

SCM Process Assessment Guide

AUTHOR: KALI PRASAD / RAJESH KUMAR

Email: rajesh@scmGalaxy.com
www.scmGalaxy.com

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1 Introduction

This Article will help you to study project, technology, scope and process for configuration management, build management, release management and deployment management.

This document will help you to assess SCM process of any project.

2 General Assessment Questions

2.1 Questions to analyze the development process description

Which of the following do you get from your existing process?

- ✚ Examples
- ✚ Guidelines
- ✚ Artifact templates
- ✚ Activity descriptions
- ✚ Artifact descriptions

2.2 Questions to characterize the project application

- ✚ What is the size of each project (duration, persons, person years, LOC)
- ✚ What type (maintenance / enhancement / new development / prototype / feasibility)
- ✚ What type of development model is being used?
- ✚ Are we using any process models like UCM, RUP or any other?
- ✚ Any industry/domain specific standards (like CMMI, ITIL etc.) to be followed?

2.3 Questions to identify the supporting tools

- ✚ What are the tools that you currently use in your work?
- ✚ How is the integration among the above tools?
- ✚ Are we using the tool features the way they are designed or intended?

3 Assessment on Configuration and Change Management

3.1 Project/Development Managers

- ✚ How do you maintain all the artifacts together and version them?
- ✚ Where are the people working on the project located?
- ✚ What's the difference between Developer CM and Release CM?
- ✚ How do you assess, and track the impact of a proposed change?
- ✚ How do you manage system integration of modules developed by individual developers?
- ✚ How many product versions are you supporting at this moment?
- ✚ Who is the designated Configuration Manager?

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3.2 Developers

- ✚ How do you baseline project artifacts?
- ✚ Can you build your system reliably and repeatedly?
- ✚ Explain your labeling scheme?
- ✚ Can you show me what versions went into a certain release?
- ✚ What does the version tree for this file look like?
- ✚ How many product versions are you supporting at the moment?
- ✚ What is the version control tool being used? Is it user friendly?
- ✚ What is the bug tracking/change management tool being used? Is it user friendly?

3.3 Testers

- ✚ Do you know what files/documents should be delivered?
- ✚ How do you assess, and track the impact of a proposed change?
- ✚ Can you show me what artifact versions went into a certain release?
- ✚ How comfortable are you working with Bug/Change management tool?

3.4 Configuration Manager

- ✚ Do you know what files/documents should be delivered?
- ✚ How do you track who changed what, when, where, and why?
- ✚ How long does a build or release take?
- ✚ Is there a Configuration Management Plan document?
- ✚ Is there a tight integration between Version control tool and Bug/Change tracking tool?
- ✚ How the parallel (if any) development is enabled? Any limitations with the current branching strategy?
- ✚ Is this project development spanned across multiple sites? If so, what is your multi-site strategy?

4 Assessment on Build and Release Management

4.1 Build Engineer

- ✚ What is the build process adopted (automated/manual)?
- ✚ Are there nightly builds?
- ✚ Is there continuous integration?
- ✚ Are there smoke and sanity tests at the end of the build?
- ✚ What is the build acceptance criterion (BAT)?
- ✚ What is the build duration? Is it optimal?
- ✚ How are pre-conditions to the build verified?
- ✚ Are there any build environment integrated automated unit test-cases?
- ✚ Is there any enforcement tool on coding standards?

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- ✚ Is there any code coverage tool being used?
- ✚ Are the post build activities automated?
- ✚ Any additional practices (like checksum generation, signing the build artifacts) in place as part of the build?
- ✚ Are there any scripting technologies used in automating build process?
- ✚ Is Labeling strategy well-defined?
- ✚ If any third party tool is being used for packaging, is that package creation process automated?

4.2 Release Engineer

- ✚ How many major, minor releases a year per project?
- ✚ How many customers per release per project?
- ✚ How do you deliver the releases to the customers? – Is it physical media distribution or Push/Pull mechanism from web or any other process?
- ✚ Is the distribution CD/DVD creation process automated?
- ✚ What is the size of the release deliverable?
- ✚ What are the contents of a release?
- ✚ How is the release bundle tested?
- ✚ How many platforms are certified? How different are the release packages?
- ✚ Is there any release check-list for cross-check?
- ✚ Is any part of the release process automated?
- ✚ Is there a need for i18n? If yes, is the i18n release handled separately?
- ✚ In case of installers, is there installer testing? Is it automated?
- ✚ Is the release schedule well-planned?
- ✚ Are you delivering patches in well constructed and cost effective way?
- ✚ Is there any release audit process in place?
- ✚ How are you tracking your releases?
- ✚ Is there any legal compliance in place while shipping the release to the customers?