

**BY ORDER OF THE
SUPERINTENDENT**



**HQ UNITED STATES AIR FORCE
ACADEMY INSTRUCTION 33-115**

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Communications and Information

**INFORMATION TECHNOLOGY SERVICE
CONFIGURATION MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 33-1, *Information Resources Management*, Air Force Instruction (AFI) 33-101, *Commanders Guidance and Responsibilities*, AFI 33-112, *Information Technology Hardware Asset Management*, AFI 33-114, *Software Management*, AFI 33-150, *Management of Communications Activities*, TO 00-33A-1100, *AF-GIG Operational Change Management Process*, and the Department of Defense Information Technology Infrastructure Library (D-ITIL). It supports United States Air Force Academy Instruction (USAFAI) 33-101, *Information Technology Service Strategy and Governance*. This instruction establishes Information Technology Service Configuration Management (Configuration Management) as a key Air Force Academy Information Technology Service Management process. It provides direction for managing, maintaining, and controlling United States Air Force Academy (USAFA) Information Technology assets and systems. This publication does not apply to Air Force Reserve Command (AFRC) units and the Air National Guard (ANG). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, *Recommendation for Change of Publication*. Ensure all records created as a result of the processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. See **Attachment 1** for a glossary of references and supporting information.

1. Scope.

1.1. This instruction applies to most information technology (IT) systems, assets, applications, programs, and components in use at USAFA to provide services to USAFA cadets, faculty, and staff.

1.1.1. Requests for exceptions to this policy are submitted through the Change Process (see USAFAI 33-116, *Information Technology Change Management*). If approved by the Change Advisory Board, they are then sent to USAFA/A6 for approval.

1.1.2. Approved exceptions will be listed in the USAFA Service Catalog (see USAFAI 33-101).

2. Purpose.

2.1. This instruction provides guidance and procedures that personnel must use to manage the configuration of USAFA IT services and components.

2.2. The guidance and procedures outlined in this instruction are modeled from the processes outlined in TO 00-33A-1100.

3. Process and Function Descriptions.

3.1. Effective enforcement of IT governance standards, processes, and procedures cannot take place without visibility over all IT assets. IT Service Configuration Management provides visibility into the IT enterprise, enabling better forecasting, planning, and implementation of successful change.

3.1.1. Configuration Management helps to sustain network performance, reliability, and security programs, as well as enable cost savings through enterprise efficiencies. This process is responsible for identifying, controlling, recording, tracking, reporting, auditing and verifying the value and ownership of service assets throughout their lifecycles.

3.2. Configuration Management is responsible for maintaining all information about Configuration Items (CIs) in the USAFA IT Enterprise that are required to deliver IT services to USAFA customers. This information includes relationships between CIs.

3.2.1. CIs are any components that need to be managed in order to deliver an IT service. This includes USAFA IT assets, as well as IT Services, IT infrastructure, IT Service Management processes, documentation, Service Level Standards (SLSs), Service Level Agreements (SLAs), etc.

3.2.2. CIs are under the control of Configuration Management and Change Management (see USAFAI 33-116).

3.3. Configuration Manager manages and maintains the Configuration Management System (CMS). The CMS is a repository for all USAFA CIs. It includes the Definitive Media Library (DML), License Tracking System, IT Configuration Management Database (CMDB), and IT Configuration Baseline. CMS is considered a 'living document,' updated as frequently as required to maintain currency. Information on CIs shall be stored in the CMS.

3.3.1. DML includes the Definitive Software Library, IT media CIs, and other licensed media.

3.3.2. Only authorized media shall be accepted into the DML, strictly controlled by Configuration Management.

3.3.3. DML shall include a physical store to hold master copies of all media.

3.4. The Configuration Manager will:

3.4.1. Chair the Configuration Control Board (CCB) (see USAFAI 33-116).

3.4.2. Determine how CIs are to be uniquely identified.

3.4.3. Provide impact analysis reports, configuration status reports, and appropriate metrics through chain of command to USAFA/A6 (see [Attachment 2](#)).

3.5. The Configuration Management process contains five steps (see [Attachment 3](#), Service Configuration Management Process Model).

3.5.1. Management & Planning. USAFA/A6, 10 CS/CL, and Configuration Manager decide what level of Configuration Management is required for the selected service or project and how this level will be achieved. This is documented in the Configuration Management Plan.

3.5.2. Configuration and Asset Identification defines how types of assets and CIs are to be selected, grouped, classified, and defined by appropriate characteristics.

3.5.2.1. Defines the approach to uniquely identifying all assets or services across the service lifecycle, and the relationships between them.

3.5.2.2. Defines the types of assets and CIs under the control of Configuration Management.

3.5.3. Configuration & Control ensures adequate control mechanisms over CIs are in place. No CI should be added, modified, replaced, or removed without appropriate controlling documentation or procedure being followed.

3.5.4. Status Accounting ensures that all configuration data and documentation are recorded as each asset or CI progresses through its lifecycle. It provides the status of the configuration of a service and its enterprise as the configuration evolves through the service lifecycle.

3.5.5. Verification & Audit include a series of reviews or audits to ensure that there is conformity between the documented baselines (e.g., agreements, interface control documents) and the actual business enterprise they refer to. Also, it verifies the physical existence of CIs in the organization or DML as well as checks that the release and configuration documentation is present before performing the release.

4. USAFA Organizational Responsibilities.

4.1. Director of Communications & Information (USAFA/A6) will:

4.1.1. Review and approve the implementation of Configuration Management process outlined in this instruction.

4.1.2. Report appropriate metrics to USAFA Superintendent (see [Attachment 2](#)).

4.2. 10th Communications Squadron (10 CS) will:

- 4.2.1. Assign the IT Service Configuration Manager.
- 4.2.2. Monitor and maintain Configuration Management process.
- 4.2.3. Maintain a Configuration Management System (CMS) and Configuration Management Database (CMDB).

5. Prescribed and Adopted Forms.

5.1. Prescribed Forms.

No forms are prescribed by this instruction.

5.2. Adopted Forms.

AF Form 847, *Recommendation for Change of Publication*

MICHAEL C. GOULD, Lt Gen, USAF
Superintendent

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

AFI 33-101, *Commanders Guidance and Responsibilities*, 18 November 2008

AFI 33-112, *Information Technology Hardware Asset Management*, 7 January 2011

AFI 33-114, *Software Management*, 13 May 2004

AFI 33-150, *Management of Communications Activities*, 26 November 2008

AFMAN 33-363, *Management of Records*, 1 March 2008

AFPD 33-1, *Information Resources Management*, 27 June 2006

TO 00-33A-1100, *AF-GIG Operational Change Management Process*

Department of Defense Information Technology Infrastructure Library (D-ITIL)

Abbreviations and Acronyms

AF—Air Force

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFRIMS—Air Force Records Information Management System

ANG—Air National Guard

CCB—Configuration Control Board

CI—Configuration Item

CMDB—Configuration Management Database

CMS—Configuration Management System

CSF—Critical Success Factor

DML—Definitive Media Library

IT—Information Technology

KPI—Key Performance Indicator

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

SLA—Service Level Agreement

SLS—Service Level Standard

USAFA—United States Air Force Academy

Attachment 2

SERVICE CONFIGURATION PROCESS METRIC EXAMPLES

A2.1. This Attachment provides an example set of USAFA IT Service Configuration Management performance measures, Critical Success Factors (CSFs), and Key Performance Indicators (KPIs).

Critical Success Factors
Focusing on establishing valid justification for collecting and maintaining data at the agreed level of detail
Ability to demonstrate a top down approach that is focused on identifying service CIs and subsequently the CIs that support those services, thereby allowing a rapid and clear demonstration of potential points of failure for any given service
Ensuring that assets and configuration items are accurate
Making use of enabling technology to automate the CMS practices and enforce ACM policies
Control information about the IT infrastructure and services
Support delivery of quality IT services
Key Performance Indicators
Percentage improvement in maintenance scheduling over the life of an asset
Number of assets identified as cause of service failures
Number of incidents related to inaccurate CI information
Average cost per user for licenses (i.e., more effective charging options achieved)
Number of licenses not used
Percentage (reduction) in user impact of outages and incidents related to inaccurate CMS/CMDB data
Number of unauthorized configurations
Number of failed changes related to inaccurate CMS/CMDB data
Number of breached SLAs because of CMS/CMDB errors
Percentage of inaccurate CIs
Number of exceptions reported during configuration audits

Attachment 3

SERVICE CONFIGURATION MANAGEMENT PROCESS MODEL

