CDC Unified Process

Project Management

Newsletter

Supporting a Common Project Delivery Framework

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Release Management

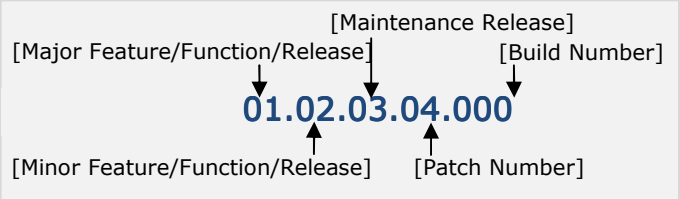
Last the CDC Unified Process Project Management Newsletter focused on the practice of Release Strategy. This month, we elaborate upon that topic by providing an overview of Release Management.

Release management approaches may vary from organization to organization. However, regardless of which approach is used a best practice approach to release management is comprised of activities that effectively manage the planning, organization, development, testing, and implementation of new features and functions, defects, change requests, etc. into the application being developed. Some of the stages that a release may go through as it works through the release process may include:

- **Pre-Alpha** - A pre-alpha release does not necessarily contain completed features/functions. This is often an interim build, prior to testing, often to validate a particular piece of work or that development to this point hasn't broken anything.
- **Alpha** - An alpha release does not necessarily contain all completed features/functions but does satisfy release requirements. This release is often the first internal product build delivered to the testing group. It is often a preliminary build that is only partially complete and typically contains temporary code, comments, product breaks, etc.
- **Beta** - A beta release is the first product version released outside the performing organization for the purposes of real-world testing. A beta release includes all features/functions but often still contains some known issues and bugs.
- **Release Candidate** - A release candidate contains all completed features/functions and is a product version that has the potential to be a final product. It is complete when agreed that no additional new source code will be added to the release.
- **General Availability (Gold)** - A general availability release is the final version of a particular product. A gold release is stable and relatively bug-free with a quality exceeding the client's expectations.

Release Numbering

Software release numbering may appear trivial but is critical to the overall success of any effective release strategy. The illustration below from IBM's documentation on enterprise software release management provides an example of one standard for numbering and naming releases that is flexible enough to handle most software delivery situations.



Release decisions are ultimately affected by how much testing is needed to verify that both functional and non-functional requirements have been correctly built into the system, and quality, as defined by project stakeholders, has been met. The optimal level is difficult, if not impossible, to find. In practice, cost and time will constrain this activity to a level that the performing organization can tolerate.

A release checklist is one approach to help identify when a product is ready for release. This type of checklist can also validate client requirements and expectations and can also be used as a communication vehicle for the client. The process for creating a release checklist may include:

- **Product Defects/Coding Errors** - Quantify an amount of defects that the client finds acceptable. Obviously, the optimal level of defects would be zero. However, in practice, achieving zero defects is extremely cost and time prohibitive. Constrained by cost and time, a reasonable level of quality should be identified and agreed upon by stakeholders.
- **Product Documentation** - Documentation should be a reflection of the code. Clarity, completeness, and consistency are better achieved if the individuals who developed the product create documentation.

Some of the individuals involved in a typical release:

- **Software Architects** capture and understand the physical execution environment and related issues.
- **Designers** understand distribution and processing of data in the system.
- **System Managers** understand the physical environment in which the system executes.
- **Project Managers** estimate costs and schedules for monitoring and controlling project activities.
- **Configuration Managers** assemble product builds and releases, and for maintain organization of development units, history, and access to files.

The ultimate decision on determining if a product release is ready for distribution should be made based on an objective analysis of factors such as:

- **Completeness** of milestones/deliverables that deliver functionality required by the client.
- **Performance** and server load is within acceptable margins defined in the requirements gathering and design phases of the project.
- **Defects** have been reduced to a level acceptable by the client.
- **Security** compliance through Certification and Accreditation (C&A) requirements.
- **Sign-off** by the appropriate stakeholders and/or authorizing individuals to confirm that all product expectations have been met and that the product is officially approved for general release. A sign-off checklist may include items such as:
  - Annotate the correct release number as defined by an agreed upon standard
  - Confirm legal, license, and copyright elements
  - Remove any testing and debugging code
  - Check documentation is complete and up to date
  - Ensure compliance with regulations, mandates, and related policies
- **Stage Gate Review** – determines if the final product is ready for release into the production environment for sustained operations and maintenance support. The Operational Readiness Review gate is a major stage gate and requires governance approval.

For more information about release strategy, planning, or management, the Project Management Community of Practice or the CDC UP please visit the CDC Unified Process website at http://www.cdc.gov/cdcup/. ▮

Project Management Community of Practice

- ***April 27, 2012***
  Contracting
- ***May 18, 2012***
  Cloud Computing at CDC
- ***June 22, 2012***
  Project Change Management
- ***July 27, 2012***
  PM Best Practices – A Panel Discussion
- ***August 24, 2012***
  Enterprise Performance Life Cycle (EPLC)
- ***September 28, 2012***
  A Conversation with CDC Policy Leadership
- ***October 26, 2012***
  The Value of Alternative Analysis
- ***December 07, 2012***
  Managing Risk

For more information on the Project Management Community of Practice visit the PMCoP website at http://www2.cdc.gov/cdcup/library/pmcop/ ▮

CDC Unified Process Presentations

The CDC UP offers a short overview presentation to any CDC employee and/or contractor group. Presentations are often performed at your facility, on a day of the week convenient for your group, and typically take place over lunch structured as one hour lunch-and-learn style meeting.

Contact the CDC Unified Process at cdcup@cdc.gov or visit http://www.cdc.gov/cdcup to arrange a short overview presentation for your group. ▮

Contact the CDC Unified Process

The CDC Unified Process Project Management Newsletter is authored by Daniel Vitek, MBA, PMP and published by the Office of Surveillance, Epidemiology, and Laboratory Services.

For questions about the CDC UP, comments regarding this newsletter, suggestions for future newsletter topics, or to subscribe to the CDC UP Project Management Newsletter please contact the CDC UP at cdcup@cdc.gov

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