# TEST DATA MANAGEMENT

**What is TDM?**

Modern Test Data Management solutions help organizations accelerate application development speed, code quality, data compliance, and sustainability initiatives by providing timely access to fresh relevant data downstream for code development, automated tests, troubleshooting, and validation.

## What can Test Data Management tools do?

Test Data Management involves the synchronization of multiple data sources from production, versioning copies, sensitive data discovery, compliance masking data, and multicloud distribution of test data to support agile development and automated testing.

## Best Practices for Test Data Management:

A comprehensive approach should seek to improve test data management in the following areas:

* **Data delivery:**
* Reducing the time to deliver test data to a development team or test team.
* **Data quality:**
* Meeting requirements for high-fidelity test data.
* **Data security:**
* Minimizing security risks without compromising speed.
* **Infrastructure costs:**
* Lowering the costs of storing and archiving test data.

# TEST ENVIRONMENT MANAGEMENT

## What is a Test Environment?

A testing environment is a setup of software and hardware for the testing teams to execute test cases. In other words, it supports test execution with hardware, software and network configured.

Test bed or test environment is configured as per the need of the Application Under Test. On a few occasion, test bed could be the combination of the test environment and the test data it operates.

**Test Environment Setup: Key Areas**

For the test environment, a key area to set up includes

* System and applications
* Test data
* Database server
* Front-end running environment
* Client operating system
* Browser

**Test Environment Management**

Test Environment Management deals with the maintenance and upkeep of the test bed.

List of activities by the Test environment management function include,

1. Maintenance of a central repository with all the updated version of test environments.
2. Test environment management as per the test team demands.
3. As per the new requirements creating new environments
4. Monitoring of the environments
5. Updating/deleting outdated test-environments
6. Investigation of issues on the environment
7. Co-ordination till an issue resolution.

**Best practices for setting up a Test Environment Management**

1. Understand the test requirements thoroughly and educate the test team members.
2. Connectivity should be checked before the initiation of the testing
3. Check for the required hardware and software, licenses
4. Browsers and versions
5. Planning out the Scheduled use of the test environment.
6. Automation tools and their configurations.

**What is Test Bed in Software Testing?**

A **Test Bed in Software Testing** is a software development environment. It allows developers to test their modules without affecting the live production servers. Test bed is not only confined to developers but also used by testers. It is referred to as a test environment for rigorous and transparent testing of new technologies.