

Lab11-Automation
SYS255
Ben Weatherill
FA23

Deliverables:

1. Screenshot showing ssh and connectivity to all clones



```
ad-assessment-SYS-255-01-benjamin.weatherill Enforce US Keyboard Layout View Fullscreen Send Ctrl+Alt+Delete

Administrator: Windows PowerShell
PS C:\Windows\system32> whoami; hostname
ben\ben-adm
ad02-benjamin
PS C:\Windows\system32> ssh ben@clone1
ben@clone1's password:
Last login: Mon Nov 27 13:22:11 2023
Last login: Mon Nov 27 13:22:11 2023
[ben@clone1 ~]$ whoami; hostname; hostname -i; nslookup ad02-benjamin | grep -i name; ping -c1 ad02-benjamin | grep "packets transmitted"
ben
clone1
10.0.5.70
Name: ad02-benjamin.ben.local
1 packets transmitted, 1 received, 0% packet loss, time 0ms
[ben@clone1 ~]$ exit
logout
Connection to clone1 closed.
PS C:\Windows\system32> ssh ben@clone2
ben@clone2's password:
Last login: Mon Nov 27 13:22:31 2023
Last login: Mon Nov 27 13:22:31 2023
[ben@clone2 ~]$ whoami; hostname; hostname -i; nslookup ad02-benjamin | grep -i name; ping -c1 ad02-benjamin | grep "packets transmitted"
ben
clone2
10.0.5.71
Name: ad02-benjamin.ben.local
1 packets transmitted, 1 received, 0% packet loss, time 0ms
[ben@clone2 ~]$ exit
logout
Connection to clone2 closed.
PS C:\Windows\system32> ssh ben@clone3
ben@clone3's password:
Last login: Mon Nov 27 13:22:49 2023
Last login: Mon Nov 27 13:22:49 2023
[ben@clone3 ~]$ whoami; hostname; hostname -i; nslookup ad02-rubes | grep -i name; ping -c1 ad02-benjamin | grep "packets transmitted"
ben
clone3
10.0.5.72
1 packets transmitted, 1 received, 0% packet loss, time 0ms
```

2. SSH into clone3 with key not password

```
[ben@clone1 .ssh]$ ssh -i id_rsa ben@clone3
Enter passphrase for key 'id_rsa':
Last login: Mon Nov 27 13:38:21 2023 from clone2.ben.local
[ben@clone3 ~]$ whoami
ben
[ben@clone3 ~]$ hoistname
-bash: hoistname: command not found
[ben@clone3 ~]$ hostname
clone3
[ben@clone3 ~]$ _
```

3. SSH with cached password

```
[ben@clone1 .ssh]$ eval `ssh-agent`
Agent pid 2360
[ben@clone1 .ssh]$ ssh-add -t 1h
Enter passphrase for /home/ben/.ssh/id_rsa:
Identity added: /home/ben/.ssh/id_rsa (/home/ben/.ssh/id_rsa)
Lifetime set to 3600 seconds
[ben@clone1 .ssh]$ ssh clone3
Last login: Mon Nov 27 13:43:10 2023 from clone1.ben.local
[ben@clone3 ~]$ hostname
clone3
[ben@clone3 ~]$ exit
logout
Connection to clone3 closed.
[ben@clone1 .ssh]$ ssh clone2
Last login: Mon Nov 27 13:38:07 2023 from clone1.ben.local
[ben@clone2 ~]$ hostname
clone2
[ben@clone2 ~]$ exit
logout
Connection to clone2 closed.
[ben@clone1 .ssh]$
```

4. Sudo no password

```
[ben@clone1 .ssh]$ ssh clone2
Last login: Mon Nov 27 13:48:03 2023 from clone1.ben.local
[ben@clone2 ~]$ sudo -i
[root@clone2 ~]# whoami
root
[root@clone2 ~]# exit
logout
[ben@clone2 ~]$ exit
logout
Connection to clone2 closed.
[ben@clone1 .ssh]$
```

5. PSSH command running

```
clone01-SYS-255-01-benjamin.weatherill Enforce US Keyboard Layout View Fullscreen Send Ctrl+Alt+Delete

=====
Package      Arch      Version      Repository    Size
=====
Installing:
tree         x86_64    1.6.0-10.el7      base          46 k
=====
Transaction Summary
=====
Install 1 Package

Total download size: 46 k
Installed size: 87 k
Downloading packages:
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : tree-1.6.0-10.el7.x86_64                1/1
  Verifying  : tree-1.6.0-10.el7.x86_64                1/1

Installed:
tree.x86_64 0:1.6.0-10.el7

Complete!
[ben@clone1 ~]$ pssh -i -h hosts.txt uptime
[1] 13:55:07 [SUCCESS] ben@clone2
13:55:07 up 35 min, 1 user, load average: 0.05, 0.03, 0.05
[2] 13:55:07 [SUCCESS] ben@clone3
13:55:07 up 34 min, 1 user, load average: 0.26, 0.09, 0.07
[ben@clone1 ~]$ pssh -i -h hosts.txt uname -a
[1] 13:55:11 [SUCCESS] ben@clone2
Linux clone2 3.10.0-1160.81.1.el7.x86_64 #1 SMP Fri Dec 16 17:29:43 UTC 2022 x86_64 x86_64 x86_64 GNU
U/Linux
[2] 13:55:12 [SUCCESS] ben@clone3
Linux clone3 3.10.0-1160.81.1.el7.x86_64 #1 SMP Fri Dec 16 17:29:43 UTC 2022 x86_64 x86_64 x86_64 GNU
U/Linux
[ben@clone1 ~]$ pssh -i -h hosts.txt tree /etc/yum.repos.d/_

[ben@clone1 ~]$ pssh -i -h hosts.txt tree /etc/yum.repos.d/_
[1] 13:55:50 [SUCCESS] ben@clone3
/etc/yum.repos.d/
├── CentOS-Base.repo
├── CentOS-CR.repo
├── CentOS-Debuginfo.repo
├── CentOS-fasttrack.repo
├── CentOS-Media.repo
├── CentOS-Sources.repo
├── CentOS-Vault.repo
├── CentOS-x86_64-kernel.repo
├── epel.repo
└── epel-testing.repo

0 directories, 10 files
[2] 13:55:50 [SUCCESS] ben@clone2
/etc/yum.repos.d/
├── CentOS-Base.repo
├── CentOS-CR.repo
├── CentOS-Debuginfo.repo
├── CentOS-fasttrack.repo
├── CentOS-Media.repo
├── CentOS-Sources.repo
├── CentOS-Vault.repo
├── CentOS-x86_64-kernel.repo
├── epel.repo
└── epel-testing.repo

0 directories, 10 files
[ben@clone1 ~]$ _
```

6. Ansible Ping Pong

```
[ben@clone1 ~]$ ansible all -i hosts.txt -m ping
ben@clone3 : SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
ben@clone2 : SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
[ben@clone1 ~]$ _
```

7. Ansible and sudo

```
[ben@clone1 ~]$ ansible all -i hosts.txt -a "tail -n 1 /etc/passwd"
ben@clone2 : CHANGED : rc=0 >>
ben:x:1000:1000::/home/ben:/bin/bash
ben@clone3 : CHANGED : rc=0 >>
ben:x:1000:1000::/home/ben:/bin/bash
[ben@clone1 ~]$ ansible all -i hosts.txt -a "tail -n 1 /etc/shadow"
ben@clone2 : FAILED : rc=1 >>
tail: cannot open '/etc/shadow' for reading: Permission deniednon-zero return code
ben@clone3 : FAILED : rc=1 >>
tail: cannot open '/etc/shadow' for reading: Permission deniednon-zero return code
[ben@clone1 ~]$ ansible all -b -i hosts.txt -a "tail -n 1 /etc/shadow"
ben@clone2 : CHANGED : rc=0 >>
ben:$6$UCfNd1kk$yWUJtWpyBn6uZAg2UjtcHZGT1hU0uEPcbm6h0dpSNa9DDIvR1M6DnZJRZcH/v30Fp1whTdFf7j67pLhoh3WN
j1:19688:0:99999:7:::
ben@clone3 : CHANGED : rc=0 >>
ben:$6$dHUbJSJh$6RZnA2o9sNh3LT9URGJSKZBUSatsiRIlnkuyi.Ot6Q/U0Y/oGmINB4hmwq1eYe1aQhdDqvZ1e9o1AuyZy065
Q.:19688:0:99999:7:::
[ben@clone1 ~]$ _
```

8. Adding a port through the firewall

```
[ben@clone1 ~]# ansible all -b -i hosts.txt -a "firewall-cmd --add-port=1234/tcp"
ben@clone2 : CHANGED : rc=0 >>
success
ben@clone3 : CHANGED : rc=0 >>
success
[ben@clone1 ~]# ansible all -b -i hosts.txt -a "firewall-cmd --list-all"
ben@clone2 : CHANGED : rc=0 >>
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: ens192
  sources:
  services: dhcpv6-client ssh
  ports: 1234/tcp
  protocols:
  masquerade: no
  forward-ports:
  source-ports:
  icmp-blocks:
  rich rules:

ben@clone3 : CHANGED : rc=0 >>
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: ens192
  sources:
  services: dhcpv6-client ssh
  ports: 1234/tcp
  protocols:
  masquerade: no
  forward-ports:
  source-ports:
  icmp-blocks:
  rich rules:

[ben@clone1 ~]# _
```

9. Ansible Playbook and curl

```
[ben@clone1 Nginx]$ ansible-playbook -i ../hosts.txt nginx-centos7.yml
```

```
ok: [ben@clone2]

TASK [Add epel-release repo] *****
ok: [ben@clone3]
ok: [ben@clone2]

TASK [Install nginx] *****
ok: [ben@clone2]
ok: [ben@clone3]

TASK [Insert Index Page] *****
changed: [ben@clone2]
changed: [ben@clone3]

TASK [Start NGINX] *****
ok: [ben@clone2]
ok: [ben@clone3]

TASK [Enable Firewall] *****
changed: [ben@clone3]
changed: [ben@clone2]

TASK [Reload Firewall] *****
changed: [ben@clone2]
changed: [ben@clone3]

PLAY RECAP *****
ben@clone2      : ok=7    changed=3    unreachable=0    failed=0    skipped=0    rescued=
0               ignored=0
ben@clone3      : ok=7    changed=3    unreachable=0    failed=0    skipped=0    rescued=
0               ignored=0

[ben@clone1 Nginx]$ curl clone2
I am a file in SYS255
[ben@clone1 Nginx]$ curl clone3
I am a file in SYS255
[ben@clone1 Nginx]$ _
```