Software deployment processes

Software Deployment Meaning: Software deployment includes all of the steps, processes, and activities that are required to make a software system or update available to its intended users. Today, most IT organizations and software developers deploy software updates, patches and new applications with a combination of manual and automated processes. Some of the most common activities of software deployment include software release, installation, testing, deployment, and performance monitoring.

Cloud Software Deployment

While many development teams still choose to host applications using on-premises IT infrastructure, cloud service providers like Amazon Web Services (AWS), Google Cloud Platform and Microsoft Azure now offer IT Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) products that help developers deploy applications into live environments without the additional financial and administrative burden of managing their own storage and virtualization servers.

Software Deployment Methodologies

DevOps is a methodology and a set of best practices for software development whose primary goals are to shorten delivery times for new software updates while maintaining high quality. In the DevOps framework, there are seven steps in the software development process:

- Coding
- Building
- Testing
- Packaging
- Releasing

- Configuring
- Monitoring

DevOps especially emphasizes the use of automation to streamline the software deployment process. DevOps usually incorporates a framework known as Continuous Integration (CI) where new code is integrated into a shared repository by working teams on a regular basis e.g: committing all your application code in a single repository. Continuous Deployment (CD) describes a software release strategy where new code passes through a battery of automated tests before being automatically released into the production environment where users can interact with it.

Software Deployment Processes:

1. Preparation:

In the preparation stage, developers must gather all of the code that will be deployed along with any other libraries, configuration files, or resources needed for the application to function.

2. Testing

Before an update can be pushed to the live environment, it should be deployed to a test server where it can be subjected to a pre-configured set of automated tests.

3. Deployment

Once an update has been fully tested, it can be deployed to the live environment.