



System Development and Life-Cycle Management (SDLCM) Methodology

Subject Products Installation and Integration Plan	Type	Standard
	Identifier	S-5052
	Effective Date	February 2002
	Revision No.	2

Approval

CISSCO Program Director

A. PURPOSE

This standard specifies content and format requirements for a Products Installation and Integration Plan.

B. APPLICABILITY

This standard applies to NRC Project/Tasks, subject to the SDLCM Methodology, that plan to develop and deploy a new, upgraded, or migrated data processing system or software application, when equipment, in addition to the development suite, will be used in the system or application software operational environment.

This standard is used by those persons who create, review, and approve the Products Installation and Integration Plan.

C. REFERENCE PUBLICATIONS

The following publications contain related information:

- *SDLCM Methodology Handbook*, Component 3
- SDLCM Methodology Standard S-5051, Tactical Integration Plan
- *NRC Model Tactical Integration Plan*, January 3, 1997

D. STANDARD

The Products Installation and Integration Plan provides a detailed description of the activities involved in the installation and integration of equipment resources (Commercial or Government off-the-shelf (COTS or GOTS) hardware and software and custom-developed software) required for the deployment of the solution system. It defines responsibilities, schedules, risks, and risk mitigation approaches.

Tailor this standard as needed to be consistent with the size, scope, and complexity of the installation and integration effort. Add sections and subsections for special topics. Sections and subsections that are not applicable should *not* be deleted; they should indicate "not applicable."

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For Project/Tasks with very small installation efforts, the Products Installation and Integration Plan content may be included as part of the sections of the Tactical Integration Plan (TIP) indicated in the paragraphs below.

The following paragraphs describe the content of each section of the Products Installation and Integration Plan.

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1. INTRODUCTION

Describe the purpose of the Products Installation and Integration Plan.

1.1 Background

Provide any information necessary for understanding the Project/Task effort in the installation and integration of products that support the solution system in operational or production environment.

1.2 Objectives

Include Project/Task objectives related to installation and integration of hardware and software products needed to support the solution system.

1.3 Scope

Describe the scope of this plan. Specify the number and locations of the production sites that are covered by this plan. Identify the activities that mark the beginning and end of the installation and integration process. Also identify any activities related to the installation and integration of support products that are not covered by this plan.

1.4 Assumptions

Identify any assumptions related to the installation and integration of support products. Include any identified open issues if the installation and integration effort is to continue while issues remain unresolved. Include the degree of criticality in the description of each assumption.

1.5 Applicable Documents

List the documents that support this plan or that provide additional information about the various activities included under this plan, such as hardware and software installation and maintenance manuals and procedures; test requirements; training materials; applicable system requirements and specification documents; Project/Task schedules; facility requirements, plans, and activity schedules; and problem resolution procedures and policies.

2. APPROACH

Describe the overall approach that will be followed to installed and integrate the hardware and software products needed to support the solution system in the operational environment.

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2.1 Installation and Integration Activities

Describe the various stages of activity and the strategy for accomplishing the installation and integration of the operational support products. Clearly identify the date and activity that marks the end of the installation and integration of the operational support products.

2.2 Installation and Integration Organizational Responsibility

Describe the organizations involved and their responsibilities. Describe how coordination will be maintained among these organizations.

3. GENERAL INSTALLATION AND INTEGRATION PLANNING

Include in this section the planning that is required for the installation and integration of the operational support products that are common to both hardware and software support equipment.

3.1 Solution System Overview

Briefly describe the solution system function and the context in which it operates, including the support equipment interfaces. State any special conditions that exist and how they might affect this plan or its implementation.

3.2 Identification of the Products to be Installed and Integrated

Identify the support equipment (both hardware and software) to be installed at the operational site(s) and their sources (for example, COTS, GOTS, custom developed). Include model or version identification as appropriate and a contact person and phone number for each source. Use a bulleted list or table to provide this information.

3.3 Facility preparation

Identify any facility requirements related to the support equipment. Include such items as the locations that must be prepared for the operational support equipment, needed power and cabling support, dates that the various locations must be ready for the installation and integration of the equipment.

Identify any physical security and safety restrictions for hardware, software, or personnel entering each facility.

Refer to Section 2.9, Facility Plan, of the TIP as appropriate. If the effort is a small or uncomplicated one, include all facility preparation information related to the support equipment in Section 2.9 of the TIP.

3.4 Support Equipment Installation and Integration Milestones

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Provide the milestone schedule for the installation and integration period. Indicate dependencies. Include the major hardware and software integration activities and any other associated activities, such as acceptance testing. Include facility preparation milestones that affect installation activities and the date by which support equipment installation and integration must be complete.

Refer to Section 1.4, Schedule for Development of Deployment Plan Components, of the TIP as appropriate. If the effort is a small or uncomplicated one, include all installation and integration milestones in Section 1.4 of the TIP.

3.5 Support Equipment Installation and Integration Roles and Responsibilities

Provide a table indicating the activities required for installation and integration of the support equipment and the Project/Task personnel (NRC and contractor) having responsibility for their completion.

Specify by role name (or sub-role name in the case of Development Team members), not the name of an actual person, the person(s) responsible for each activity. The *SDLCM Methodology Handbook* contains role names, descriptions, and responsibilities as they apply to the methodology.

Refer to Section 1.3, Roles and Responsibilities, of the TIP as applicable. If the effort is a small or uncomplicated one, include all installation and integration related activities and the associated roles and responsibilities in Section 1.3 of the TIP.

3.6 Problem Identification and Resolution

Identify the problem reporting and tracking procedures that will be followed. Identify who is responsible for reporting problems in the support equipment being installed and for implementing approved fixes or changes during the installation and integration process. Refer to the Project/Task problem resolution procedures, as applicable.

3.7 Training Requirements

Identify any training or cross-training requirements associated with the installation and integration of the operational support products.

3.8 Risks and Risk Mitigation

Enumerate the risks associated with installation and integration of the operational support hardware or software. Examples of such risks include availability or on-time delivery of COTS equipment, delays in facility or site preparation, and failures of the support hardware or software during installation. Analyze the potential impact of any identified risks and describe any proposed risk mitigation strategies, such as activity resequencing, vendor changes or COTS substitution, and equipment rental. Analyses should consider critical Project/Task objectives that may be jeopardized.

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Refer to Section 2.3, Risk Management, of the Project Action Plan as applicable.

4. HARDWARE INSTALLATION AND INTEGRATION

Address the activities that are specific to the installation and integration of operational support hardware. Operational support hardware includes, but is not limited to, platforms, peripherals, and communications hardware.

4.1 Hardware Installation and Integration Activities

Summarize the activities involved in hardware installation and integration. Examples of such activities include: special shipping, packaging, or delivery requirements; preshipment checkout of the support equipment; site preparation; removal of the old system; setup; post-installation inspection and testing of the support equipment; vendor or third-party system software installation; network connection and integration; and integration with support software.

Identify the procedures that will be followed to perform these activities.

4.2 Hardware Acceptance

Summarize the acceptance activities associated with the new or reconfigured support hardware. This can include both pre- and post-installation checkout and the exercising of the physical interfaces. Specify the acceptance criteria. Describe the conditions necessary for acceptance testing both to begin and to conclude successfully.

5. SOFTWARE INSTALLATION AND INTEGRATION

Address the activities that are specific to the installation and integration of operational support software. Operational support software includes, but is not limited to, operating systems, database management systems, language compilers and generators, and graphical user interface (GUI) builders.

5.1 Software Installation and Integration Activities

Summarize the activities involved in hardware installation and integration. Examples of such activities include: system configuration; software installation, setup, and testing; file allocation and user account creation; network installation; operating system and vendor or third-party COTS or GOTS software installation and testing; and installation of monitoring tools.

Identify the procedures that will be followed to integrate the support software with the support hardware and with the solution system. Include development of the initial system tuning parameter values.

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As necessary, establish policies and procedures for installing and accepting new software releases, ensuring integrity and security of the system and its data, and monitoring resource usage.

5.2 Software Acceptance

Summarize the acceptance activities associated with the new or reconfigured support software. These activities can include formal reviews and inspections by the customer or purchasing agency. Specify the acceptance criteria. Describe the conditions necessary for acceptance testing both to begin and to conclude successfully.