

## **A SIMPLE WAY TO LEARN AS A DEVOPS ENGINEER BY READING (DOCKER #1)**

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**1. Before the arrival of Docker, companies outside there were facing multiple challenges related to application development, deployment, and management. Name two among the following which are not these challenges?**

- A- Meantime to failure recovery
- B- Speed of development
- C- Resource utilization
- D- Environment inconsistency
- E- Dependency management
- F- Incompatibility
- G- Percentage of failure delivery

Your answer: \_\_\_\_\_ and \_\_\_\_\_

**2. Before the arrival of Docker which one among the following was not used as a traditional method concerning application development, deployment, and management?**

- A- Manually configuration and setting up the underlying operating system
- B- Application dependencies set on the target servers
- C- Runtime environment
- D- Deployment frequency

Your answer: \_\_\_\_\_

**3. Which one is not one of the common methods used before the arrival of Docker to development, deployment, and management application or software?**

- A- Manual installation
- B- Configuration Management
- C- Windows 11.0
- D- Virtual Machines
- E- Containerization (LXC and OpenVZ)

Your answer: \_\_\_\_\_

**4. Which one of the following was not making it difficult to maintain consistency across different environments and versions of applications before the arrival of docker when using the tree methods cited in the question #3?**

- A- Complexity
- B- Error-prone
- C- Time – consuming
- D- MS - DOS

Your answer: \_\_\_\_\_

**5. Docker was launched in 2005 to better help development, deployment, and management applications or software. Which definition is not well representing docker?**

- A- Docker is a close-source platform
- B- Docker is an open-source containerization platform
- C- Docker is used for building, deploying, and running applications
- D- Docker wraps anything that can be installed on a server.

Your answer: \_\_\_\_\_

**6. The industry of development, deployment, and management of applications and software was still looking for the best ways to enable organizations to deliver software products and services faster and with higher quality when tools, technologies or set of practices was launched in 2007-2008. Nowadays, what is the name of the best representant of all these tools, technologies or set of practices in the IT industry?**

- A- Virtual Machine Monitor (VMM)
- B- Containerization
- C- Hypervisor
- D- DevOps

Your answer: \_\_\_\_\_

**7. Manual installation, configuration Management, virtual Machines, containerization (LXC and OpenVZ) were methods used to development, deployment, and management applications or software like DevOps does today. Which one among the following is not one of the goals of DevOps?**

- A- Foster a culture of collaboration between software development and IT operations teams
- B- Foster a culture of communication between software development and IT operations teams
- C- Continuous improvement between the software development and IT operations teams
- D- Foster a culture of collaboration and flexibility in a cross-functional teams.

Your answer: \_\_\_\_\_

**8. DevOps is a set of practices, a mindset and a culture that uses docker as containerization tool. What among the following is not a trustily definition of docker?**

- A- Docker packages your application and all its dependencies together in the form of containers to ensure that your application works seamlessly in any environment, such as development environment, test environment or production environment.
- B- Docker as a container which is placed on a ship and is waterproof technology.
- C- Docker containers, wrap a piece of software in a complete filesystem that contains everything needed to run code, runtime, system tools, system libraries and more.
- D- Docker wraps basically anything that can be installed on a server.
- E- Docker guarantees that the software will always run the same, regardless of its environment.

Your answer: \_\_\_\_\_

**9. To deliver software products and services faster and with higher quality, DevOps lifecycles has various phases. Which one among the following is not one of them?**

- A- Plan
- B- Code
- C- Build
- D- Test
- E- Integrate
- F- Deploy
- G- Delivery
- H- Operate
- I- Monitor

Your answer: \_\_\_\_\_

**10. Like the core benefits of docker, DevOps also have core benefits. Which one among the following represented the categories of the core benefits of devOps?**

- A- Social and Human benefits
- B- Professional and interpersonal benefits
- C- Technical and business benefits
- D- Cultural and diversity benefits

Your answer: \_\_\_\_\_

**11. Which one among the following is not one of the technical benefits of DevOps?**

- A- Less complex problems to manage
- B- Early detection and faster correction of defects
- C- Continuous software delivery
- D- Docker Hub

Your answer: \_\_\_\_\_

12. Which one among the following is not one of the business benefits of DevOps?

- A- Billions docker files
- B- Improved communication and collaboration between the teams
- C- Stable operating environments
- D- Faster delivery of features

Your answer: \_\_\_\_\_

13. **Before the arrival of Docker to development, deployment, and management application or software, IT industry were using containerization.**

- A- Yes
- B- No

Your answer: \_\_\_\_\_

14. **Before the arrival of Docker to development, deployment, and management application or software, IT industry were using Virtual machine.**

- A- Yes
- B- No

Your answer: \_\_\_\_\_

15. Which one among the following is not a virtual machine?

- A- Hypervisor Type 1
- B- Hypervisor Type 2
- C- Native Hypervisor
- D- Hardware

Your answer: \_\_\_\_\_

16. What is the correct representation of a hypervisor type 1?

- A- Hardware ---> OS (Open source) ---> Hypervisor ---> OS (Open source)
- B- Hardware ---> Hypervisor ---> OS (Open source) --> Hardware
- C- Hardware ---> Hypervisor ---> OS (Open source) --> Native Hypervisor
- D- Hardware ---> Hypervisor ---> OS (Open source)

Your answer: \_\_\_\_\_

**17. What is the correct representation of a hypervisor type 2?**

- A- Hardware ---> OS (Open source) ---> Hypervisor ---> OS (Open source)
- B- Hardware ---> Hypervisor ---> OS (Open source) --> Hardware
- C- Hardware ---> Hypervisor ---> OS (Open source) --> Docker engine
- D- Linux ---> OS (Open source) ---> Hypervisor ---> OS (Open source) --> Hardware

Your answer: \_\_\_\_\_

**18. Containerization is a type of virtualization.**

- A- Yes
- B- No

Your answer: \_\_\_\_\_

**19. Which one of the following doesn't fit with the definition of the containerization?**

- A- Containerization allows multiple isolated and lightweight containers to run on a single host operating system.
- B- Each container includes its own runtime environment and application dependencies, making it possible to run multiple applications or services on a single host with a high degree of resource efficiency and portability.
- C- Containers are lighter-weight and do not require a separate operating system for each container.
- D- Containerization technology is commonly used in modern application development, deployment, and scaling environments, such as cloud computing and megaservices architectures.

Your answer: \_\_\_\_\_

**20. Virtualization is the process of creating a virtual version of a physical resource, such as a server, storage device, network, or operating system.**

- A- Yes
- B- No

Your answer: \_\_\_\_\_

**21. In IT field, there are Key Performance Indicator (KPI) that is used to evaluate the performance of every tool, technologies or set of practices. For example: lead time (LT), which is the time it takes to go from code committed to code successfully running in production; mean Time to Recovery (MTTR): The average time it takes to recover from a service outage; change failure rate (CFR): The percentage of changes that result in a failure or an unintended consequence; defect density (DD) : The number of bugs or issues per unit of code.**

Following the list above of KPI, there is another three most important KPI listed below. Which KPI among the below listed is not among the tree most important KPI?

- A- Meantime to failure recovery (MFR) - This is the average time taken to recover from a failure.
- B- Deployment frequency (DF) - The frequency in which the deployment occurs.
- C- Frozen data in the swap partition (FDSP) – Data store in the swap partition.
- D- Percentage of failed deployments (PFD) - The number of times the deployment fails.

Your answer: \_\_\_\_\_

**22. Docker has revolutionized the way developers build, ship, and run software by providing a consistent and portable environment that simplifies the deployment process and reduces the risk of issues caused by dependencies, inconsistency, and environment variations.**

Which issues among the following is not one of the issues that docker has solved in the world of software development and deployment?

- A- Dependency management
- B- Portability
- C- Consistency
- D- Isolation
- E- Scalability
- F- Iterativity and incrementality

Your answer: \_\_\_\_\_

**23. Docker's benefits in terms of portability, consistency, dependency management, Isolation and scalability have made it a popular choice among companies of all sizes and across many industries. Which among the following is not one of the reasons of why docker is used by a lot of companies out there?**

- A- Resource utilization
- B- Support for modern development practices
- C- Microservices
- D- DevOps
- E- Costly

Your answer: \_\_\_\_\_

**24. Portability, consistency, efficiency, scalability, easy management, and rapid deployment are known as some pros of Docker.**

**The following sentence describe the most important pros of Docker.**

*Docker provides a level of isolation between different containers running on the same host, which can help to prevent \_\_\_\_\_ breaches. Each container has its own file system, network interface, and process space, which means that one container cannot interfere with another container's resources or settings.*

**What is that most important pros of Docker among the following?**

- A- Breakdown
- B- Bugs
- C- Security
- D- Leaking

Your answer: \_\_\_\_\_

**25. Which sentence among the following is not relate to the definition or function of docker client?**

- A- A Docker client is a command-line tool or a graphical user interface (GUI) that provides an interface to interact with the Docker daemon.
- B- The Docker client provides a way to manage and interact with Docker containers, images, networks, and volumes.
- C- The Docker client can be installed on any system that supports Docker.
- D- Docker client is a small computer used by one client at the time to run, start, stop, and remove containers.
- E- There are several popular Docker clients available, including the Docker CLI (command-line interface), Docker Compose, Docker Swarm, and third-party clients such as Kitematic and Portainer.

Your answer: \_\_\_\_\_

**26. The Docker host is the machine on which the Docker platform is installed, and where containers can be created and managed using the Docker daemon. The host provides the resources necessary to run the containers and can be managed using a variety of tools and platforms provided by Docker.**

**Which one among the following is not one of the functions of the Docker host?**

- A- A Docker host is a physical or virtual machine on which the Docker platform is installed and where Docker containers can be created and managed.

- B- Docker also provides several tools and platforms that can be used to manage Docker hosts and orchestrate container deployments, including Docker Swarm, Kubernetes, and Docker Enterprise Edition.
- C- The Docker host provides the resources necessary to run the containers, including CPU, memory, storage, and network bandwidth.
- D- Docker host can be only a physical server or only a virtual machine, and can run on any operating system that supports Docker, including Linux, Windows, and macOS.

Your answer: \_\_\_\_\_

27. Docker Hub is a key component of the Docker ecosystem and is widely used by developers and organizations to host and share Docker images. It provides a convenient and reliable way to store and distribute Docker images and has played a significant role in the growth and adoption of containerization technology.

**Which one among the following is not one of the functions of the Docker hub?**

- A- Docker Hub also provides a web-based interface for managing Docker images and repositories, as well as a REST API for programmatically managing images and repositories.
- B- Docker Hub offers only free subscription plans du its users.
- C- Docker Hub allows developers to host and share their Docker images with the community or with a specific team, making it easier to collaborate and share knowledge.
- D- Docker Hub is a cloud-based registry service provided by Docker that enables developers to store, share, and distribute Docker images. It provides a central repository for Docker images, which can be easily searched, pulled, and pushed by users.

Your answer: \_\_\_\_\_

**28. Docker image registry is a service that stores and distributes Docker images. It can be public or private and is used to share and manage Docker images within an organization or with the community. Docker provides a built-in image registry, and there are also third-party services available that offer additional features and functionality.**

**Which one among the following is not one of the functions of the Docker image?**

- A- Docker images can be pushed to and pulled from a Docker image registry using only the Linux command-line interface (CLI) or other tools that support the Docker Registry API.
- B- Private Docker image registries are used within organizations to store and manage Docker images that are specific to their needs.



- C- Public Docker image registries, such as Docker Hub and Docker Store, are available to everyone and are commonly used to share Docker images with the community.
- D- A Docker image registry is a service that stores and distributes Docker images.

Your answer: \_\_\_\_\_

**29. Public registries are open to the public and are commonly used to share open-source and community Docker images, while private registries are used within organizations to store and manage Docker images that are specific to their needs. Private registries provide greater control over access and permissions and can be used to enforce security policies and ensure that only trusted images are used in the development process.**

**What is the main difference between a public and private Docker registry?**

- A- The proximity between the docker host and the container.
- B- The level of the RAM in the server.
- C- The level of access control that the virtual machine provides.
- D- The level of access control and security the public and the private docker registry provide.

Your answer: \_\_\_\_\_

**30. Which definition among the following doesn't well represented docker- machine?**

- A- Docker Machine is a tool for creating and managing virtual machines that can be used to run Docker containers.
- B- Once a virtual machine is created, Docker Machine installs Docker on the machine and configures it to connect to the local Docker daemon or a remote Docker engine.
- C- Docker Machine, users can easily create new Docker hosts, connect to existing Docker hosts, and manage multiple hosts from a single command-line interface.
- D- Docker machine cannot be useful for testing and developing applications in different environments, as well as for deploying applications to different production environments.

Your answer: \_\_\_\_\_

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### ANSWERS

1	2	3	4	5	6	7	8	9	10
A and G	D	C	D	A	D	D	B	G	C

11	12	13	14	15	16	17	18	19	20
D	A	A	A	D	D	A	A	D	A

21	22	23	24	25	26	27	28	29	30
C	F	E	C	D	D	B	A	A	D