

Docker and API's in Enterprise Computing

James Ash

Wentworth Institute of Technology

Author Note

First paragraph: Why is Docker considered a "disruptive technology"?

Second paragraph: What is an API and the importance of Enterprise Computing?

Third paragraph: What is the role of Docker in Mainframe implementation?

Fourth paragraph: Most important attribute in Docker.

Fifth paragraph: Conclusion.

## Docker and API's in Enterprise Computing

Docker is a powerful platform to help developers test and deploy in custom build container environments. Docker uses containers to isolate applications and their dependencies instead of relying on plain virtual machines and mainframes. Docker's approach provides logistical benefits including more efficient deploying, testing, and scaling. Docker is considered a "disruptive technology" because of how drastically it changes the way software is developed, deployed, and tested. Disruptive technology is not inherently a bad thing, it just disrupts the normal way of life. Docker is widely used in industries to streamline development and makes the environment in which the container is deployed stable across different host environments. (Docker, 2023). Docker is deployed widely in many industries related to enterprise computing around the entire world.

### **API's and their importance**

An API (Application Programming Interface) is an interface that allows different software programs to properly communicate with one another. API's are essential in Enterprise Computing because they enable client and server (mainframes) or even different applications entirely to communicate simply and securely between one another. API's usually bear a heavy load which requires the need for them to be scaled. Docker allows the developer to containerize and rapidly deploy new instances of their API. Allowing for fast, rapid, and easy deployments and scale, Docker improves the scalability and reliability of API's without disrupting legacy systems showing itself to be a very powerful tool. (IBM, 2023)

**Docker and Mainframes**

Mainframes have always been an important subject in enterprise computing structure. Mainframes are able to run Docker containers, this allows Mainframes to easily scale their application across multiple nodes. It also allows the developer to easily add more mainframes or nodes. Z Systems are ideal for their high reliability and performance and with the power of Docker are able to run software at a bigger scale more efficiently. (IBM, 2021). Docker's ability to be a versatile tool allows it to integrate smoothly in the current enterprise computing architecture while improving scalability and reliability.

**Docker features**

In my opinion, the most important feature of Docker is its portability and scalability. Docker containers can run on almost anything, from local machines to cloud services like AWS or Azure. This allows Docker containers to run on anything, anywhere, anytime. This also allows for Docker containers to be deployed fast and efficiently, allowing engineers to scale at a moment's notice. Docker's portability also allows engineers to quickly change providers if needed. This allows companies to not get locked in on a single vendor due to convenience. Docker is an integral tool in modern Software Development. (Red Hat, 2022).

**Conclusion**

All in all, Docker is a disruptive technology that has changed the software development process, especially in deployment and scalability. Its technique of using container technology has made itself an essential tool in the eyes of Engineers. Docker has streamlined workflows and deployment in development and production environments. Docker has also allowed for

automated deployment to virtually solve scaling issues in real-time. Docker continues to reshape the enterprise computing industry everyday leaving a massive impact on the industry.

## References

Docker, Inc. (2023). *What is Docker?* Docker.

<https://www.docker.com/what-docker>

IBM. (2023) *APIs in enterprise computing*. IBM Developer.

<https://www.ibm.com/it-infrastructure/mainframe>

Red Hat. (2022) *Docker in the enterprise*. Red Hat.

<https://www.redhat.com/en/topics/containers/what-is-docker>

Tech Radar. (2022). *What is an API and why it's important for developers?* Tech Radar.

<https://www.techradar.com/news/what-is-an-api>