**What is Test Environment Management?**

Test Environment Management (TEM) helps companies to speed up their software releases with close daily collaboration between all team members, to capture environment demands, to establish a simple and transparent environment utilization, to organize effective cooperation through planning and scheduling resources and control their lifecycles. TEM helps to streamline delivery by providing a validated, stable and available environment to execute any test scenarios or replicate bugs.

**What are TEM functions?**

1. Complete transparency of test environments, including software version history, deployment details, availability of VMs or clusters, etc. A total understanding of your environment creates a path to optimize and innovate it.
2. Allocation of test environments across projects, teams, individual QA engineers and DevOps or exact tasks.
3. Tracking of resource usage, discovering a simple way to acquire and release resources, and organizing simultaneous shared access.
4. On-demand creation of new test environments, updating or deleting existing outdated test environments in order to sustain the actual amount of necessary resources.
5. Continuous improvement, innovation and automation to eliminate the amount of routine manual tasks and optimize infrastructure costs.
6. Standardized environment usage by simplifying daily tasks and operations.

What is Test Bed?

The test execution environment configured for testing. Test bed consists of specific hardware, software, Operating system, network configuration, the product under test, other system software and application software.

Test Bed Configuration:

1. It is the combination of hardware and software environment on which the tests will be executed. It includes hardware configuration, operating system settings, software configuration, test terminals and other support to perform the test.

## Difference between Test Environment & Test Bed:-

1. In the software testing field test environment and test bed, both words are very popular. We can see the difference between these words as mentioned below:-
2. **Test Environment:-** This is an environment where testers executes their tests. This environment is a collection of hardware and software. In other words test environment includes hardware elements and the software environment in which we perform the tests. Here hardware environment indicates processor speed, ram etc.
3. **Test Bed:-** Test bed is an execution or performance environment which is designed for the testing. This bed may contains operating system, configuration management for the products, hardware, network topology etc. Generally we described in details about the test bed when we prepare a test plan. In other words we can say that a software tester select the environment to run the test cases in the test bed.

### **What Is a Staging Environment?**

1. On the

other side, we often find a staging environment.

1. **A staging environment replicates the production environment that will host the live version of your application.** It’s crucial that your staging environment is an exact replica of your production environment. Often, this can be achieved by having very detailed documentation. It should describe all the needs and correct configuration for your production environment.
2. While a test environment is focused on testing individual components, the staging environment is focused on testing the whole application. Basically, the staging environment is a safe playground in which you can test the whole application.
3. This makes a staging environment ideal for running [end-to-end tests](https://www.testim.io/what-is-end-to-end-testing-a-helpful-introductory-guide/) or performance testing. End-to-end tests confirm that the whole application works as expected by testing all the integrations.
4. Besides that, since the staging environment replicates the production environment. It’s a safe area for testing the limits of your environment and application by using performance testing.

In short, in a staging environment, you test the whole application under the real conditions it would experience in a production environment.