

# **Course: Software Configuration Management**

## **Week 3: Audit and Status Reporting**

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# Contents



## SOFTWARE CONFIGURATION MANAGEMENT

- Introduction
- The Role of Audits and Status Reporting
- Tasks, Reviews and Processes
- Summary

Figure 1: Concepts of SCM  
(Source: OpenAI, 2025)

# Learning Outcomes

After completing this lesson, you will be able to:

- Define audits and status reporting in SCM
- Explain their importance for traceability and visibility
- Identify tasks, reviews, and processes

# Introduction

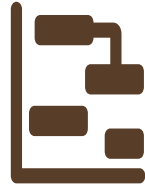
- In SCM, **maintaining control** over the project's assets and **providing clear communication** about their status are two critical, complementary functions.
- This lecture introduces the concepts that fulfill these needs:
  - **Configuration Audit**
    - The mechanism for control and verification.
  - **Status Reporting**
    - The mechanism for communication and visibility.

# Key Concepts in Audit & Status Reporting



## Configuration Audit

Verifies conformity



## Status Reporting

Communicates the current state of the project.



## Configuration Status Accounting

Records CI data



## Reviews & Tasks

Supports daily practices.

# What is Configuration Audit?

Formal review of configuration items (CIs)

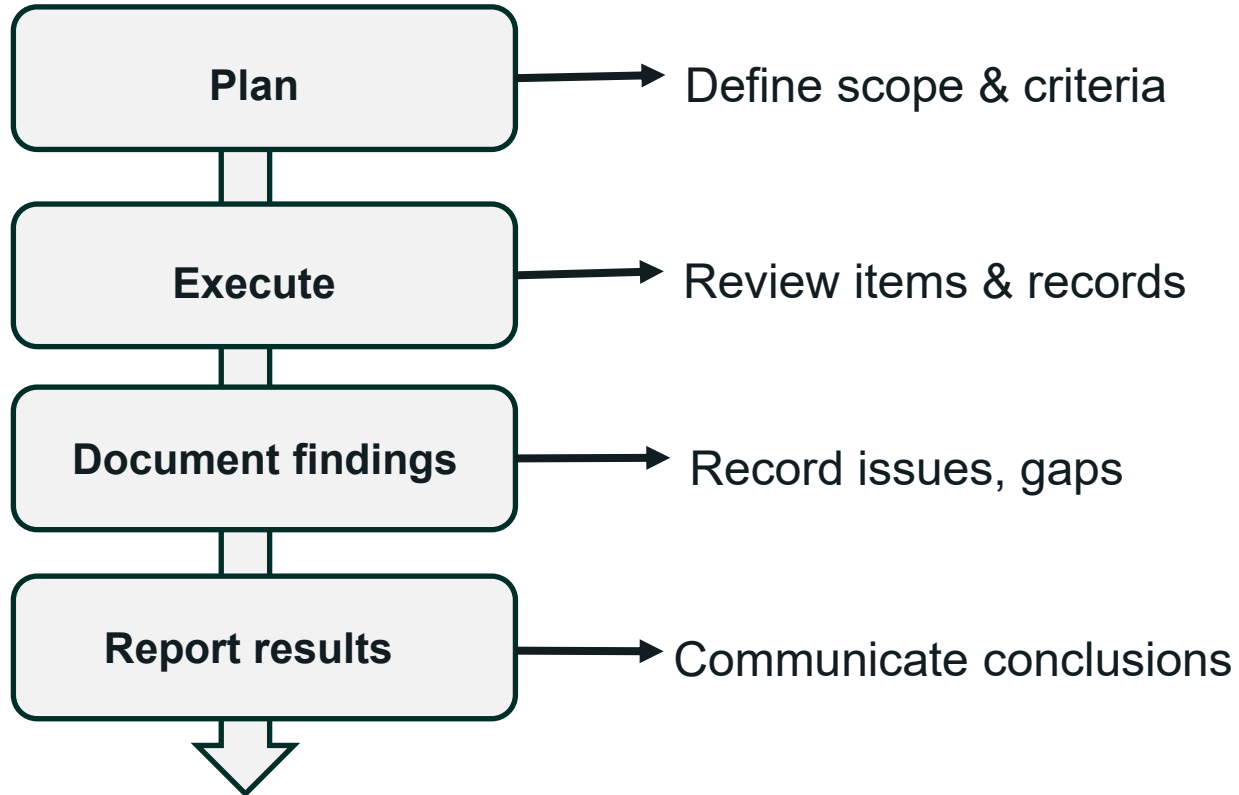
Ensures conformance to requirements & standards

Provides objective evidence of integrity

# Audit Focus

- **Completeness**
  - Are all required items present?
- **Correctness**
  - Does the item match requirements?
- **Consistency**
  - Are items aligned with each other?

# Audit Process



# Difference from Quality Assurance

- **Quality Assurance**

- process quality



**How work is done**

- **Audit**

- product integrity

**What is delivered**

**Both complement each other**

# Audit Deliverables



## **Audit Report**

Summarizes audit findings and insights (Leon, 2025)



## **Non-conformance List**

Outlines issues needing correction (Leon, 2025)



## **Corrective Actions**

Details tasks for issue resolution (Leon, 2025)

# Types of Audits: Preview

- **Functional Audit**
  - Does it meet requirements?
- **Physical Audit**
  - Does it match documentation?
- **Baseline Audit**
  - Is the baseline complete & consistent?

**Details in Lecture 10**

# Definition of Status Accounting

Structured communication of project state

Provides information on CIs, changes, and baselines

Keeps all stakeholders aligned

# Purpose of Status Reporting

**Ensure visibility of progress**

**Track bottlenecks and delays**

**Support management decisions**

**Provide evidence for audits**

# Key Contents of Status Reports

- **CI status**
  - versions, approvals, locations
- **Change request status**
  - open, approved, implemented
- **Baseline state**
  - current baseline, pending changes
- **Outstanding issues**
  - unresolved risks or actions

# Status Report Format Example

CI ID	Version	Status	Approver	Baseline

- Clear and concise format
- Easy to update regularly

# Benefits of Status Reporting

**Promotes  
transparency**

**Enables  
early risk detection**

**Improves  
decision-making**

**Builds  
stakeholder confidence**

# Tools Supporting Status Reporting

- **Automated tools**
  - JIRA, Git, CMDB systems
- **Manual tools**
  - spreadsheets, documents
- **Dashboards for real-time visibility**

# Frequency of Reporting

- **Daily**
  - For agile or fast-moving projects
- **Weekly**
  - Standard time for many teams
- **Milestone-based**
  - Tied to releases or phases

# Challenges in Reporting

- **Incomplete data**
  - Missing updates or records
- **Overload**
  - Too much irrelevant detail
- **Engagement**
  - Lack of interest from stakeholders
- **Consistency**
  - Irregular reporting

# The Role of Audits & Reporting in SCM



- ✓ Provide visibility to stakeholders
- ✓ Offer assurance of compliance
- ✓ Support decision-making
- ✓ Strengthen overall control

# Why Are Audits & Reporting Needed?

- Prevent chaos and rework
- Maintain accuracy of versions and baselines
- Reduce frustration and wasted time
- Avoid broken or noncompliant products

# Configuration Status Accounting (CSA)

- Process of recording and reporting configuration data
- Tracks the history and current state of Cis
- Supports decision-making and control

# Role of CSA in SCM

- Provides traceability across versions and changes
- Ensures visibility of baseline states
- Supplies evidence for audits and reviews

# CSA vs. Status Reporting

- **CSA**

  - ➔ systematic record keeping

- **Status Reporting**

  - ➔ communication of current state

**CSA feeds data into status reports**

# CSA Outputs

- Version histories of Cis
- Change logs with approvals
- Baseline records
- Reports for audits and reviews

# Reviews in SCM

- Peer or management evaluation of work products
- Focus on quality and correctness
- Less formal than audits

# Objectives of Reviews



## **DETECT ERRORS EARLY**

Detect errors early



## **ENSURE COMPLIANCE WITH STANDARDS**

Ensure compliance with standards



## **PROMOTE TEAM LEARNING AND ALIGNMENT**

Promote team learning and alignment



## **REDUCE REWORK COSTS**

Reduce rework costs

# Participants in Reviews

- **Author**
  - Presents the work product
- **Reviewers**
  - Peers or experts providing feedback
- **Moderator/Facilitator**
  - Guides the process
- **Recorder**
  - Captures issues and decisions


# Review Deliverables

- **Review report**
  - Summary of findings
- **Defect/action list**
  - Issues to resolve
- Approval or rejection decision

# Tasks in SCM

- Specific activities to manage configuration items
- Include tracking, updating, and reporting
- Support audits, reviews, and reporting

## Example

- 
- Update CI version and status
  - Record change request approvals
  - Prepare status reports
  - Document review findings

# Task Assignments and Ownership



Figure 2: Task Assignment and Ownership (Source: OpenAI, 2025)

# Tools for Task Management

- **Automated tools**
  - JIRA, Trello, MS Planner
- **Manual tools**
  - Spreadsheets, task boards
- Ensure visibility and accountability



# Importance of Task Management

Supports audit and reporting processes

Ensures consistency and accuracy

Reduces errors and rework

Improves team efficiency

# Summary

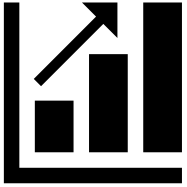
- Audits provide assurance of integrity
- Status reports provide visibility
- CSA maintains records and history
- Reviews and tasks support quality and control

# Summary ... (2)

- Visibility, assurance, and control are central
- Early detection of issues saves time and cost
- Structured processes reduce errors
- Documentation supports audits and decisions

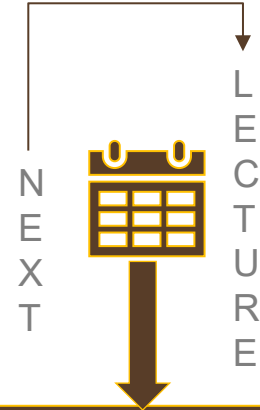
# References

1. Leon, A. (2015). Software Configuration Management Handbook (3rd ed.). Norwood: Artechhouse. Retrieved September 4, 2025.
2. OpenAI. (2025, September 4). SCM history and concepts [AI-generated image]. ChatGPT (Sora). <https://chat.openai.com/>
3. OpenAI. (2025, September 22). SCM Task Assignment and Ownership [AI-generated image]. ChatGPT (Sora). <https://chat.openai.com/>



# Thank You!

## SOFTWARE CONFIGURATION MANAGEMENT



**Organizational  
Context and Planning**