Creating a local yum under a container using RHEL8 base system dvd using docker bind mount volume

Note: we can not copy all the contents of the dvd into a docker container, since it does not hold that much of space, here we create volume under container pointing to mount point of RHEL8 dvd.

Docker volume creation
[root@localhost ~]# docker volume create **dvd**

[root@localhost ~]# docker volume ls
DRIVER   VOLUME NAME
local   dvd

Docker image
[root@localhost ~]# docker image ls
centos   latest   470671670cac   3 months ago   237MB

[root@localhost ~]# **df -h**
Filesystem   Size Used Avail Use% Mounted on
/dev/sr0   6.7G 6.7G   0 100% **/run/media/root/RHEL-8-0-0-BaseOS-x86_64**

Create a container named mytmt with volume name as /run/media/root/RHEL-8-0-0-BaseOS-x86_64 and mount to dvd folder

[root@localhost ~]# docker run -it --name mytmt -v /run/media/root/RHEL-8-0-0-BaseOS-x86_64:/dvd centos:latest

Note: image **centos:latest** is **CentOS 8**

[root@1967c1fe70c9 /]# cd /etc/yum.repos.d/
[root@1967c1fe70c9 yum.repos.d]# ls
CentOS-AppStream.repo CentOS-Debuginfo.repo CentOS-Media.repo   CentOS-Vault.repo
CentOS-Base.repo   CentOS-Extras.repo   CentOS-PowerTools.repo CentOS-centosplus.repo
CentOS-CR.repo   CentOS-HA.repo   CentOS-Sources.repo   CentOS-fasttrack.repo

Remove all existing files under /etc/yum.repos.d folder
[root@1967c1fe70c9 yum.repos.d]# rm -rf *.repo
[root@1967c1fe70c9 yum.repos.d]# ls

Create yum repository file local.repo here
[root@1967c1fe70c9 yum.repos.d]# vi local.repo
[dvd]
baseurl=file:///dvd/AppStream
gpgcheck=0

[dvd1]
baseurl=file:///dvd/BaseOS
gpgcheck=0

:wq

[root@1967c1fe70c9 yum.repos.d]# **yum repolist**
Failed to set locale, defaulting to C.UTF-8
Repository 'dvd' is missing name in configuration, using id.
Repository 'dvd1' is missing name in configuration, using id.
dvd   20 MB/s | 5.3 MB   00:00
dvd1   11 MB/s | 2.2 MB   00:00
Last metadata expiration check: 0:00:01 ago on Thu Apr 9 20:43:40 2020.
repo id   repo name   status
dvd   **4672**
dvd1   **1658**

yum repository is successfully created under docker container mytmt

Install net-tools package for command ifconfig
[root@1967c1fe70c9 yum.repos.d]# yum install **net-tools**
Failed to set locale, defaulting to C.UTF-8
Repository 'dvd' is missing name in configuration, using id.
Repository 'dvd1' is missing name in configuration, using id.
Last metadata expiration check: 0:01:10 ago on Thu Apr 9 20:43:40 2020.
Dependencies resolved.
==
==
 Package   Architecture   Version   Repository   Size
==
==
Installing:
 net-tools   x86_64   2.0-0.51.20160912git.el8   dvd1   323 k

Transaction Summary
==
==
Install 1 Package

Total size: 323 k
Installed size: 1.0 M
Is this ok [y/N]: y
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
 Preparing   :   1/1
 Installing   : net-tools-2.0-0.51.20160912git.el8.x86_64   1/1
 Running scriptlet: net-tools-2.0-0.51.20160912git.el8.x86_64   1/1
 Verifying   : net-tools-2.0-0.51.20160912git.el8.x86_64   1/1

Installed:
 net-tools-2.0-0.51.20160912git.el8.x86_64

Complete!

[root@1967c1fe70c9 yum.repos.d]# **ifconfig**
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
        inet 172.17.0.4 netmask 255.255.0.0 broadcast 172.17.255.255
        ether 02:42:ac:11:00:04 txqueuelen 0 (Ethernet)
        RX packets 13 bytes 2036 (1.9 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
        inet 127.0.0.1 netmask 255.0.0.0
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

Create one more container named mytmt1 and link to container mytmt

[root@localhost ~]# docker run -it --name mytmt1 --link mytmt centos:latest

Check the /etc/hosts file for link entry of container mytmt
[root@9303c4310b81 /]# cat /etc/hosts
127.0.0.1   localhost
::1   localhost ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
172.17.0.2   mytmt 1967c1fe70c9
172.17.0.3   9303c4310b81

ping to container with name mytmt
[root@9303c4310b81 /]# ping mytmt
PING mytmt (172.17.0.2) 56(84) bytes of data.
64 bytes from mytmt (172.17.0.2): icmp_seq=1 ttl=64 time=0.178 ms
64 bytes from mytmt (172.17.0.2): icmp_seq=2 ttl=64 time=0.203 ms

Pinging successfully with container name