Scalability

**Description:** The ability of the system to handle increases in load without an impact on the performance or to be readily enlarged.

Two methods for increasing scalability: vertical scaling (scale up) and horizontal scaling (scale out).

Scale up: You add more resources such as CPU, memory, disk, etc.

Scale out: You add more machines to the system/park that runs the application in order to share the load.

**Why?**

Most of the software on the market are designed in a way that it can function for a lot of years, without the need to release a completely new product. Even though technology evolves rapidly and exponentially nowadays, a program should handle additional changes, upgrades as well as increasing load – of handling data (number of data stored, number of users accessing the system at the same time, amount of information flow (amount of mails sent out).

**How?**

Using Scale up or Scale out.

**Execute Test:**

We can try to flood the system with increasing amount of data, information and see if the performance drops. We should have a preliminary investigation about how much data increase we can expect in the future and plan our scaling according to that. Of course we cannot plan for infinite amount of data flow