

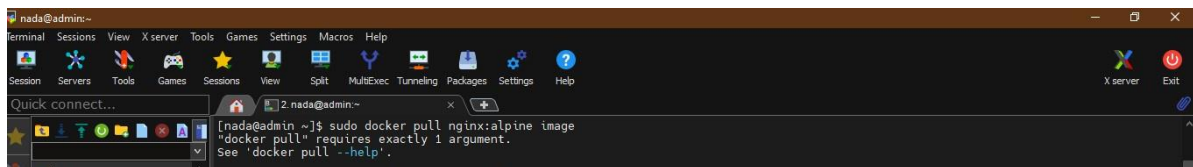
# Task1

1-Github account ....done

2- download docker ...done

3- pull nginx: alpine image

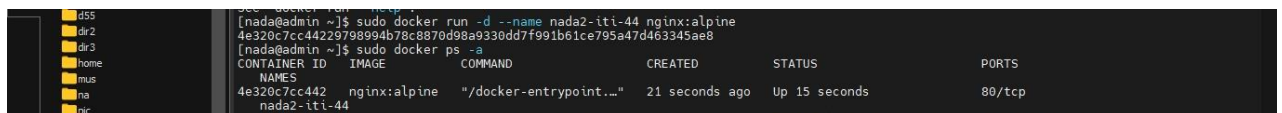
`sudo docker pull nginx: alpine`



```
nada@admin:~$ sudo docker pull nginx: alpine
"docker pull" requires exactly 1 argument.
See "docker pull --help".
```

4- explore the 'docker run' command and run nginx: alpine image on vm in background and specify name 'nada2-iti-no'

`sudo docker run -d --name nada2-iti-44 nginx: alpine`

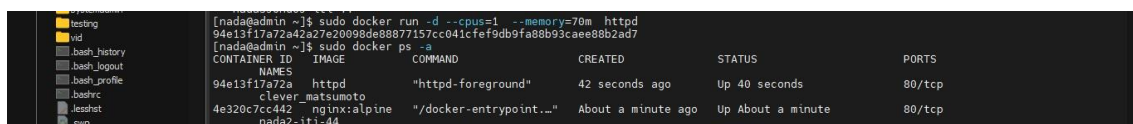


```
[nada@admin ~]$ sudo docker run -d --name nada2-iti-44 nginx:alpine
4e320c7cc44229798994b78c8870d98a9330dd7f991b61ce795a47d463345ae8
[nada@admin ~]$ sudo docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
4e320c7cc442   nginx:alpine   "/docker-entrypoint..." 21 seconds ago Up 15 seconds 80/tcp
nada2-iti-44
```

5-run apache container with apache image with memory limit 70 MB and 1 core

`docker run -d --cpus=1 --memory=70m httpd`

`docker ps`



```
[nada@admin ~]$ sudo docker run -d --cpus=1 --memory=70m httpd
94e13f17a72a4227e20090de88077157cc041cfe9db9fa8b93cae80b2ad7
[nada@admin ~]$ sudo docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
NAMES
94e13f17a72a   httpd          "httpd-foreground"      42 seconds ago Up 40 seconds 80/tcp
clover_matsumoto
4e320c7cc442   nginx:alpine   "/docker-entrypoint..." About a minute ago Up About a minute 80/tcp
nada2-iti-44
```

## sudo docker stats

CONTAINER ID	NAME	CPU %	MEM USAGE / LIMIT	MEM %	NET I/O	BLOCK I/O	PIDS
94e13f17a72a	clever_matsumoto	0.01%	13.2MiB / 70MiB	18.86%	1.08kB / 0B	12.6MB / 4.1kB	82
4e320c7cc442	nada2-iti-44	0.00%	3.422MiB / 1.737GiB	0.19%	1.53kB / 0B	14.3MB / 25.6kB	2

5-after creating containers make sure to get the path of the cgroups created for this container and memory.limit\_in\_bytes of apache container

- `sudo docker ps --no-trunc`

CONTAINER ID	STATUS	PORTS	NAMES	IMAGE	COMMAND	CREATE
94e13f17a72a	Up 6 minutes	80/tcp	clever_matsumoto	httpd	"httpd-foreground"	6 min
4e320c7cc442	Up 7 minutes	80/tcp	nada2-iti-44	nginx:alpine	"/docker-entrypoint.sh nginx -g 'daemon off;'"	7 min

- `Ls /sys/fs/cgroup/system.slice/docker2559ffffb`

`e8cf8e91ce39447219d56b21245d2c53bc367ebf68a9a0170546d46.scope/`

cgroup.controllers	cgroup.type	cpu.stat	io.bfq.weight	memory.max	memory.swap.max
cgroup.events	cpu.idle	cpu.weight	io.latency	memory.min	memory.zswap.current
cgroup.freeze	cpu.max	cpu.weight.nice	io.max	memory.numa_stat	memory.zswap.max
cgroup.kill	cpu.max.burst	hugetlb.2MB.current	io.pressure	memory.oom_group	misc.current
cgroup.max.depth	cpu.pressure	hugetlb.2MB.events	io.stat	memory.pressure	misc.max
cgroup.max.descendants	cpuset.cpus	hugetlb.2MB.events.local	memory.current	memory.reclaim	pids.current
cgroup.procs	cpuset.cpus.effective	hugetlb.2MB.max	memory.events	memory.stat	pids.events
cgroup.stat	cpuset.cpus.partition	hugetlb.2MB.numa_stat	memory.events.local	memory.swap.current	pids.max
cgroup.subtree_control	cpuset.mems	hugetlb.2MB.rsvd.current	memory.high	memory.swap.events	rdma.current
cgroup.threads	cpuset.mems.effective	hugetlb.2MB.rsvd.max	memory.low	memory.swap.high	rdma.max

- `cat /sys/fs/cgroup/system.slice/docker2559ffffbe8cf8e91ce39447219d56b21245d2c53bc367ebf68a9a0170546d46.scope/memory.max`

<	>	[root@khaled ~]# cat /sys/fs/cgroup/system.slice/docker-2559ffffbe8cf8e91ce39447219d56b21245d2c53bc367ebf68a9a0170546d46.scope/memory.max
		73400320