Logistics Management Associates
3010 Heather Green Blvd.
LaGrange, Kentucky 40031
www.log-mgmt.com

Configuration Management and Data Management

A comprehensive three-day virtual course of instruction.

Configuration Management and Data Management:

A process for establishing and maintaining consistency of a product's performance, functional and physical attributes with its requirements, design and operational information throughout its life. This course highlights CM/DM challenges and solutions in a paperless, digital environment.

What the course will achieve for you

CM/DM is an often overlooked critical aspect of programs. Lack of accurate control of the design of a system and all supporting documentation leads to production and through life support catastrophes. The course is aimed at the engineering, logistics, manufacturing, quality assurance, procurement, in-service sustainment and management professionals who need to broaden their scope of knowledge on critical CM/DM-related topics. The course explores all aspects of in-service sustainment issues of contemporary programs especially safety and mission availability. The objective of the workshop is to expand the scope of understanding of the attendees in all facets of configuration management and control. Highlights of the course are practical examples and case studies of successes and failures on real programs.

Course Outline

- Basis of Configuration Management
  - Interoperability
  - Supportability
  - Reproducibility
  - CM/DM Standards
    - MIL-STD 973
    - MIL-STD 2549
    - ISO 10007
    - MIL HDBK 61
    - EIA 649/836.
- The History of Configuration Management
- Examples of CM/DM Success

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CM/DM Functions
- Management and Planning
- Configuration Identification
- Configuration Control
- Configuration Status Accounting
- Configuration Verification and Audit

Creating Baselines
- Functional Baseline
- Allocated Baseline
- Physical (Product) Baseline

Configurations
- Functional Configuration
- Allocated Configuration
- Physical Configuration
- As-tested Configuration
- As-built Configuration
- As-delivered Configuration
- As-maintained Configuration

Basis of Configuration Management
- Configuration Management
- Identification of Configuration Items (CI's)
- Documenting the evolution if CI's
- Documenting the relationships of CI's

Configuration Item (CI)
- Configuration Identification
- Identification Levels
- Functional Configuration Identification
- Item Specification
- Material Specification
- Engineering Drawing
- Assembly Drawing with Parts List
- Software Design Documentation
- Specification Control Drawing
- Source Control Drawing
- Acceptance Test

The Three F's
- Form
- Fit
- Function

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CI Documentation
- Engineering Family Tree Drawing
- Assembly Drawings
- Parts List
- Acceptance Test
- Process Control Drawings
- Release Record
- Interface Control
- Interface Control Drawing
- Specification Control Drawing
- Source Control Drawing

Building a Configuration
- Identify the Structure
- Identify locations within the structure
- Assign unique identifiers to each location

The Evolution of a System Design
- System Architecting
- System Engineering
- Systems Architecting Terms
- Systems Architecting Methods
- Systems Engineering
- Design Teams
- System Requirements Identification
- Controlling Functional Requirements

Managing Change - Documenting the Evolution of a Design
- Systems Engineering
- Functional block diagram
- Design rules for each design engineering
- Hardware
- Software
- Hardware Evolution
- Design engineer for item
- Integration engineer
- Subsystem integration engineer
- System integration engineer
- Design Starts
- Designer’s Instructions
- Designer’s Product
- Engineering Drawings
- Assembly Drawings
- Parts List

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Who Controls Change?
- Formal change notices
- Engineering Release
- Engineering Release Record

Software Engineering
- Software Evolution
- Software engineer for each item
- Integration engineer
- Systems engineer
- Software CM/DM Terminology
- Software Hierarchy

Basis for Software Design
- Unit Development Folder
- Functional Requirements
- Inputs
- Required Outputs
- Functional Flow
- Development Methodology/Conventions
- Documentation Requirements

Reviews and Audits
- System Requirements Review (SRR)
- System Design Review (SDR)
- Preliminary Design Review (PDR)
- Critical Design Review (CDR)
- Functional Configuration Audit (FCA)
- Physical Configuration Audit (PCA)
- Production Quality Audit (PQA)

Configuration Audits
- Preparing for Audits
- Functional Configuration Audit
- Compliance Matrix
- Performing the FCA
- FCA Roles and Responsibilities
- Documenting the FCA
- Physical Configuration Audit
- PCA Preparation
- Performing the PCA
- PCA Roles and Responsibilities
- Documenting the PCA Results

- Production Quality Audit
- PQA Preparation
- Performing the PQA
- Documenting the results

Managing Change
- Classes of Change
- Importance of F3
- Informal Control
- Formal Control
- The Process of Change
- Chance Management Organization
- Change Effectivity

Change Control Board
- Classes of Change
- Class 1 and Class 2 Changes
- Change Control Process
- Engineering Change Request
- Engineering Change Order
- Engineering Change Proposal
- Engineering Change Request (ECR)
- Engineering Change Order (ECO)
- Engineering Change Proposal (ECP)
- Change Control Process
- Notice of Revision

Change Effectivity
- Effectivity Application
- Why Delay Effectivity?

Transition to Production
- CM/DM and Manufacturing
- Producibility
- Serialization
- Manufacturing Planning
- Procurement
- Quality Assurance
- Testing
- Deviations and Waivers
- Producibility
- Serialization
- Manufacturing Planning
- Procurement

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- Configuration Status Accounting
  - CSA System
  - CSA System Uses
  - CSA Data
    - Documentation and identification
    - Specifications
    - Drawings
    - Software
    - CI structure
    - Change tracking
    - Changes in process
    - History of changes
    - Approved changes
    - Change implementation
    - Management information
  - CSA Data System Overview

- ISO 10303 Standard for Exchange of Product Model Data (STEP)
  - AP 233: Systems Engineering
  - AP 239: Product Life Cycle Support
  - AP 242: Managed Model Based 3D Engineering

- Obsolescence Management
  - Standards and Policies.
  - Corporate Responsibilities for Obsolescence Avoidance
  - OM Strategy vs. OM Plan.
  - Contracting for Obsolescence.
  - Obsolescence Management in Design.
  - Systems Engineering for Obsolescence Avoidance.
  - Understanding the Cost of Obsolescence Management.
  - Obsolescence Management Organizations and Responsibilities
  - Developing an Obsolescence Management Strategy
  - Developing an Obsolescence Management Plan

- The Data Management Process
  - Data Artifact Identification
  - Artifact Marking and Control
  - Contract Data Requirement List
  - Organizational Data Submittal Responsibilities
  - Managing Data Submittal Flow
  - Data Status Accounting
  - Dealing with Rejections
  - Corporate Data Accession List

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In-Service Configuration Control Issues
- Lessons Learned
- Maintenance and Supply Implications
- Upgrades, updates and modifications
- Configuration status management
- Spares Tracking
- Build Standard Reference
- Contractor Logistics Support (CLS)
- Performance Based Logistics
- Post Production Support

Virtual Presentation using Microsoft Teams 0900-1630 EDT (NY/DC)

Course Fee: US$ 995

Register at: conference@log-mgmt.com

LOGISTICS
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Registration Form

Name _____

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Contact Telephone _____

Please register me for:

☐ Configuration Management and Data Management - $995
8-10 July 2025

☐ Early Bird Discount 10% (Register before 2 June 2025)

☐ CLEP Active Member Discount 10%

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