**System design scalability** refers to the ability of a system to handle increasing workloads or requests without sacrificing performance or incurring excessive costs. [It involves two main approaches: **vertical scaling** (increasing capacity within an individual component) and **horizontal scaling** (adding more machines to distribute the workload)](https://bing.com/search?q=free+system+design+courses) [1](https://bing.com/search?q=free+system+design+courses).

Here are **five free resources** where you can learn more about system design and scalability:

1. **GeeksforGeeks**: Their article on [Horizontal and Vertical Scaling](https://www.geeksforgeeks.org/system-design-horizontal-and-vertical-scaling/) [provides insights into both scaling approaches and their characteristics](https://bing.com/search?q=free+system+design+courses) [1](https://bing.com/search?q=free+system+design+courses).
2. **Medium**: The post on [Designing Scalable Systems: A Technical Guide](https://medium.com/@gargg/designing-scalable-systems-a-technical-guide-c15f0c700c23) [offers practical knowledge and tips for building scalable architectures](https://bing.com/search?q=free+system+design+courses) [2](https://creation-closet-design-pte-ltd.business.site/).
3. **PrepBytes**: Their article on [System Design – Horizontal and Vertical Scaling](https://www.prepbytes.com/blog/system-design/system-design-horizontal-and-vertical-scaling/) [delves into the concepts of horizontal and vertical scaling in system design](https://bing.com/search?q=free+system+design+courses) [3](https://medium.com/javarevisited/hello-guys-if-you-are-preparing-for-system-design-interview-or-just-want-to-improve-your-software-7bc0034ac015).
4. **Coursesity**: Explore their list of [free tutorials for learning system design](https://coursesity.com/free-tutorials-learn/system-design) [from various online platforms](https://bing.com/search?q=free+system+design+courses) [4](https://coursesity.com/free-tutorials-learn/system-design).
5. **Coursera**: Check out their [System Design courses](https://www.coursera.org/courses?query=system%20design) [offered by top universities and industry leaders](https://bing.com/search?q=free+system+design+courses) [5](https://www.coursera.org/courses?query=system%20design).

Remember that understanding scalability is crucial for building robust systems that can adapt to changing demands. Happy learning! 🚀