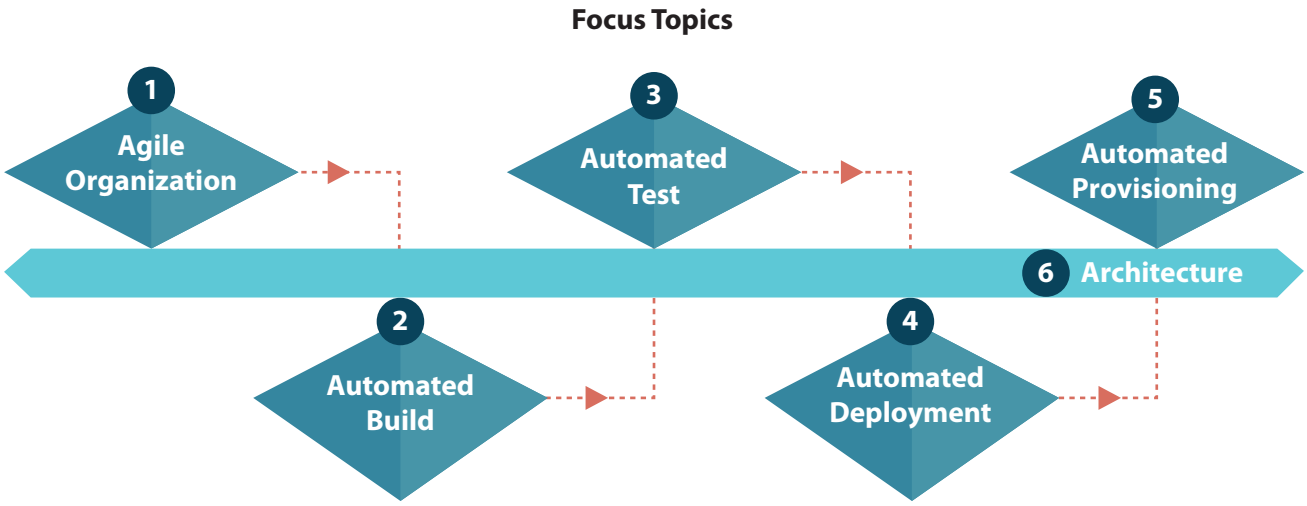
FULLY AUTOMATED CONTINUOUS DELIVERY – THE FOCUS TOPICS



Automated Continuous Delivery offers several benefits, for example, faster speed to market, faster feedback, lower level of risk, and more productivity. Considering the various business benefits that Continuous Delivery provides, organizations can successfully adopt a fully automated Continuous Delivery process. This requires them to leverage six focus topics. These topics are:

- Agile Organization,
- Automated Build,
- Automated Test,
- Automated Deployment,
- Automated Provisioning, and
- Architecture.

Agile Organization and Architecture are non-automation focus topics and the rest four are automation focus topics.

Let's discuss these topics in detail.

- **Agile Organization**: Agile organizations are known for the fast and often delivery of right products. They do it to respond quickly to the changes in the market to meet customers' needs as soon as possible. To achieve this, they have autonomous, multidisciplinary teams who apply the combined principles of Agile and Lean.
- **Automated Build**: The automated build is an automated process of writing and committing code, scanning the code for errors, compiling it, running automated tests, and reporting errors, if any. When automated tests identify any errors, the development team receives an immediate notification to fix these quickly. Some of the benefits of the automated build include Continuous Integration, improved quality, and increased predictability.
- **Automated Test**: Tests are performed before releasing the product/software in the production environment to validate whether it is functioning correctly and meeting customer's expectations. When such tests are performed through automation using testing tools, these are known as automated tests. These tests include a sequence of test scripts that testing tools execute.

- **Automated Deployment**: It is an automated process of deploying published deployment artifacts to different environments. It includes various tasks to make the target machines ready for deployment, such as:
  - Moving artifacts to the target machines
  - Configuring the target machines for the successful execution of the software/product
  - Configuring the other components required to execute the software successfully
- **Automated Provisioning**: It is the ability to deploy, update, and repair the complete application infrastructure (such as network components, server components, and runtime software stacks) using a predefined set of automated procedures. Such provisioning enables Development and Quality Assurance teams to operate a more efficient and reliable application lifecycle by providing safe self-service capabilities for deploying and managing their environments. Automated provisioning also enables system administrators in production environments to operate their applications with unachievable levels of efficiency and reliability.
- **Architecture**: The architecture of any system includes its components, their relationships, and the way these interact with each other. It is defined at various levels in an organization, such as enterprise, business, application, and technical. Therefore, architecture plays a key role in optimizing the software delivery process of teams.

