Docker Associate考试攻略

考试地点：居家（只能有一个显示器，必须保证有话筒、摄像头、网络访问，电脑必须有Zoom, 考官会以Zoom sharescreen的方式监考）

考试时长：1小时30分钟

考试类型：选择题和discrete option multiple choice (DOMC).注意DOMC题型不能修改答案

考试题数量：55题 （13 multiple choice and 42 discrete option multiple choice (DOMC)）

考试价格：CAD 291.22 or USD $195 or Euro €175

考试范围：

1.0 Orchestration

2.0 Image Creation, Management, and Registry

3.0 Installation and Configuration

4.0 Networking

5.0 Security

6.0 Storage and Volumes

注意：Kubernetes的题型很多，大概有25%左右。没有考到docker-compose. K8s的persistent volume考了3-4题

真题考点

1. The name of the docker daemon (Anser: In Linux, it is dockerd; In Windows, it is dockerd.exe)
2. To list the services created by a stack, run … (Answer: docker stack services <stackName>)
3. docker system events
4. Docker system prune
5. Docker container inspect
6. How does the -P option in the docker container run command know what ports to publish on the container? (Answer: It uses the ExposedPorts field set on the container or the EXPOSE instruction in the Dockerfile)
7. docker system info
8. Docker image tag
9. Which command should be used to get the total size consumed by all images on a host? (docker system df)
10. A government facility runs a secure data center with no internet connectivity. A new application requires access to docker images hosted on docker hub. What is the best approach to solve this? (Pull docker images from a host with access to docker hub, convert to a tarball using docker image save command, and copy to the restricted environment and extract the tarball)
11. Difference between ADD and COPY in Dockerfile
12. COPY instruction has some features like local-only tar extraction and remote URL support. (Answer: False, only ADD can copy file from URL)
13. Main linux feature used for container(Answer: cgroup and namespace)
14. What is a linux feature that prevents a process within the container to access raw sockets? (Answer: Kernel Capabilities)
15. How to set the maximum amount of memory the container can use? (Answer: docker run –memory=??? )
16. What option is used in the docker command to map UDP port 80 in the container to port 9595 on the Docker host? (Answer: -p 9595:80/udp)
17. Assume that you have 3 managers in your cluster, what will happen if 2 managers fail at the same time? Select the all right answers. (Answer: 1. The services hosted on the available worker nodes will continue to run. 2. New services/workers can’t be created or added.)
18. How many manager nodes must be online in a cluster with 7 manager nodes for the swarm cluster to continue to operate? (Answer: 4 -> (N/2) + 1 )
19. Which command can be used to increase the number of replicas from 2 to 4 of webapp? Select the all right answer. (Answer: docker service update --replicas=4 webapp or docker service scale webapp=4)
20. The webapp:v1 had some bugs and we fixed them in webapp:v2. We want to apply webapp:v2 to webapp service. Select the right answer. (Answer: docker service update --image=webapp:v2 webapp)
21. What is the command to apply <code>’disk=ssd'</code> label to <code>worker1</code> in a swarm cluster. (Answer: docker node update --label-add disk=ssd worker1)
22. The …. network connects multiple Docker daemons together and enables swarm services to communicate with each other. (Answer: overlay)
23. When you create an overlay network, only containers created as part of a swarm service can attach to it by default. (Answer: True)
24. The health check on the web service is configured to run at an interval of every 30 seconds. What would happen if the web server takes 45 seconds to boot up the first time? (Answer: The health checks only start after 2 minutes, so the web server has sufficient time to boot up)
25. The different to join a manager node and a worker node (Answer: they are both using `docker swarm join` but using different token)
26. DTR is able to reduce the bandwidth used when pulling Docker images by caching images closer to users. (Answer: True)
27. To install DTR, all nodes must \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_. (Answer: Be a worker node managed by UCP and have a fixed hostname)
28. In which of the following will image scanning look for known vulnerabilities (Answer: OS packages, Libraries, Other dependencies that are defined in a container image)
29. When the Pod readiness fails, will the service still route the traffic to the container?
30. K8s Readiness
31. kubectl get pods - -all-namespaces -l env=developement
32. How to reuse a retain status PV in k8s (Answer: Removing the spe.claimRef)
33. How to resize PV in K8s? (Answer: It requires enabling the PersistentVolumeClaimResize admission plug-in and storage classes whose allowVolumeExpansion field is set to true.Request a change in volume capacity by editing your PVC (spec.resources.requests.)
34. The … allows you to authorize a remote Docker engine to a specific user account managed in Docker EE, absorbing all associated RBAC controls in the process (Answer: Client bundle)
35. What is a Linux feature that prevents a process within the container from performing filesystem related operations such as altering attributes of certain files? (Answer: Kernel Capabilities)
36. An application deployed in a kubernetes cluster has 2 tiers - a web service that must be externally accessible by users on the nodes interfaces and a database service that must be accessible within the cluster only. What service types should be configured for each? (Answer: Web - NodePort, Database - ClusterIP)
37. Create a swarm service webapp with image httpd and expose port 8080 on host to port 80 in container. (Answer: docker service create --name=webapp -p 8080:80 httpd)
38. What is the status of a persistent volume when it is associated with a claim? (Answer: Bound)
39. After scanning an image, how does DTR trigger a unit test? (Answer: need to configure CICD webhook)
40. The communication between UCP server on the manager node and its associated agent services running on worker nodes are encrypted and properly authenticated using certificate-based client-server authentication by default. (Answer: True)

拓展题型

1. By default, all containers get the same share of CPU cycles. How to modify the shares? （Answer: docker container run --cpu-shares=512 nginx）
2. Which command can be used to list the tasks in a stack named <code>webapp</code>? (Answer: docker stack ps webapp)
3. When you create a swarm service and do not connect it to a user-defined overlay network, it connects to the …. network by default. (Answer: ingress)
4. What are the different access modes configurable on a persistent volume? (ReadonlyMany, ReadWriteOnce, ReadWriteMany)
5. What will happen if the container consumes more memory than its limit? (Answer: the container will be killed with an Out of Memory exception)
6. What is the command to deploy a service named webapp on a node which has a type=cpu-optimized label? (Answer: docker service create --constraint=node.labels.type==cpu-optimized webapp)
7. What is the type and the name of the network created for the DTR services to communicate with each other? (Answer: overlay/dtr-ol)
8. How does docker map a port on a container to a port on the host? (Answer: IPtables)