dev-ops traning material

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To: Vishal Gupta <Vishal.Gupta@synechron.com>

```
apt-get update
apt-get install apache2
curl localhost
```

https://us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

```
apt-get update
apt-get install git
git --version

root@ip-172-31-46-92:/home/ubuntu# git config --global user.name "Vishal Gupta"
root@ip-172-31-46-92:/home/ubuntu# git config --global user.email "vishal.gupta@synechron.com"
root@ip-172-31-46-92:/home/ubuntu# git config --global -l
user.name=Vishal Gupta
user.email=vishal.gupta@synechron.com
root@ip-172-31-46-92:/home/ubuntu#
root@ip-172-31-46-92:/home/ubuntu#
root@ip-172-31-46-92:/home/ubuntu#


root@ip-172-31-46-92:/home/ubuntu/repo# git init
Initialized empty Git repository in /home/ubuntu/repo/.git/
root@ip-172-31-46-92:/home/ubuntu/repo#


root@ip-172-31-46-92:/home/ubuntu/repo# git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)
root@ip-172-31-46-92:/home/ubuntu/repo# vi first
root@ip-172-31-46-92:/home/ubuntu/repo# git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        first

nothing added to commit but untracked files present (use "git add" to track)
root@ip-172-31-46-92:/home/ubuntu/repo# git add first
root@ip-172-31-46-92:/home/ubuntu/repo# git status
On branch master

No commits yet
```

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

      new file: first

root@ip-172-31-46-92:/home/ubuntu/repo# git commit -m"first commit"
[master (root-commit) 5742437] first commit
 1 file changed, 2 insertions(+)
 create mode 100644 first

root@ip-172-31-46-92:/home/ubuntu/repo# git log
commit a6659a7f6bfa83d8288d9334d755291aae3832e9 (HEAD -> master)
Author: Vishal Gupta <vishal.gupta@synechron.com>
Date: Tue Sep 17 06:52:33 2019 +0000

    second commit

commit 57424370dfb305c7e51fd7633e3b2934251efe3f
Author: Vishal Gupta <vishal.gupta@synechron.com>
Date: Tue Sep 17 06:44:55 2019 +0000

    first commit
root@ip-172-31-46-92:/home/ubuntu/repo#

root@ip-172-31-46-92:/home/ubuntu/repo# git branch
* master
root@ip-172-31-46-92:/home/ubuntu/repo#

root@ip-172-31-46-92:/home/ubuntu/repo# git branch trading

root@ip-172-31-46-92:/home/ubuntu/repo# git branch
* master
  trading

root@ip-172-31-46-92:/home/ubuntu/repo# git checkout trading
M   first
Switched to branch 'trading'
root@ip-172-31-46-92:/home/ubuntu/repo#

root@ip-172-31-46-92:/home/ubuntu/repo# git branch
  master
* trading

root@ip-172-31-46-92:/home/ubuntu/repo# git status
On branch trading
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

      modified: first

no changes added to commit (use "git add" and/or "git commit -a")

```
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo# git add first
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo# git commit -m"child branch"
[trading 8dc4053] child branch
 1 file changed, 1 insertion(+), 5 deletions(-)
root@ip-172-31-46-92:/home/ubuntu/repo#

root@ip-172-31-46-92:/home/ubuntu/repo# cat first
hello world 1   `

root@ip-172-31-46-92:/home/ubuntu/repo# git checkout master
Switched to branch 'master'
root@ip-172-31-46-92:/home/ubuntu/repo#

root@ip-172-31-46-92:/home/ubuntu/repo# cat first
1
:!

root@ip-172-31-46-92:/home/ubuntu/repo# git merge trading
Updating a6659a7..8dc4053
Fast-forward
 first | 6 +-----
 1 file changed, 1 insertion(+), 5 deletions(-)
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo#



hdhd
root@ip-172-31-46-92:/home/ubuntu/repo#
```

tried creating conflict by making changes in master & child branch files manully
```
root@ip-172-31-46-92:/home/ubuntu/repo# git merge trading
Auto-merging first
CONFLICT (content): Merge conflict in first
Automatic merge failed; fix conflicts and then commit the result.
root@ip-172-31-46-92:/home/ubuntu/repo# vi first
root@ip-172-31-46-92:/home/ubuntu/repo#
```


Steps to connect to reomte git hub

```
root@ip-172-31-46-92:/home/ubuntu/repo# git remote add origin
```
https://github.com/vikasam1/devops-viksam (origin is key to GIT repository)

---

vikasam1/devops-viksam

Contribute to vikasam1/devops-viksam development by creating
an account on GitHub.

github.com

```
root@ip-172-31-46-92:/home/ubuntu/repo# git remote -v
origin  https://github.com/vikasam1/devops-viksam (fetch)
origin  https://github.com/vikasam1/devops-viksam (push)
root@ip-172-31-46-92:/home/ubuntu/repo#
```

push code to GIT hub

```
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo# git push origin master
Username for 'https://github.com': vikasam1
Password for 'https://vikasam1@github.com':
Counting objects: 18, done.
Compressing objects: 100% (6/6), done.
Writing objects: 100% (18/18), 1.31 KiB | 672.00 KiB/s, done.
Total 18 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/vikasam1/devops-viksam
 * [new branch]      master -> master
root@ip-172-31-46-92:/home/ubuntu/repo#
root@ip-172-31-46-92:/home/ubuntu/repo#
```

Clone repository to local system
```
root@ip-172-31-46-92:/home/ubuntu# git clone https://github.com/vikasam1/hello-world.git
Cloning into 'hello-world'...
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (6/6), done.
remote: Total 7 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (7/7), done.
root@ip-172-31-46-92:/home/ubuntu#
root@ip-172-31-46-92:/home/ubuntu#
root@ip-172-31-46-92:/home/ubuntu# ls -ltr
total 16
-rwxr-xr-x 1 root root   19 Sep 17 06:27 xyx.txt
drwxr-xr-x 3 root root 4096 Sep 17 07:33 repo
drwxr-xr-x 4 root root 4096 Sep 17 09:28 repo1
drwxr-xr-x 4 root root 4096 Sep 17 09:30 hello-world
root@ip-172-31-46-92:/home/ubuntu/hello-world# git remote -v
origin  https://github.com/vikasam1/hello-world.git (fetch)
origin  https://github.com/vikasam1/hello-world.git (push)
```

SSH authentication to GIT hub

```
root@ip-172-31-46-92:~/.ssh# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
```

Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:0zhKzpIK1Dmyom42GxeRatX0yeY1FyTVHbgiby+75sY root@ip-172-31-46-92

-rw-r--r-- 1 root root 402 Sep 17 09:51 id_rsa.pub
-rw------- 1 root root 1675 Sep 17 09:51 id_rsa
root@ip-172-31-46-92:~/.ssh#
root@ip-172-31-46-92:~/.ssh#
root@ip-172-31-46-92:~/.ssh# cat id_rsa.pub
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQCyWfjjjdtddx7pCXyiKTP6SxX5U2IjrHCaxUOFYBy79bCl6dFLY3
iTGItT+Ue2+FT7cCEEq32m4jwd8kZZat08jAkL/qZV8cNX4jM/tMXB7dfvHy8CSf7ZAdlF654ArPYHM1VfB
P4Ko3my5T1OdyfGiBB5jwIzrE3Wxcy72MkNaX9N17WI9gweIhnBPYPhd6Fb4C7gzyHHrZiGhg3gBgu95
nqxOlkgJY4jwhqMJTpnhNbANKoWh2oZa4WK+YbeEwiz1Fbw3cUC/ZrL6EtMFeHZx898OrRFodlGPEmv
7kz45F3HFFrlYcEayiAcVJZ/vfKeBpxhgzU1RtHXGRQf6Nz/ root@ip-172-31-46-92

add the public key to git-repo -> settings -> deploy *key (provide write access)*

root@ip-172-31-46-92:/home/ubuntu/hello-world# git remote add tex
git@github.com:vikasam1/hello-world.git (the link should not be https)
root@ip-172-31-46-92:/home/ubuntu/hello-world# git push tex master

pull and merge
pull = fetch+merge
fetch = this will fetch details from remote

root@ip-172-31-46-92:/home/ubuntu/repo3# git fetch delta master
From https://github.com/vikasam1/dev-ops-clean
 * branch   master   -> FETCH_HEAD
root@ip-172-31-46-92:/home/ubuntu/repo3# ls -ltr
total 8
-rw-r--r-- 1 root root 11 Sep 17 11:11 index.html
-rw-r--r-- 1 root root 12 Sep 17 11:11 contact.txt
root@ip-172-31-46-92:/home/ubuntu/repo3# git branch -a
* master
  mycode
  remotes/delta/master
  remotes/delta/mycode
root@ip-172-31-46-92:/home/ubuntu/repo3# git checkout master
Already on 'master'
root@ip-172-31-46-92:/home/ubuntu/repo3# ls
contact.txt index.html
root@ip-172-31-46-92:/home/ubuntu/repo3# git merge remotes/delta/master
Updating 5a6afb5..65f6781
Fast-forward
 test.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 test.txt
root@ip-172-31-46-92:/home/ubuntu/repo3# ls
contact.txt index.html test.txt
root@ip-172-31-46-92:/home/ubuntu/repo3#

lsblk *(lisk block devises)*

Regards,
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