

Exam Instructions:

- 1) you will have 8 VMs in the exam
 - loadbalancer.domain3.example.com
 - registry.domain3.example.com
 - workbench.domain3.example.com (where we will do our work)
 - master0.domain3.example.com
 - master1.domain3.example.com
 - master2.domain3.example.com
 - worker0.domain3.example.com
 - worker1.domain3.example.com
 - 2) 3 Hours Exam
 - 3) Cluster is already configured and all required packages are installed. In case you need any package, you can install with preconfigured repositories.
 - 4) Docs are available in html and pdf format
 - 5) Cluster Web Console and API url will be given in the exam:
 - https://console.domain3.example.com:6443
 - https://api.domain3.example.com:6443
 - 6) kubeadmin user password is stored in /root/kubeadmin-passwd on workbench VM
 - 7) once common password will be given in the exam, we can use same password to access workbench VM as root
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Q1) Manage Identity Providers: (secret name and identity provider name will be given in the exam)

- Create user bob with password indionce
- Create user qwerty with password catalog
- Create user john with password john123
- Create user natasha with password natasha123
- Create user harry with password harry123
- Create user susan with password susuan123
- Identity provider name should be users

Q2) Manage Cluster Project and Permissions:

- Create project with named apollo,test,demo
- bob user should have cluster administrator rights
- john user can create new projects
- qwerty user can not create projects
- natasha user can only view the resources of apollo and test project
- kubeadmin user should not exist (remove kubeadmin user)

Q3) Managing Groups:

- Create a groups with named site-users and guest-users
- add qwerty user in guest-users group
- add harry and susan users in site-users
- Give edit permission to sites-users groups on test project
- Give view permission to guest-users groups on demo project

Q4) Create resource quota for project rocky:

- pods = 3
- cpu = 2
- services = 6
- memory = 1Gi
- secrets = 6

Q5) Create LimitRange for project rocky:

- Set the pod memory limit between 5Mi and 300Mi
- Set the container memory limit between 5Mi and 300Mi
- Set the pod cpu limit between 5m and 300m
- Set the container cpu limit between 5m and 300m
- Set the container default limit for memory and cpu to 100Mi and 100m

respectively

Q6) Scale Application Manually:

- scale the single-pod replicas to 6 under the project world and make sure all pods should run successfully.

- Q7) Autoscale of Pods in scaling project:
- minimum replicas=2, maximum replicas=9 and cpu percentage=60%
 - Default request for container memory should 100Mi and cpu 50m
- Q8) Create secret with named ex280-secure in secure project
- The key name should be myuser
 - The value of key should be asdf234234=
- Q9) Use Secret in secure project
- There is one pod already exists.
 - it should use ex280-secure secret
 - Application Should Produce Output.
- Q10) Create Secure Route in quart project
- One application is already running named with hello based on http
 - It should run on https with self-signed certificate.
 - It should use '/CN=quart.apps.domain3.example.com'
 - It should run on https with following url:
https://quart.apps.domain3.example.com
 - Application should produce output.
- Q11) Create Service Account(user) in project1:
- Service Account (user) Should be project1-sa
 - Service Account should be associated with anyuid SCC
- Q12) Deploy application in the project project1:
- There is one pod already running and,
 - Application should produce output
- Q13) Deploy application in the project project2:
- There is one pod already running and,
 - Application should produce output
- Q14) Deploy application in the project project3:
- There is one pod already running and,
 - Application should produce output
- Q15) Deploy application in the project project4:
- There is one pod already running and,
 - Application should produce output

(FOR OUR KNOWLEDGE: In every "deploy application" question there is one application is already deployed with one pod which is having some issues we will have to fix it)
