The evaluation may also incorporate written examinations. The trainee must perform evaluated tasks unassisted and pass all written evaluations. Tasks are assessed as either "Satisfactory" or "Unsatisfactory." Tasks assessed as "Unsatisfactory" result in an unsuccessful evaluation. Upon successful completion of the mission-ready standardization evaluation the trainee has met the mission qualification training requirements for the position assigned.

6.3.2.2.2. MAJCOMs may waive accomplishment of position-specific tasks outlined in the Position Certification for Network Professionals AF JQS that are not performed at that specific duty location. File a copy of the MAJCOM waiver in the individual's training record. Upon reassignment to a location that performs the waived tasks or the system/application is installed, train and certify the individual on the applicable tasks.

6.3.3. Operational Experience. In addition to completing core training and position-specific training requirements, a minimum of 6 months experience in the assigned crew position is required prior to award of certification. (Operational experience begins upon entry into position-specific training.)

6.3.4. Award of Position Certification. Supervisors will submit requests to issue position certificates to the NCC/Network Operations and Security Center (NOSC) or squadron training manager when the trainee has completed all core training and position-specific training requirements, successfully completed required evaluations, and has a minimum of 6 months operational experience in the crew position. The training manager will review position certification requests to ensure all requirements were accomplished. When all requirements are met, the training manager will generate a position certificate using AF Form 1256, **Certificate of Training**, and will sign the left block authenticating certification completion. Position certificates are then sent to the DAA or designated DAA representative for final approval. The NCC/NOSC will publish a list of Certified Network Professionals (CNPs) for each position.

6.4. Periodic Re-Certification. CNPs must successfully complete a Periodic Standardization Evaluation at least once every 12 months to retain position certification. The periodic evaluation will encompass a minimum of 10 percent of position-specific tasks and 10 percent of position-specific critical tasks.

6.5. Unsuccessful Evaluations. Unsuccessful evaluations require task de-certification and the individual must enter into remedial training. The supervisor, trainer, and evaluator must work together to investigate the cause of all unsuccessful evaluations and take corrective action accordingly. Upon task re-certification a re-evaluation is required. The re-evaluation will include all tasks rated "Unsatisfactory" in the previous evaluation.

6.6. De-Certification of Network Professionals. Network professionals will lose position certification upon discovery of actions inconsistent with network policies and procedures, failure to maintain task proficiency, becoming de-certified on any task listed in the appropriate Position Certification for Net-

work Professionals AF JQS, or from an unsatisfactory standardization evaluation. Supervisors will investigate the cause of network de-certification and initiate remedial training on all associated tasks.

6.7. Suspension of Network Professional's Privileges. Supervisors will inform the NCC/NOSC OIC or Crew Commander immediately of any actions inconsistent with policies and procedures. These actions include: failure to maintain task proficiency, actions threatening network security, actions that may result in damage or harm to a network, or actions inconsistent with licensing policies identified in paragraph 5. The NCC/NOSC OIC will send requests for suspension of network privileges to the DAA or designated DAA representative for approval.

6.8. Performing Training Standardization Evaluations. The NCC/NOSC flight commander will appoint a minimum of two personnel to perform training standardization evaluations. The personnel fulfilling the duties must be highly trained and have extensive knowledge, skill, and abilities regarding NCC/NOSC overall operations and equipment.

6.8.1. Conducting Evaluations. Evaluators will assess tasks by asking questions, written tests, or using interactive training devices. Evaluators will determine task proficiency by observing the network professional demonstrate the task. The evaluator will not be the individual who trained or certified task proficiency. Ideally, the evaluator is certified in the position being evaluated. The evaluator must be capable of verifying the use of proper procedures and verifying task performance conforms to established standards. Evaluators must stop the evaluation if technicians use methods or procedures that could jeopardize safety or cause equipment damage. Evaluators will brief the individual evaluated and the supervisor at the conclusion of the evaluation.

7. Information Collections, Records, and Forms or Information Management Tools (IMT).

7.1. Information Collections. This instruction requires collecting and maintaining information protected by the *Privacy Act of 1974* (5 U.S.C. 552a). System of records notices F036 AF PC C, Military Personnel Records System, and OPM/GOVT-1, General Personnel Records, apply..

7.2. Records. Training records created in paragraphs 5. and 6. of this instruction are filed according to AFI 36-2201.

7.3. Forms or IMTs (Adopted and Prescribed).

7.3.1. Adopted Forms or IMTs. DD Form 1556, **Request, Authorization Agreement, Certification of Training, and Reimbursement**; AF Form 797, **Job Qualification Standard Continuation/Command JQS**; AF Form 847, **Recommendation for Change of Publication**; AF Form 971, **Supervisor's Employee Brief**; and AF Form 1256, **Certificate of Training**.

7.3.2. Prescribed Forms or IMTs. No forms or IMTs are prescribed by this instruction.

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Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DoDD 8500.1, *Information Assurance (IA)*, October 24, 2002

DoDI 8500.2, *Information Assurance (IA) Implementation*, February 6, 2003

OMB Circular No. A-130, *Management of Federal Information Resources*

Paperwork Reduction Act (PRA) of 1980, as amended by PL 104-13, *Paperwork Reduction Act of 1995* (44 U.S.C. 3504)

Privacy Act of 1974 (5 U.S.C. 552)

AFI 10-201, *Status of Resources and Training System*

AFI 31-501, *Personnel Security Program Management*

AFPD 33-1, *Command, Control, Communications, and Computer (C4) Systems*

AFI 33-115, Volume 1, *Network Management*

AFI 33-119, *Electronic Mail (E-Mail) Management and Use*

AFI 33-129, *Transmission of Information Via the Internet*

AFI 33-202, *Computer Security* (will become *Networking and Computer Security*)

AFI 33-204, *Information Assurance (IA) Awareness Program*

AFI 33-360, Volume 2, *Forms Management Program*

AFI 36-2201, Volume 3, *Air Force Training Program On The Job Training Program*

AFMAN 37-139, *Records Disposition Schedule*

AFSSI 5021, *Time Compliance Network Order (TCNO) Management and Vulnerability and Incident Reporting*

Abbreviations and Acronyms

AETC—Air Education and Training Command

AF—Air Force (used for designated forms only)

AFCA—Air Force Communications Agency

AFI—Air Force Instruction

AF JQS—Air Force Job Qualification Standard

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFSSI—Air Force Systems Security Instruction

CBT—Computer-Based Training

CNP—Certified Network Professional

| **CPF**—Civilian Personnel Flight

DAA—Designated Approval Authority

| **DCS**—Deputy Chief of Staff

DD—Department of Defense (used for designated forms only)

DoD—Department of Defense

DoDD—Department of Defense Directive

DoDI—Department of Defense Instruction

DRU—Direct Reporting Unit

FOA—Field Operating Agency

HQ—Headquarters

IA—Information Assurance

| **IQT**—Initial Qualification Training

| **JQS**—Job Qualification Standard

MAJCOM—Major Command

NCC—Network Control Center

NOSC—Network Operations and Security Center

OIC—Officer in Charge

OMB—Office of Management and Budget

| **PL**—Public Law

USAF—United States Air Force

U.S.C.—United States Code

WM—Workgroup Manager