



AF-IG-9500-001

Implementation Guide

Space / Aviation / Defense

FIRST EDITION

AF 9500 SUPPORTING DOCUMENT

Document identity and use

FIRST EDITION MANUSCRIPT - Prepared for Aerospace Federation review

Field	Controlled identity
Document	AF-IG-9500-001 - Implementation Guide
Parent standard	AF 9500 - Aerospace Digital Systems, Software & Cybersecurity
Edition / language	FIRST EDITION / English master text
Family	Companions
Primary source anchors	0-40; Annexes A-T
Suggested local owner	Implementation lead
Authority	Publisher approval and effective date are not assigned. Local use requires authorized adoption and completed parameters.

Use with the main standard

This document implements the identified AF 9500 clauses and annexes. Read the complete applicable requirements in the main standard. The source anchors are navigation references; a template does not replace technical judgement, evidence, permission or eligible approval.

AF-ML-9500-001 lists the complete supporting set. AF-CM-9500-001 maps the main clauses and annexes to working documents. AF-TP-9500-001 establishes the common local parameter baseline; add the relevant discipline profiles.

Record control

Identify the object, configuration, record owner and dates. Reference attachments by stable identifier and version. Keep superseded evidence and decisions traceable. Use the approved local retention, access and authentication arrangements. No technical limit, numerical limit, interval or acceptance value is assigned by a blank template.

Implementation model: Translate the stated responsibilities and controls into the actual organization. Informative examples remain explanatory; use approved programme-specific values for operational decisions.

1 Select a representative digital function

Choose an actual aerospace product or service whose source, suppliers, integration and operational duties can be examined end to end. Use AF-FR-9500-001 to define scope, assets, modes and consequences. Complete AF-TP-9500-001 and every applicable P01-P44 entry. Select additional profiles from actual activities.

1.1 Establish authority and requirements

Assign eligible owners and independent reviewers with AF-FR-9500-005. Resolve requirement and interface ambiguity using AF-FR-9500-003. Construct safety-security scenarios and architecture evidence using AF-FR-9500-002/004. Keep essential unknowns as blocked dependencies.

2 Demonstrate the development chain

Use supplier, configuration, implementation, build and tool procedures. Trace one release artifact to its actual source, dependencies, worker, options and gates. Demonstrate why its evidence applies to the intended target. Preserve unknown provenance and adverse results until dispositioned.

2.1 Verify actual behavior

Use AF-FR-9500-011/012/013 to establish valid verification, complete coverage and timing/resource evidence. Include adverse interfaces and security examinations within authorized boundaries. Challenge a wrong target, missing result and manipulated denominator in a controlled environment.

3 Establish operational controls

Use the identity, trust, data, communication and environment procedures. Complete secure deployment and operational handover with AF-FR-9500-022. Verify actual denied actions, platform settings, monitoring and recovery prerequisites.

3.1 Exercise an update

Use AF-FR-9500-023 to demonstrate transfer, validation, installation, activation and confirmation. Include an interruption and the approved recovery route. Reconcile mixed and unreachable states rather than reporting only package delivery.

4 Exercise adverse conditions

Use AF-FR-9500-024/025/026 for a representative alert, vulnerability and incident. Assess actual applicability and operational consequence. Preserve facts, uncertainty, evidence and authorized notifications. Demonstrate that protective actions do not silently remove essential control.

4.1 Prove recovery

Use AF-FR-9500-027 to restore function, identities, keys, configuration and data relationships. Reconcile pending commands, transactions and product results. Measure actual recovery time and recoverable state against approved objectives. Record remaining restrictions.

5 Address specialized activities

For aviation and remote missions use AF-FR-9500-019 and relevant profiles. For trained models and AI-assisted work use AF-FR-9500-020/021. Demonstrate operating-domain boundaries, independent evidence and bounded actions. General IT controls alone do not establish these integrated claims.

6 Review, release and maintain

Use AF-FR-9500-028 to assemble the exact assurance case and eligible release. Follow AF-CM-9500-001 for applicable source requirements and AF-ML-9500-001 for document locations. Examine real adverse trails through AF-FR-9500-030 and verify corrective effectiveness.

6.1 Adopt and expand

Record actual local adoption, competence, methods, profiles and transition using AF-FR-9500-030. Expand only after necessary interfaces and capabilities are demonstrated. Maintain legacy restrictions, support plans and secure retirement through AF-FR-9500-028/029.

Required evidence: A complete and reproducible requirement-source-build-evidence-deployment-operation chain with demonstrated adverse-case handling and recovery.