

Make a critical assessment of the as-is infrastructure regarding the NIST "five essential characteristics"! Focus on elasticity and availability!

Develop a strategy on operation of the infrastructure for the future! (Own server hosting, server colocation, hosting service provider)

2 As-is situation

The lead **enterprise architect** of the **Awesome Cloud AG** (your employer) gives you the following **as-is** application landscape for the **LowTech GmbH** with the technical details listed below.

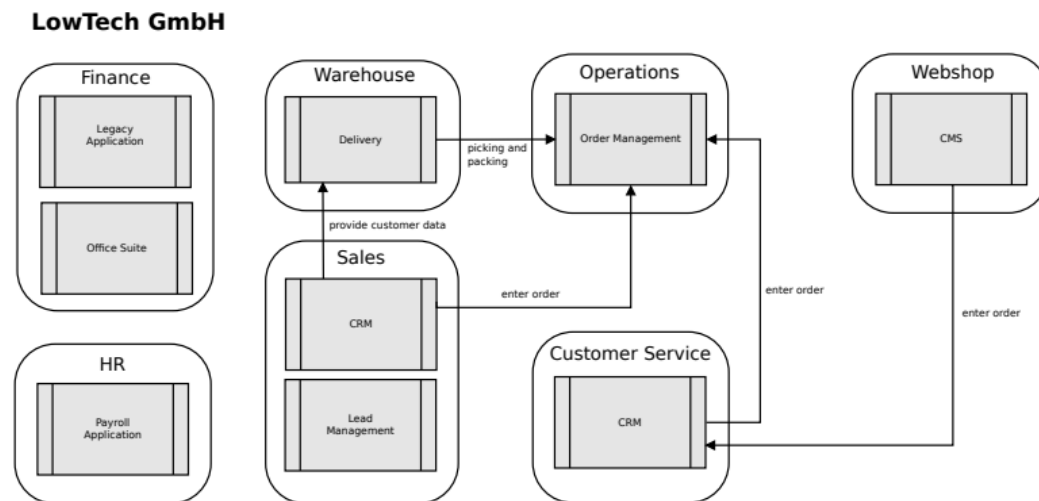


Figure 1: Application landscape of LowTech GmbH

As per NIST definition of elasticity and availability.

Rapid elasticity: Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear to be unlimited and can be appropriated in any quantity at any time. [1]

Broad network access: Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations). [1]

Critical Assessment of As-is infrastructure(Elasticity)

According to As-is infrastructure we have servers hosted on premise for 7 different departments with specific resources.

In order to meet the high demand, we need to add more servers which is not possible in the current scenario as we have a limitation of 19-inch rack.

Currently, there is no virtualization of servers which cannot meet the dynamic demand.

Critical Assessment of As-is infrastructure(Availability)

As there is no virtualization and each application hosted on an individual server, if any of the server goes down, there is no other way to provide the access to the application, which results in unavailability of business services and operations.

If server goes down at the peak time, it would have detrimental effect on the business operations.

Develop a strategy on operation of the infrastructure for the future! (Own server hosting, server colocation, hosting service provider).

Own server hosting

If we are going with this option, we need to consider the following points;

1. Identify those application which are crucial for the business operations.
2. Replace the current servers with modern servers with higher specifications and virtualization supported.
3. Implement the virtualization the servers in order to achieve elasticity and availability.
4. To implement servers on premise would require high skilled IT staff and a server room. It requires higher cost but gives the complete control and security of the server. [2]
- 5.

References

1. Mell, P. and Grance, T. (2011). The NIST Definition of Cloud Computing Recommendations of the National Institute of Standards and Technology. [online] NIST. Available at: <https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf>.
2. <https://medium.com/@zomiv/benefits-of-using-dedicated-server-hosting-for-your-business-20218ead1082>