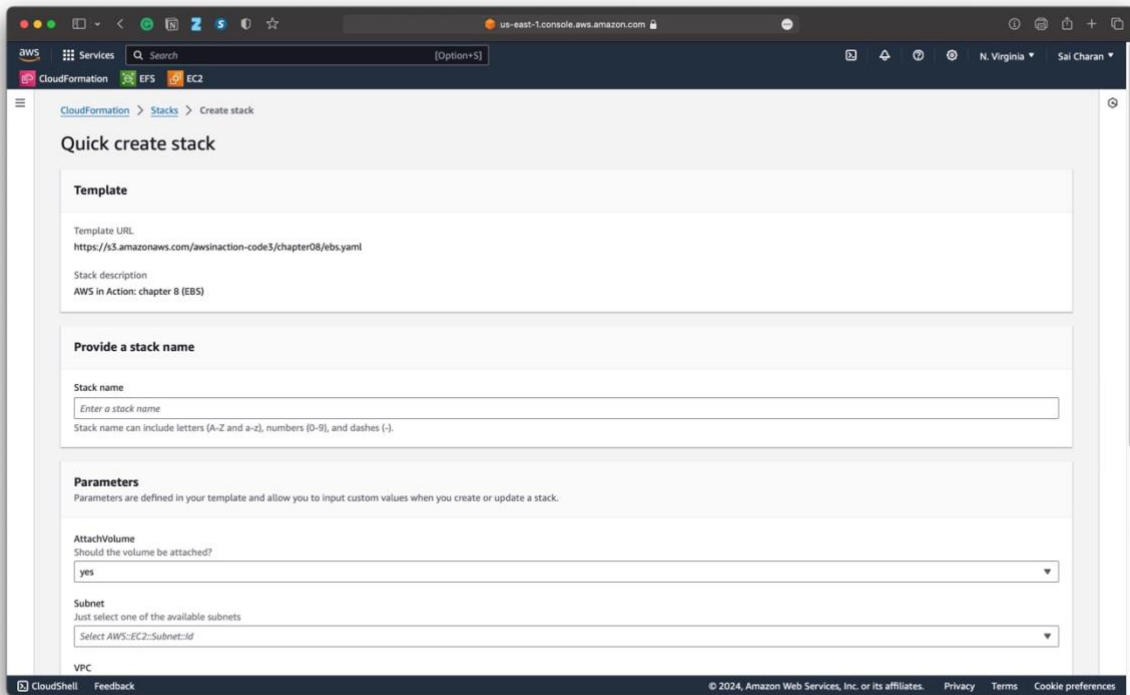


## Creating the template:



us-east-1.console.aws.amazon.com

CloudFormation > Stacks > Create stack

### Quick create stack

**Template**

Template URL  
https://s3.amazonaws.com/awstutorial-code3/chapter08/efs.yaml

Stack description  
AWS in Action: chapter 8 (EBS)

**Provide a stack name**

Stack name  
Enter a stack name

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

**Parameters**

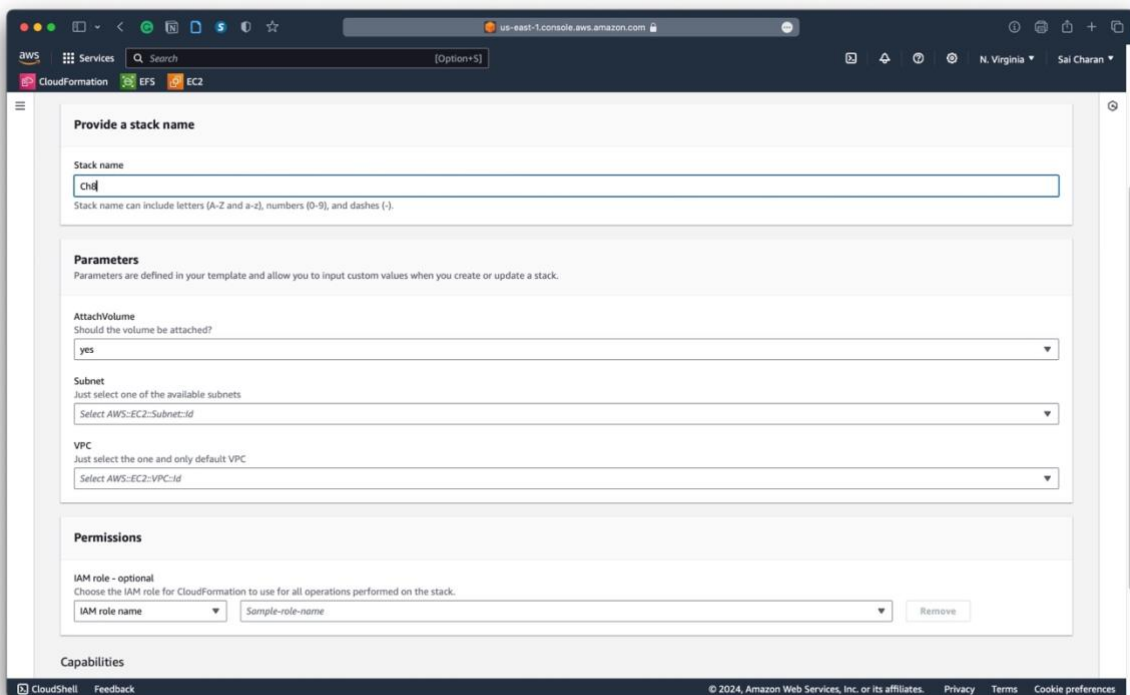
Parameters are defined in your template and allow you to input custom values when you create or update a stack.

**AttachVolume**  
Should the volume be attached?  
yes

**Subnet**  
Just select one of the available subnets  
Select AWS::EC2::Subnet::id

**VPC**  
Just select the one and only default VPC  
Select AWS::EC2::VPC::id

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us-east-1.console.aws.amazon.com

CloudFormation > Stacks > Create stack

### Provide a stack name

Stack name  
Ch8

Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-).

**Parameters**

Parameters are defined in your template and allow you to input custom values when you create or update a stack.

**AttachVolume**  
Should the volume be attached?  
yes

**Subnet**  
Just select one of the available subnets  
Select AWS::EC2::Subnet::id

**VPC**  
Just select the one and only default VPC  
Select AWS::EC2::VPC::id

**Permissions**

**IAM role - optional**  
Choose the IAM role for CloudFormation to use for all operations performed on the stack.

IAM role name Sample-role-name Remove

**Capabilities**

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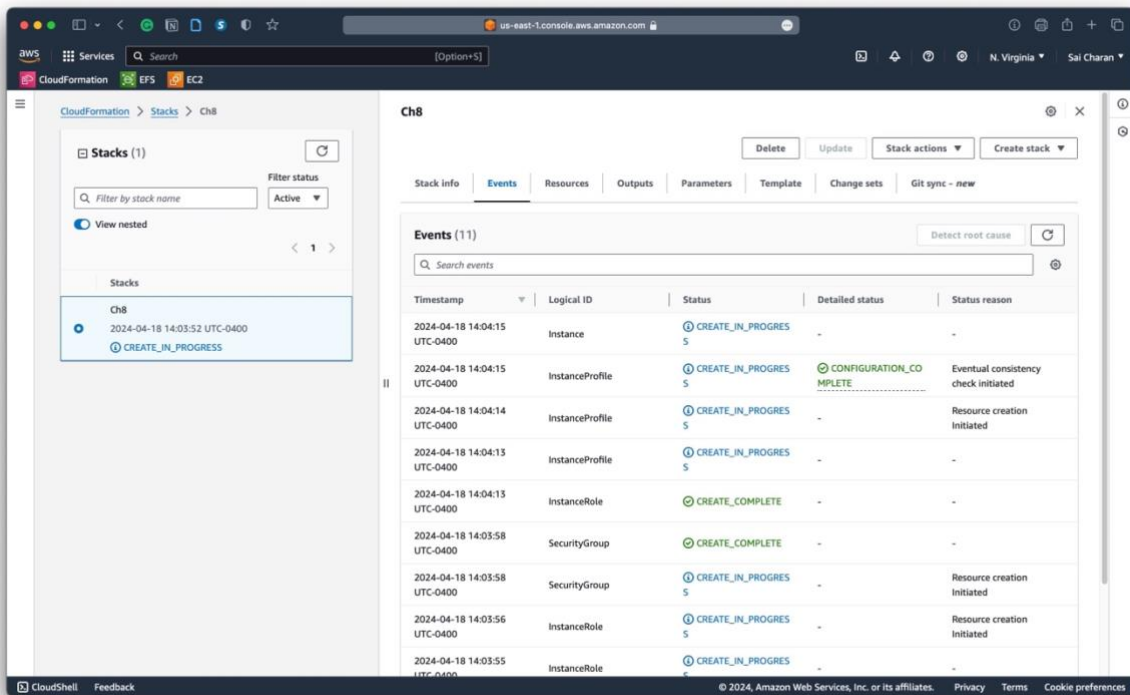
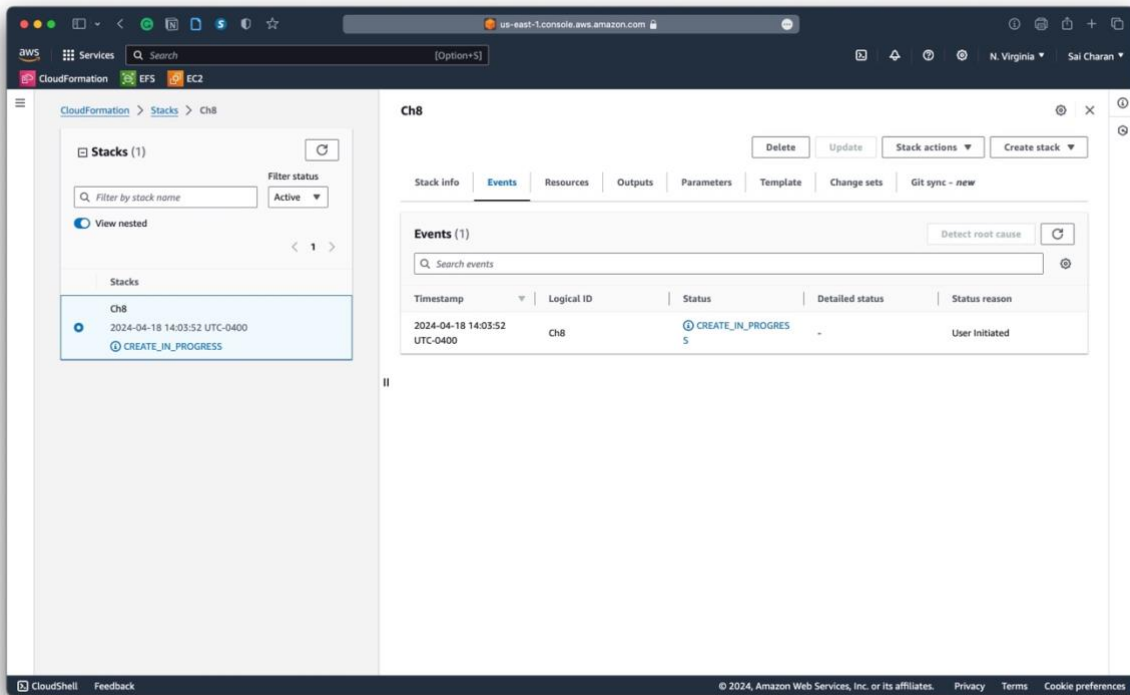
## Selecting VPC & Subnet:

The screenshot shows the AWS CloudFormation console interface. The 'Provide a stack name' section has a text input field with 'Ch8' and a note: 'Stack name can include letters (A-Z and a-z), numbers (0-9), and dashes (-)'. The 'Parameters' section contains three dropdown menus: 'AttachVolume' (set to 'yes'), 'Subnet' (set to 'subnet-053210744a34bbef6'), and 'VPC' (set to 'vpc-02f241005278ce1e1'). The 'Permissions' section has an 'IAM role - optional' dropdown set to 'Sample-role-name' with a 'Remove' button. The 'Capabilities' section is partially visible at the bottom.

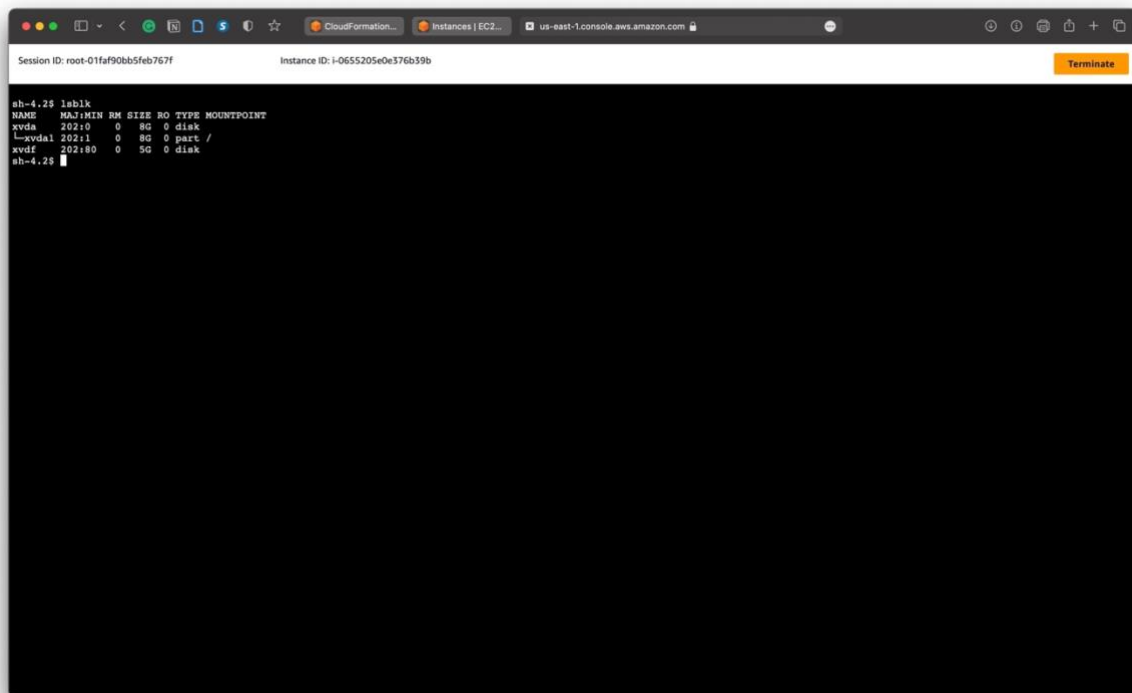
IAM role can select automatically: this step is optional

This screenshot shows the same AWS CloudFormation console interface but with the 'Capabilities' section expanded. It displays a warning message: 'The following resource(s) require capabilities: [AWS::IAM::Role]'. Below this, it states: 'This template contains Identity and Access Management (IAM) resources that might provide entities access to make changes to your AWS account. Check that you want to create each of these resources and that they have the minimum required permissions. [Learn more](#)'. A checkbox labeled 'I acknowledge that AWS CloudFormation might create IAM resources.' is checked. At the bottom right, there are three buttons: 'Cancel', 'Create change set', and 'Create stack'.

## Creating the Stack:



Starting the instance and checking it:



The screenshot shows a terminal window within the AWS Management Console. The terminal is connected to an Amazon EC2 instance. The session ID is root-01fa90bb5feb767f and the instance ID is i-0655205e0e376b39b. The terminal displays the output of the 'lsblk' command, which lists the disk layout. The output is as follows:

```
sh-4.2$ lsblk
NAME        MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda        202:0    0  8G  0 disk 
└─xvda1     202:1    0  8G  0 part /
xvdf        202:80   0  5G  0 disk
```

The terminal window has a dark background and a light-colored text. The AWS Management Console interface is visible in the background, including the 'Instances | EC2' tab and a 'Terminate' button in the top right corner.

```
Session ID: root-01faf90bb5feb767f Instance ID: i-0655205e0e376b39b Terminate

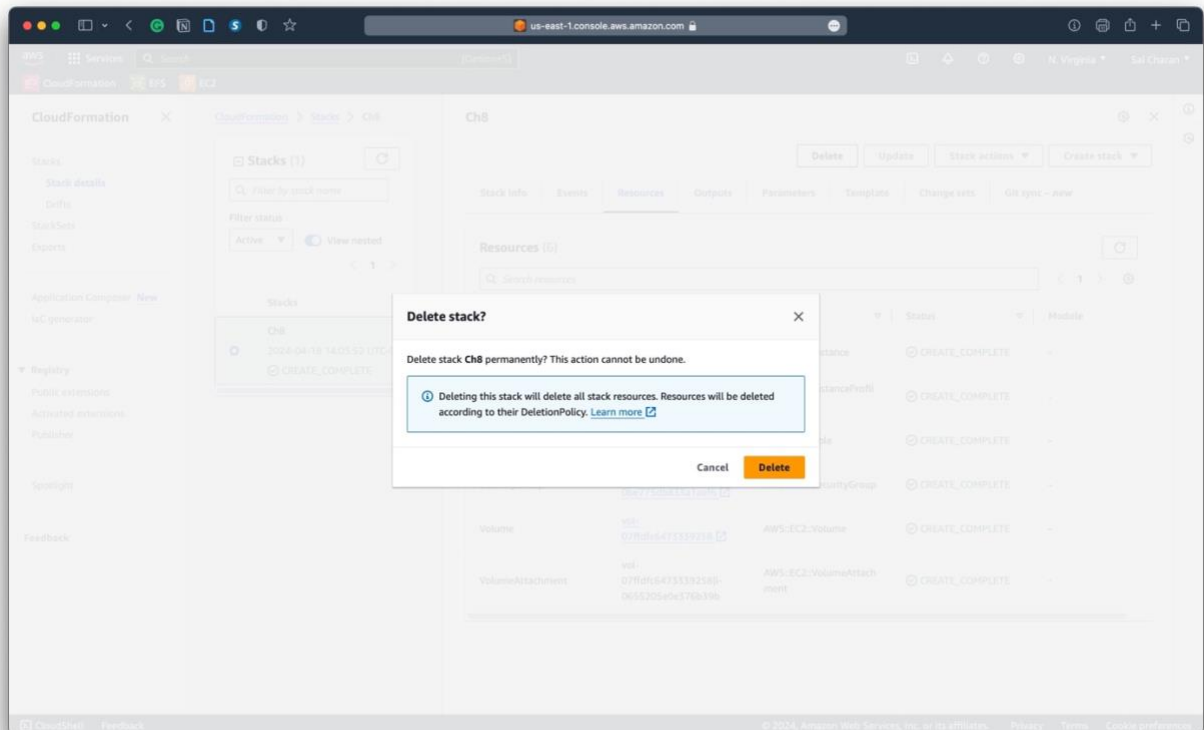
xvdf 202:80 0 5G 0 disk
sh-4.2$ ls /data/testfile
ls: cannot access /data/testfile: No such file or directory
sh-4.2$ ls
[
a2p      easy_install-3.7  kbd_mode      nl-route-get    rpogen         systemd-escape
ac       ec2-metadata      kernel-install nl-route-list   rpm            systemd-firstboot
acpi_listen  ed               keyctl         nl-totree-list  rpm2cpio      systemd-hwdb
addr2line  egrep           kill           nl-util-addr    rpmkeys       systemd-inhibit
alias      eject           killall        nm              rpmquery      systemd-machine-id-setup
amazon-linux-extras  elfedit        kmodes        nohup           rpmverify     systemd-notify
amazon-ssm-agent  enable-ec2-spot-hibernation  last          nroff          rat2html      systemd-nspawn
apropos    env             lastcomm      nslookup        rat2html-3    systemd-path
ar         eqn             lastlog       nas-policy-check rat2html-3.7  systemd-run
arch       ex              lchfn         naupdate        rat2html4-3   systemd-stdio-bridge
as         expand          lchfn         numfmt          rat2html4-3.7 systemd-sysv-convert
atq        factor         ldd           objcopy         rat2html5-3   systemd-tmpfiles
atrm       falllocate     ld            objdump         rat2html5-3.7 systemd-tyt-ask-password-agent
attr       false         ld64          od              rat2latex-3   tabs
autilast  fc             less          oldfind         rat2latex-3.7 tail
austlog    fg             lessascho    on_ac_power     rat2man       tapestat
ausyscall  fgconsole      lesspipe.sh   open            rat2man-3     tar
autilr     fgrep          lessproc     openssl         rat2man-3.7  taskset
aws        file           lexgrog       openvt          rat2odt       tbl
aws_completer  find          link          perl            rat2odt-3.7  tcpd
base64     find           linux32       pl1-kit         rat2odt_prepstyles  teadm
basename   findperl       linux64       package-cleanup rat2odt_prepstyles-3  teandotl
bash       find-repos-of-install  ln            passwd         rat2odt_prepstyles-3.7 teamcl
bashbug    fipscheck      loadkeys      perl           rat2pseudoxml  tee
bashbug-64 fipscheck      loadunimap    perl           rat2pseudoxml-3  test
batch      fipsmac        locale        peekfd         rat2pseudoxml-3.7 tic
bc         flock          local         perl5.16.3     rat25         time
bg         fold           localedef     perlbug        rat25-3.7     timeout
bikemon    free          localdoc      perldoc        rat2xetex     tload
bikparese  funzip        loopar        perltalks      rat2xetex-3   toe
bikrawverif  gapplication  login         pgawk          rat2xetex-3.7 top
bktrace    gawk          lognctl       pgrep          rat2xml       touch
bno_plot.py gdbm_dump     logname       picov          rat2xml-3.7   tput
bondteam   gdbm_load     look          pidstat        rat2xml-3.7  tr
bootctl    gdbmtool      ls            pidstat        rat2p2html    tracepath
btrace     gdbus         lattr        pinentry       rat2p2html-3  tracepath6
btreccord  gencat        labk          pinentry-curses rat2p2html-3.7 traceroute
bt         genl-ctrl-list  lscpu        ping           rsyslog-recover-qi-pl  traceroute6
btt        geolookup     lscpu        ping6          rsyslog-recover-qi-pl  troff
bunzip2    geolookup     lsinitrd     pinkey         runcom        true
busctl     geolookup     lslocks      pip3           run-parts     truncate
bxcat      geoupdate     lslogins     pip3           rvi            trust
bxcmp      getconf       lsmod        pip3.7         rview         test
bxdiff     getent        lsm          pip3.7         rvim          test
bxdiff     getent        lsm          pip3.7         rvim          test
bxdiff     getent        lsm          pip3.7         rvim          test
```

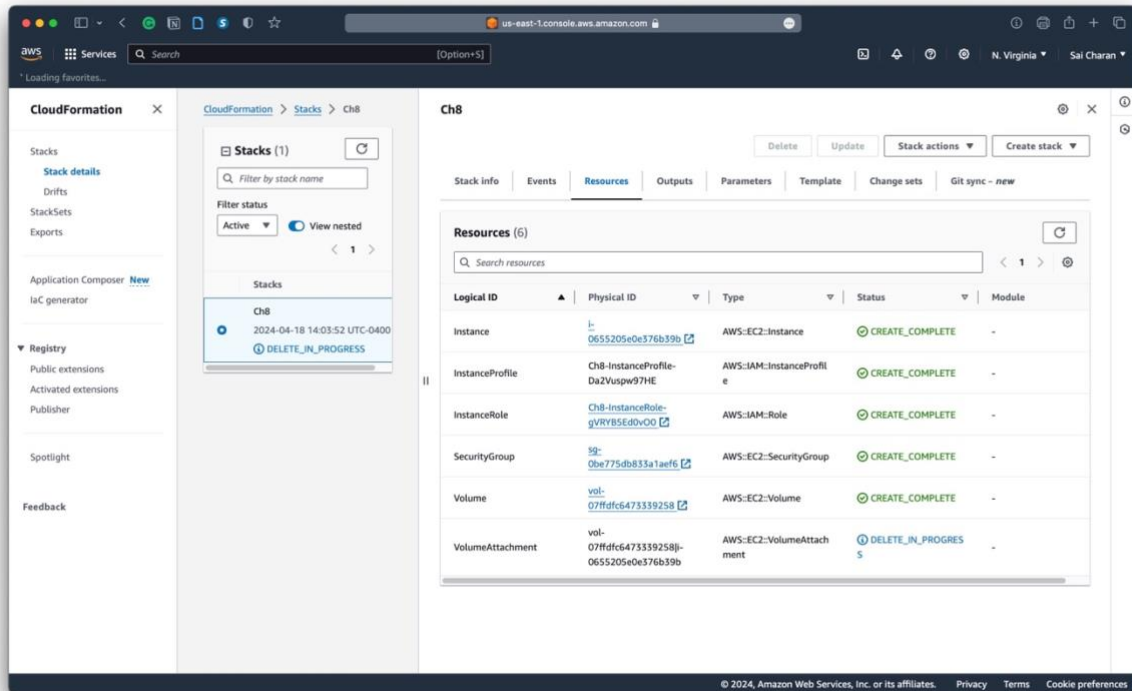
```
Session ID: root-01faf90bb5feb767f Instance ID: i-0655205e0e376b39b Terminate

db_replicate host      ngettext  python3.7    ash-keyscan  xzdec
db_stat       hostid    nice        python3.7m   salt          xzdiff
db_tuner      hostname nisdomainname python-config  sam-agent-worker  xzgrep
db_upgrade    hostnamectl  nl         pyvenv       sam-cil        xzgrep
dbus-cleanup-sockets  busctl      nl-addr-add  pyvenv-3.7   sam-document-worker  xzgrep
dbus-daemon   i386      nl-addr-delete  quota         sam-session-logger  xzless
dbus-monitor  iconv     nl-addr-list   quotasync     sam-session-worker  xzmore
dbus-run-session  id        nl-addr-add    rabin         stapsh         yes
dbus-send     iddiag-socket-details  nl-class-delete  raw           stapd          ypsdomainname
dbus-test-tool  idn       nl-classid-lookup  rdate        stap-merge     yum
dbus-update-activation-environment  igawk      nl-class-list  read          stap-report    yum-builddep
dbus-uidgen   info      nl-class-add    readelf       staprun        yum-config-manager
db_verify     infocmp   nl-cls-delete  readlink     stapsh         yum-debug-dump
dc            infokey   nl-cls-list    realpath      stat           yum-debug-restore
dd            infokey   nl-cls-add     readelf       stat          yumdownloader
de            infokey   nl-cls-list    readelf       stat          yum-groups-manager
deallcvt      infokey   nl-cls-add     readelf       stat          yum-groups-manager
debuginfo-install  infokey   nl-cls-list    readelf       stat          yum-groups-manager
delv          infokey   nl-cls-add     readelf       stat          yum-groups-manager
df            infokey   nl-cls-list    readelf       stat          yum-groups-manager
dgawk         infokey   nl-cls-add     readelf       stat          yum-groups-manager
diff          infokey   nl-cls-list    readelf       stat          yum-groups-manager
diff3         infokey   nl-cls-add     readelf       stat          yum-groups-manager
dig           infokey   nl-cls-list    readelf       stat          yum-groups-manager
dir           infokey   nl-cls-add     readelf       stat          yum-groups-manager
dircolors     infokey   nl-cls-list    readelf       stat          yum-groups-manager
dirname       infokey   nl-cls-add     readelf       stat          yum-groups-manager
dmesg         infokey   nl-cls-list    readelf       stat          yum-groups-manager
dnsmainname   infokey   nl-cls-add     readelf       stat          yum-groups-manager
domainname    infokey   nl-cls-list    readelf       stat          yum-groups-manager
dracut        infokey   nl-cls-add     readelf       stat          yum-groups-manager
du            infokey   nl-cls-list    readelf       stat          yum-groups-manager
dumpeyes     infokey   nl-cls-add     readelf       stat          yum-groups-manager
dwp          infokey   nl-cls-add     readelf       stat          yum-groups-manager
easy_install  infokey   nl-cls-add     readelf       stat          yum-groups-manager
easy_install-2.7  infokey  nl-cls-add     readelf       stat          yum-groups-manager
sh-4.2$ ls /data
ls: cannot access /data: No such file or directory
sh-4.2$ ls /data
ls: cannot access /data: No such file or directory
sh-4.2$ sudo mount /dev/xvdf /data
mount: /data: mount point does not exist.
sh-4.2$ sudo mkfs -t xfs /dev/xvdf
mkfs.xfs: meta-data=/dev/xvdf  isize=512    agcount=4, agsize=327680 blks
                        =                   sectsz=512   attr=2, projid32bit=1
                        =                   crc=1      finobt=1, sparse=0
data                =                   blocks=1310720, imaxpct=25
                        =                   sunit=0    swidth=0 blks
                        =                   naming="version 2"  bsize=4096  ascii-ci=0 ftype=1
log                 =                   logsize=2560, version=2
                        =                   realtime="none"  sectsz=512  sunit=0 blks, lazy-count=1
                        =                   realtime="none"  extsz=4096  blocks=0, rtextents=0
sh-4.2$
```

```
db_dump185      gntp          nf-exp-delete  python          sqlite3         xallint
db_hotbackup    h2ph          nf-exp-list    python2         ssh             xalvf
db_load         head          nf-log         python2.7       ssh-add         xad
db_log_verify  headump       nf-monitor     python2.7-config ssh-agent       xs
db_printlog     hibagent      nf-queue       python2-config  ssh-copy-id     xscat
db_recover      hibinit-agent nf-sio-test-sysstat python3         ssh-keygen      xzcmp
db_replicate    host          ngettext       python3.7       ssh-keyscan     xzdec
db_stat         hostid        nice           python3.7m      saltap          xzdiff
db_tuner        hostname      nisdomainname  python-config   sam-agent-worker xzgrep
db_upgrade      hostnamectl   nl            pyvenv         sam-cli         xzgrep
dbus-clean-up-sockets hunsPELL     nl-addr-add    pyvenv-1.7     sam-document-worker xsgrep
dbus-daemon     i386         nl-addr-delete quota          sam-session-logger xzless
dbus-monitor    iconv        nl-addr-list  quotasync       sam-session-worker xzmore
dbus-run-session id            nl-class-add  read           stapppf         yes
dbus-send       iddiag-socket-details raw            stapdyn        stap-merge      ydpdomainname
dbus-test-tool  idn          nl-classid-lookup rdate          stap-report     yum
dbus-update-activation-environment igawk        nl-class-list  readelf        staprun         yum-builddp
dbus-uuidgen    info         nl-cls-add    readlink       stat            yum-config-manager
db_verify       infocmp      nl-cls-delete readlink       stat            yum-debug-dump
dc             infokey      nl-cls-list   realpath       stat            yum-debug-restore
dd             infotocap    nl-fib-lookup recode-ar-latin stduf           yumdownloader
deallcovt      install      nl-link-enslave rename          strace          yum-groups-manager
debuginfo-install delv          nl-link-ifindex2name renames         strace-log-merge xcat
df             ipcalc       nl-link-list  repoclosure    strings         xcmp
dfawk          ipcmk        nl-link-name2ifindex repodiff        strip          xdiff
diff           iperm        nl-link-release repodiff        stty           xsegrep
diff3          ipcs         nl-link-set   repo-graph     su             xzgrep
dig            iptables-xml nl-link-stats repomanage      sudo           zforce
dir            iacsize      nl-list-caches repoquery       sudoedit       zgrep
dircolors      jobs         nl-list-sockets repo-ras        sudoreplay     zip
dirname        join          nl-monitor    reposync        sum            zipcloak
dmesg          journalctl   nl-neigh-add  reset          sync           zipgrep
dnsdomainname  jp-py        nl-neigh-delete reset           systemctl      zipinfo
domainname     jp-py        nl-neigh-list realsecons      systemd-analyze zipnote
dracut         jp-py-2      nl-neigh-tbl-list rev             systemd-ask-password zipsplit
du             jp-py-2.7    nl-pktloc-lookup rm             systemd-cat    zless
dumpkeys       jsonpointer  nl-qdisc-add  rmail          systemd-cgls   zmore
dwp            json_reformat nl-qdisc-delete rmail.postfix  systemd-cgtop  znew
easy_install   jsonschema   nl-qdisc-list rmdir          systemd-coredumpctl zsoelim
easy_install-2.7 json_verify  nl-route-add  rnano          systemd-delta  zstd
sh-4.2$ sudo mount /dev/xvdf /data
sh-4.2$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        484M  0  484M   0% /dev
tmpfs           492M  0  492M   0% /dev/shm
tmpfs           492M  404K  491M   1% /run
tmpfs           492M  0  492M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.7G  6.4G  21% /
tmpfs           99M  0  99M   0% /run/user/0
/dev/xvdf       5.0G  38M  5.0G  1% /data
sh-4.2$
```

Deleting the stack after work done:





**Reflection:** I tried finishing it after referring the Textbook clearly this time, I haven't tried in my own way this time. just to finish this assignment in time.

Thanks  
Sai Charan Pasupuleti