According to Martin Fowler, “Continuous Delivery is a software development discipline where you build software in such a way that the software can be released to production at any time.” The key word in this definition is “discipline.” Continuous delivery is not a product or something you can purchase off the shelf. It is a domain wherein a number of processes come together to form a practical implementation of a highly efficient and productive software development process.

At its foundation, Continuous Delivery embodies the practices prescribed by Continuous Integration and the Agile principal of satisfying customers through early and continuous delivery of valuable software. Continuous Delivery builds upon this foundation using solid SCM, Testing, and Planning practices.

Continuous Delivery is not defined as continuous deployment, continuous release, or something that only cloud applications need to worry about. Continuous Delivery uses a set of key principles that involve staging the software development and delivery process. Each stage within the process possesses a distinct set of criteria that must be validated before software can progress to the next stage. These processes leverage automation for testing, software deployment and promotion. The end result of the stage-based process is the formation of a delivery pipeline through which new software can continuously flow, and as it flows, it is validated to progressively higher levels of quality.

Because Continuous Delivery is not a tool or product, achieving it is difficult. The approach to a successful Continuous Delivery process is a holistic one, where software development organizations must align technology, process, people and values.

Best Practices for Achieving Successful Continuous Delivery

1. Model a staged release pipeline with distinct delivery and development pipelines
2. Maintain discrete software configurations in SCM for each stage in the release pipeline
3. Scale development activity by creating additional parallel development pipelines
4. Partition development along architectural, functional, organizational, or project boundaries
5. Maintain traditional Continuous Integration at commit and system integration stages
6. Promote change in small, incremental batches as frequently as possible
7. Immediately integrate to all descendant pipeline stages on commits
8. Establish “Done” = “Integrated” as a definition of done for the development teams
9. Aggressively automate validation or testing at each stage, and trigger automatic promotion of change to the next stage based on passing validations
10. Tightly integrate SCM, Agile planning, and Issue Tracking Systems
11. Elevate the definition of “Done” to “Done” = “Delivered” once automation is in place
Large, enterprise organizations are faced with unique challenges when attempting to attain a successful Continuous Delivery strategy, including:

- Scale of parallel activity
- Complexity of software and environment
- Variance in skills or expertise of teams and individuals across the organization
- Variance in the ability to integrate a "work in progress" across the organization
- Lack of continuous integration across team boundaries

In order to embrace and address these challenges, companies must adopt a set of best practices. The practices outlined below will help large, enterprise software development organizations achieve the highest levels of software development and delivery.

Conclusion
Because continuous Delivery is a software development "discipline", as opposed to a tool or product, achieving it is difficult and requires a holistic approach. Micro Focus has identified best practices for successful Continuous Delivery within enterprise organizations.

Does Your Company Follow These Best Practices Today?
With Micro Focus’s help, your organization could implement AccuRev to achieve successful Continuous Delivery for your software development process.

Micro Focus® AccuRev optimizes Continuous Delivery, empowering companies to increase productivity, improve quality and drive competitive advantage.

Find out more at: www.borland.com/accurev