Build and Release Process

Version No: 1.0

**Revision History**

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# Purpose

The purpose of this process is to provide a generic build and release process for the projects. The way Tanvi IT achieves CI is with the help of a release pipeline. A release pipeline is a conceptual process by which committed code is taken into production. As such, a release pipeline can be as ephemeral or as real as we want to make it.

Release Pipeline (RedTurf)

Updated Source Code Updated Production Software

*The fundamental release pipeline from code change to production software*

The underlying capabilities required in order to maintain a release pipeline are as follows:

* A means of triggering the pipeline to run.
* A means of executing tasks such as environment provisioning, application deployment, testing, collation of test results.
* A means of controlling the flow of execution, especially to stop further processing in the event of failure.
* An artefact store to maintain state throughout the process.
* A metadata store, allowing consistent metadata (such as build number) to be passed to each stage of the pipeline.
* A configuration store, allowing environment-specific values to be retrieved for use in the pipeline.
* Logging of the work performed and of any errors.
* Notifications of success and failure.

A release pipeline can also be thought of as a workflow. A workflow whose purpose is releasing software.

# Scope

This process is applicable to all the projects managed and controlled at Tanvi IT Solutions Inc.

# Definitions and Acronyms

|  |  |
| --- | --- |
| PM | Project Manager |
| CC | Configuration Controller |
| ML | Module Leader |
| TL | Team Leader |

# 

# Entry Criteria

## Trigger

* Software Product is constructed, verified, validated and is ready for release.
* Closure of all defects related to the project (or decision taken on them with respect to their handling)

## Inputs

Peer Reviewed and unit Tested Code

# Responsibility

* Project Manager is responsible for planning the build and release, coordinating with the build team in resolving the issues in builds and ensuring the completeness of the build released to the customer.
* Configuration Controller is responsible for establishing strict change-control procedures concerning the builds, and that the necessary software for building the system is made available to the build team.
* ML/ TL is responsible for verifying the Build
* Testing team is responsible for testing the Build

# Process Flow

Start

Prepare Build Plan

Create Config. Area

Prepare Build

Prepare Release Note

Review Release Readiness

Test the Build

Release the Build

Obtain the Feedback from Customer

Stop

PM CC Build team ML/TL Testing Team

# Process Details

## Preparation of Build Plan

Project Manager shall prepare the *Build Plan* defining the sequence in which the application components are integrated into the various application builds.

PM shall designate the Build team for carrying out the build preparation and review activities.

## Build Preparation

The build team, based on the readiness of the unit-tested code and the build plan schedule, triggers the build process.

A separate folder in project configuration area for the Component /module specific source code is maintained by the CC for build purpose. Only the respective module leaders/ team leaders should have the Check in and check out rights.

As and when a Component/module is unit tested and is ready for integration, the Module Leaders check in the source code of the Component/Module in the respective build folder in project configuration area.

The build team identifies a separate Integration area, which is cleaned for any existing code and Un-Registering of the existing components before any new build is made.

As per the Build plan schedule, the new build is prepared by the respective module leads who will check out their source code from their respective folder in configuration area into an identified Integration environment /area.

The build team compiles and registers the required components on the identified integration area.

The build team raises bug report for any problems encountered during the build compilation and registering of the components on the identified integration Area.

## Release Readiness Review

PM/ Person designated by PM shall prepare the *Release Note.*

Release Note shall be peer reviewed before the Release Readiness Review.

Module Leader/ Team Leader shall verify the readiness of all the releases including intermediate ones using *Release Readiness Checklist*.

Until unless the Module Leader/ Team Leader signs-off the Release Readiness Checklist, the delivery will be delayed.

## Build Test

The testing team conducts the functionality/ system testing as per the Testing Process.

PM shall ensure that the test defects if any are tracked to closure.

## Release to Customer

Only after ensuring that all the review, test defects are closed, deliverables are approved for release. PM/ CC shall ensure that the deliverables are baselined and a copy of the approved deliverables is sent to customer.

## Follow-up with customer for acknowledgement of the Release

The PM shall follow-up with the client for obtaining the feedback and acknowledgment of the delivery. The acknowledgment can be in the form of an email. The customer may carryout Acceptance testing (if applicable at that stage) and gives feedback. Such feedback is handled as per *User Acceptance Process*.

# Exit Criteria

Customer Feedback on the deliverables

# References:

|  |  |  |  |
| --- | --- | --- | --- |
| Process | Template | Guideline | Checklist |
| Project Planning | Release Note |  | Release Readiness Review |
| Testing | Build Plan | - | - |
| Configuration Management | - | - | - |
| User Acceptance | - | - | - |