Introduction to Docker

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Outline

Docker Definition

Docker is defined, by Microsoft [1] as:

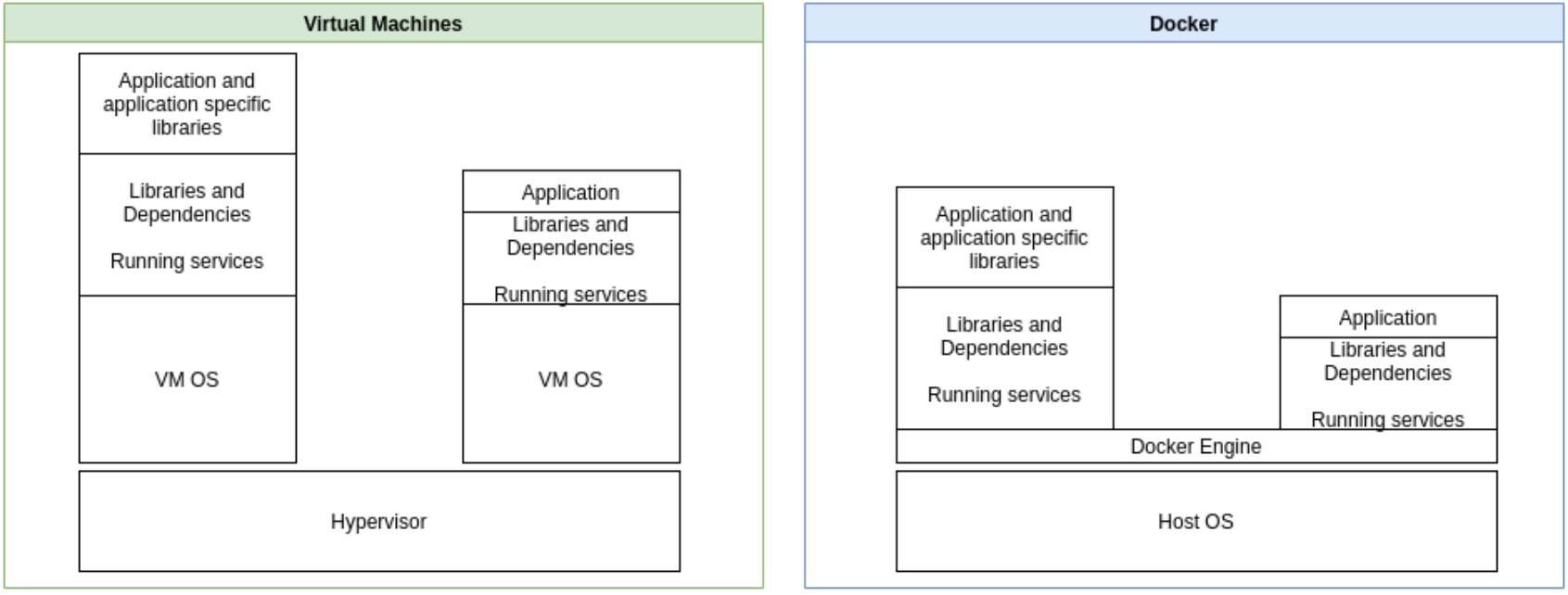
> *Docker is an open-source project for automating the deployment of applications as portable, self-sufficient containers that can run on the cloud or on-premises.*

Why use Docker?

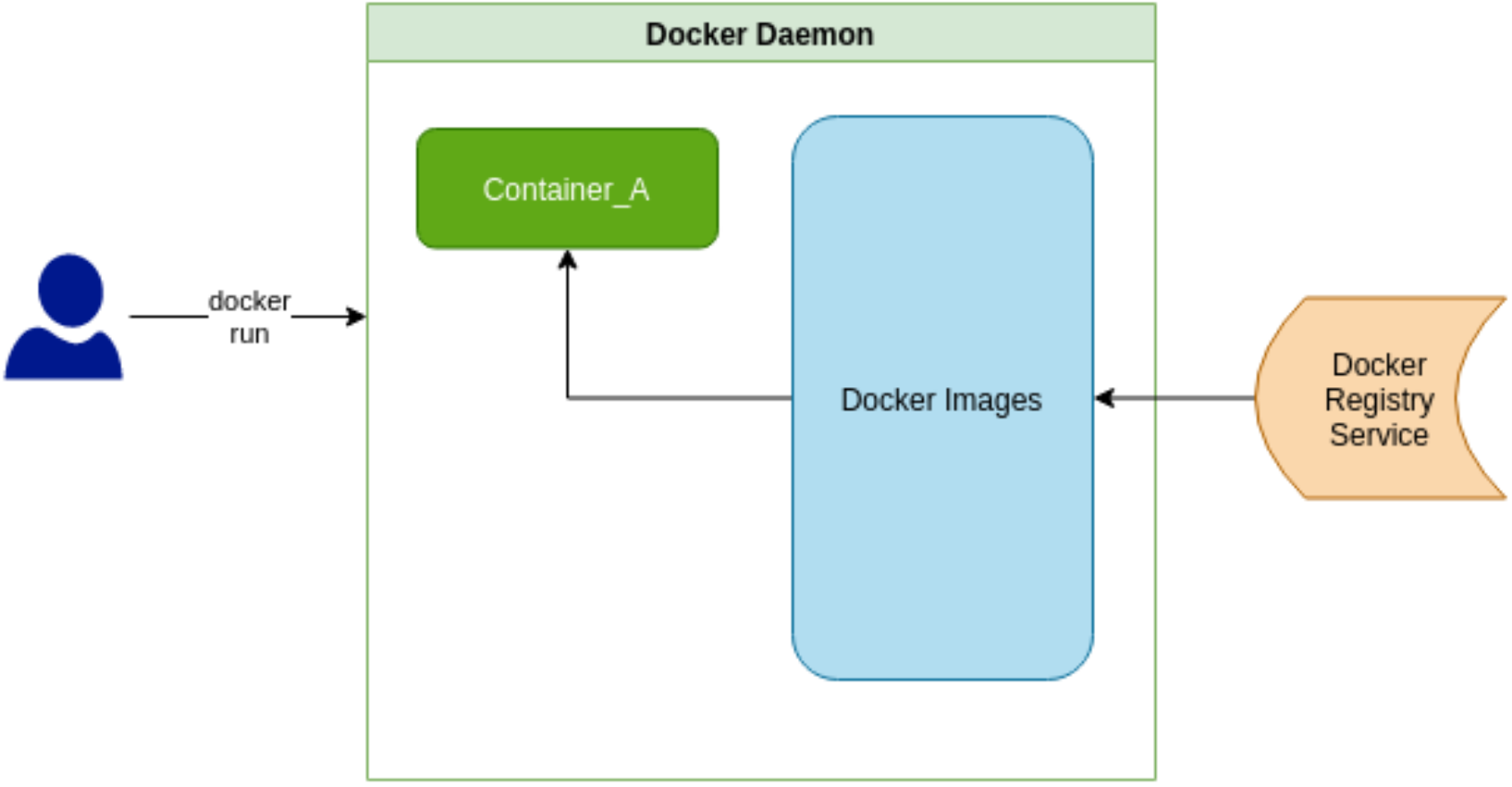
There are three main ways that Docker can benefit you, both at home, and in the enterprise:

- **Testing** - The ability to test software
- **Consisting Deployment** - Same "image" used in QA, Prod.
- **Simplified Development** - Less local dependencies, easier to spin up infrastructure.

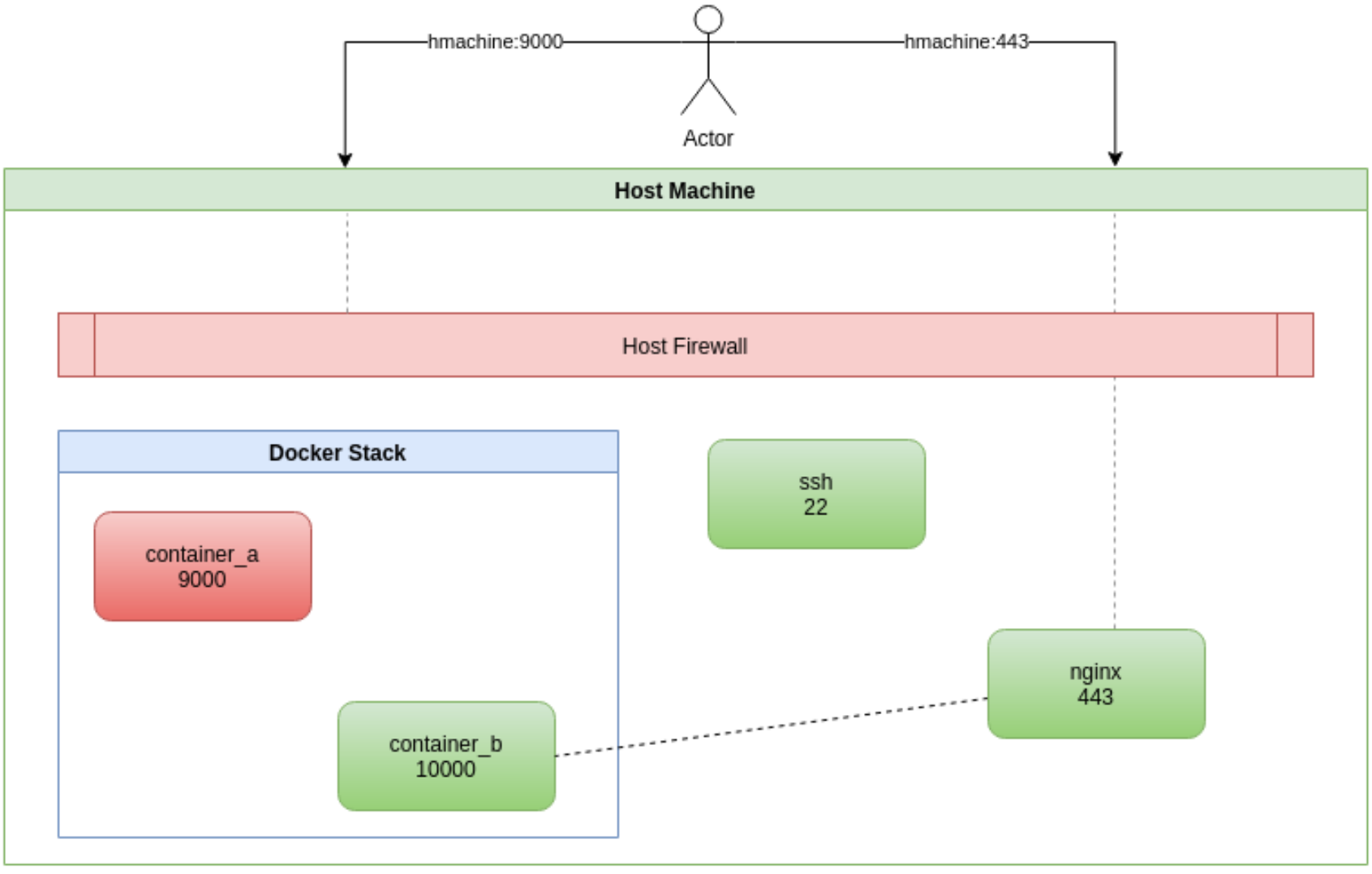
Docker Architecture



Docker Architecture



Docker Architecture



Docker Pull

Purpose: To pull an image from a repository. Default is hub.dockerhub.com

```
docker pull [image]
```

Docker Run

Purpose: Takes a currently existing image, or pulls a new image with name, and spawns a new container. Many options exist, such as exposing ports, linking to other containers, etc.

```
docker run [opts] [image]
```

Docker Kill

Purpose: Will stop execution of a currently running container.

```
docker kill [hash or name]
```

Docker Rm, and Rmi

Purpose: Will remove a container (rm) or image (rmi)

```
docker rm [container hash or name]
docker rmi [image name]
```

References

1 - https://docs.microsoft.com/en-us/dotnet/architecture/microservices/container-docker-introduction/docker-defined