IA Certification & Accreditation (C&A)

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What Is C&A?

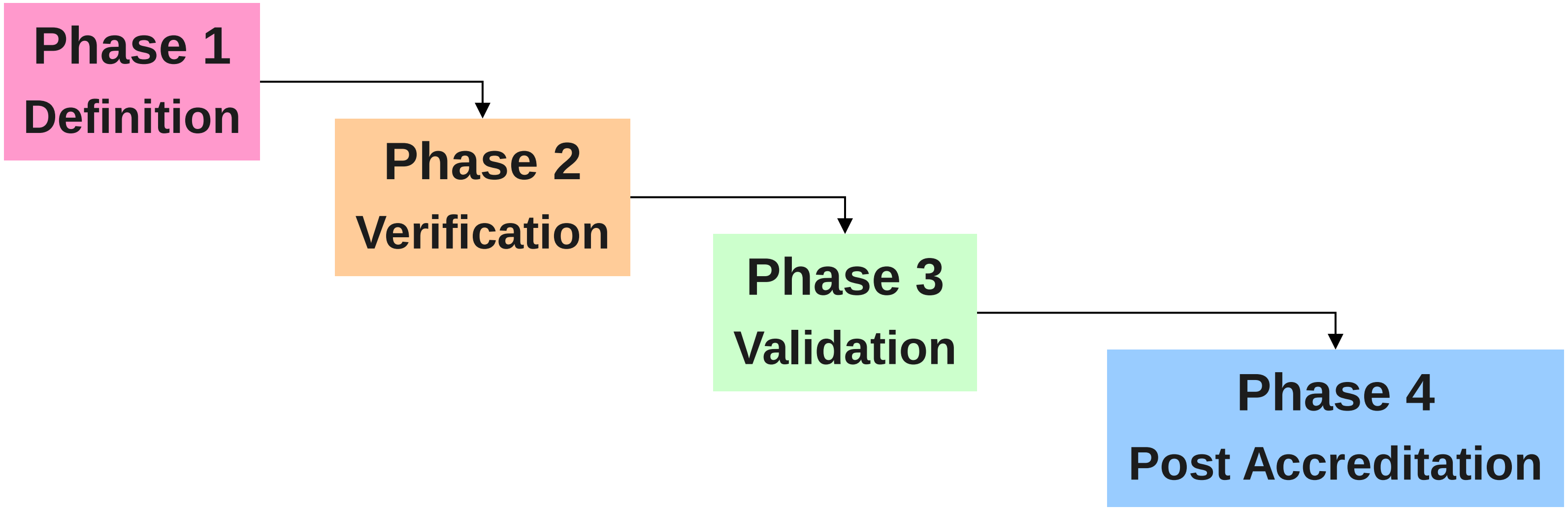
- Certification
  - ***Comprehensive evaluation*** of technical and non-technical ***security features*** of IT system and other safeguards, made in support of accreditation process, to establish the extent that a particular design and implementation ***meets specified security requirements***
- Accreditation
  - ***Formal declaration*** by the ***Designated Approving Authority (DAA)*** that an *IT system* is ***approved to operate*** in a particular security mode using a prescribed set of safeguards ***at an acceptable level of risk***

Two Key Players

- ***Designated Approving Authority (DAA):***
  - Official with authority to ***formally assume responsibility for operating a system or network at an acceptable level of risk***
- ***Certification Authority (CA):***
  - Official responsible for ***performing comprehensive evaluation and issuing certificate for a particular design and implementation that meet specified security requirements***
- ***DAA and CA*** must be ***independent of implementation team***

Certification and Accreditation (C&A) Process

- ***DoD Information Technology Security Certification and Accreditation Process*** (***DITSCAP***):
  - Tailorable, scalable, predictable, understandable, relevant, effective, evolvable, repeatable, responsive



C&A Process (Cont.)

- ***Repeatable process*** that ***addresses security threats and vulnerabilities*** with appropriate combination of security measures
- Covers entire system’s life-cycle -- from creation to maintenance until system decommission

Phase 1: Definition

- Define mission, system functions, and requirements (especially security)
- Define information category and classification
- Prepare system architecture description
- Identify principal C&A roles and responsibilities
- Draft overall C&A document
  - ***System Security Authorization Agreement (SSAA)***
- Agreement among all principals on methods for implementing security requirements
  - Approve SSAA

System Security Authorization Agreement (SSAA)

- A formal agreement among *DAA*, *CA*, IT system user representative, and program manager.
- Used throughout entire DITSCAP to guide actions, document decisions, specify Information Technology Security (ITSEC) requirements, document certification tailoring and level-of-effort, identify potential solutions, and maintain operational system security
- Return DITSCAP to the initial phase for re-design.

Phase 2: Verification

- System architecture analysis
- Software design analysis
- Network connection rule compliance
- Integrity analysis
- Life cycle management analysis
- Establishment of security requirement validation procedures
- Vulnerability evaluation

Phase 3: Validation

- Security test and evaluation
- Penetration testing (exploitation, insider/outsider)
- Compliance evaluation (requirements, integration)
- System management analysis
- Contingency plan evaluation
- Site accreditation survey
- Risk management review
- Develop certification report and recommendation for accreditation
- Generate declaration of accreditation
- Exceptions: Under certain situations, some policies may be waived to continue operation

Phase 4: Post Accreditation

- Review configuration and security management
- Follow system changes
  - Change requests to a system must be reviewed and approved by DAA and CA
  - Determine if a system with the requested changes will continue to support organization's mission and architecture
  - If change requests are approved, they invalidate the SSAA requirement, and ***DITSCAP*** must go back to Phase I; otherwise, continue to operate as it is

Phase 4: Post Accreditation (cont.)

- Conduct risk management review
  - Assess if risk to system is being maintained at an acceptable level
- Conduct compliance validation for any changes of configuration
- Maintain documentation
- Monitor compliance

References

- DoD Information Technology Security Certification and Accreditation Process (DITSCAP). Available at:

  http://www.sans.org/reading_room/whitepapers/country/ditscap-dods-answer-secure-systems_669

- “Introduction to Certification and Accreditation” by National Information Assurance Training and Education Center. Available at:

  http://niatec.info/GetFile.aspx?pid=581