Threat Modeling Mock Report

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Table of Contents

Introduction & Objective

- This report outlines and describes the potential risks and threat agents that would compromise a network, as well as showing how common each vulnerability is. Our team created a virtual private network to demonstrate within a controlled lab environment, on how to mitigate each risk that can jeopardize a user. The threats chosen to cover are DDoS, Unprotected/ Weak SSH, and outdated or unpatched software/operating systems. The mitigations used for each risk were: Cloudfare Comprehensive DDoS Protection, multi-factor authentication, the use of Lynis to audit the Web VMs, utilizing SELinux, and using certificates alongside SSH keys.

Assesement Scope

- **Azure Cloud Platform**
    - Subscription ID: `ec96a93b-061a-41f5-a43f-27ca13475d66`
- **Resource Group**
    - Name: `Red-Team-ResourceGroup`
- **Network Security Group**
    - Name: `Red-Team-SecurityGroup`
    - **Inbound Rules:**

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
4000	AllowRemote-SSH	22	Any	78.215.163.192	10.0.0.4	Allow
4003	AllowRemote-HTTP	80	Any	78.215.163.192	Any	Allow
4005	AllowJBox-SHH	22	Any	10.0.0.4	VirtualNetwork	Allow
65000	AllowVNet-Any	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowsLoadBal-Any	Any	Any	AzureLoadBalander	Any	Allow
65500	DenyAllInbound	Any	Any	Any	Any	Deny

- **Outbound Rules:**

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION
65000	AllowVNetOutbound	Any	Any	VirtualNetwork	VirtualNetwork	Allow
65001	AllowInternetOutbound	Any	Any	Any	Internet	Allow
65500	DenyAllOutbound	Any	Any	Any	Any	Deny

- **VPNs**
    - Read-Team-VPN (*VirtualNetwork*)

        Subnet Mask

        - Addresses: `256`
        - Hosts: `254`
        - Netmask: `255.255.255.0`
        - Amount of a Class C: `1`

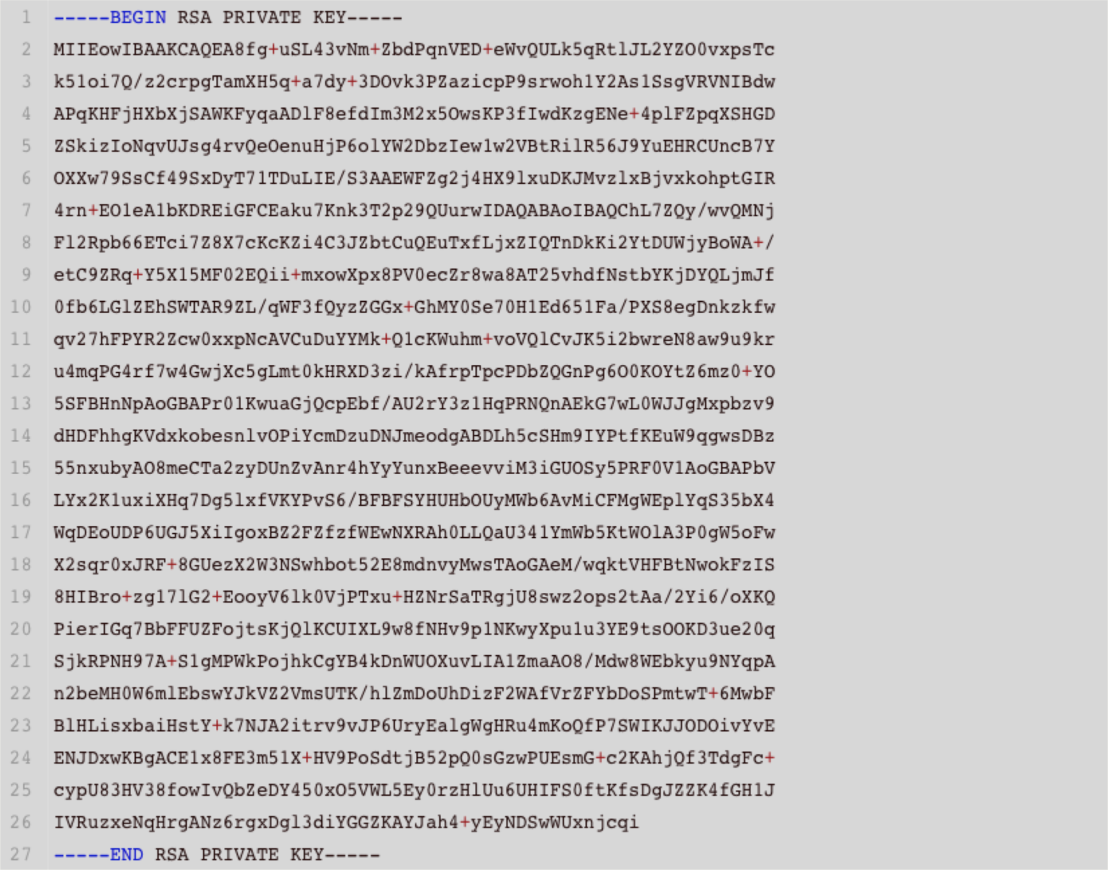
- **SSH-Keys**
- JumpBox-Provisoner (*SSH Public Key 1*):

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAACAQCzGMIgvSJc4x5o+X+gMTXRlO
vnbQTx8zQ2KXZfXrCHRS/6+pJH61wpWMSi0O0Uub83POyzoTHt2gdu
kL9k5WCG8NLrz14DboZuIxBoHgleG1Ndl4mKFH8btYo/7/urcbjw4e
5EYDIObLgDOP7Fs2Mnjq0LKIRUiipCwD/4gSrPRg8tk9D+JlMzgaBv
CgNLS8HgdlvpvqrZLi0foJd1AO2VJSpNa/36d/sIVeaGJlOJ8GeQPE
jb+1ehKEaFqWjbdWs3pJC7f8DWO5uYD6lJPAWfnnhPJw9eU22XT6ju
MLW3hyj9M2WQZ/lsatqlRSUEgl35yZRU2YA0KRVNUwMdQVevOdoLHx
ePa4gZ7dKikphU8UaOY7IVwvlf3T52OcFTzZ9tA2+R/vkZ9/cpXLjD
g+Z0yiUKPYRpgrm9FZdrjB2TTgHucUWpeAxS/e7dS6Dz9njuMQmjt7
XPxaAP02tkQbM0fP6N14HWfbAZxSrhkB3nvmF/kni3X4kwZMigHWgL
pEQ62dcrGxjCvWF4WeKYsoW0bhE0hnfj+xHv+Nvk3+xrzlbm58LyRw
DQBDM7o+pyEEfE7g3sHQ6bzOPaFklGhc+XJpFpNxVk2IJ9m5u35OI9
yrE7NiB1ht1qiYNuJZiDrnW4TA2Ti0CMtnzZNFtJGovtDIYdHkWhl2
KvPGSSr/uXUQ==
```

- Ansible Docker Container (*SSH Public Key 2*):

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDx+D65Ivje82b5lt0+qdUQP5
5a9BQuTmpG2UkvZhk7S/GmxNyTnWiLtD/PZyumBNqZcfmr5rt3L7cM
6+Tc9lrOJyk/2yvCiHVjYCzVKyBVFU0gF3AA+oocWMddteNIBYoXKp
oAOUXx590ibczbHk7Cwo/d8jB0rOAQ177imUVmmpdIcYNlKSLMig2q
9QmyDiu9B456e4eM/qiVhbYNvMh7DXDZUG1GKVHnon1i4QdEJSdwHt
g5dfDv1KwJ/j1LEPJPvVMO4sgT9LcAARYVmDaPgdf2XG4Moky/OXEG
O/GSiGm0YhHiuf4Q7V4DVsoNESIYUIRqS7sqeTdPanb1BS6v
root@e16f0e915f8e
```

- Ansible Docker Container (*SSH Private Key 2*):



```
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEA8fg+uSL43vNm+ZbdPqnVED+eWvQULk5qRtlJL2YZO0vxpsTc
k5loi7Q/z2crpgTamXH5q+a7dy+3DOvk3PZazicpP9srwohlY2As1SsgVRVNIBdw
APqKHFjHXbXjSAWKFyqaADlF8efdIm3M2x5OwsKP3fIwdKzgENe+4plFZpqXSHGD
ZSkizIoNqvUJsg4rvQeOenuHjP6olYW2DbzIew1w2VBtRilR56J9YuEHRCUncB7Y
OXXw79SsCf49SxDyT71TDuLIE/S3AAEWFZg2j4HX9lxuDKJMvzlxBjvxkohptGIR
4rn+EOleA1bKDREiGFCEaku7Knk3T2p29QUurwIDAQABAoIBAQChL7ZQy/wvQMNj
Fl2Rpb66ETci7Z8X7cKcKZi4C3JZbtCuQEuTxfLjxZIQTnDkKi2YtDUWjyBoWA+/
etC9ZRq+Y5X15MF02EQii+mxowXpx8PV0ecZr8wa8AT25vhdfNstbYKjDYQLjmJf
0fb6LGlZEhSWTAR9ZL/qWF3fQyzZGGx+GhMY0Se70H1Ed651Fa/PXS8egDnkzkfw
qv27hFPYR2Zcw0xxpNcAVCuDuYYMk+Q1cKWuhm+voVQlCvJK5i2bwreN8aw9u9kr
u4mqPG4rf7w4GwjXc5gLmt0kHRXD3zi/kAfrpTpcPDbZQGnPg6O0KOYtZ6mz0+YO
5SFBHnNpAoGBAPr01KwuaGjQcpEbf/AU2rY3z1HqPRNQnAEkG7wL0WJJgMxpbzv9
dHDFhhgKVdxkobesnlvOPiYcmDzuDNJmeodgABDLh5cSHm9IYPtfKEuW9qgwsDBz
55nxubyAO8meCTa2zyDUnZvAnr4hYyYunxBeeevviM3iGUOSy5PRF0V1AoGBAPbV
LYx2K1uxiXHq7Dg5lxfVKYPvS6/BFBFSYHUHbOUyMWb6AvMiCFMgWEplYqS35bX4
WqDEoUDP6UGJ5XiIgoxBZ2FZfzfWEwNXRAh0LLQaU341YmWb5KtWOlA3P0gW5oFw
X2sqr0xJRF+8GUezX2W3NSwhbot52E8mdnvyMwsTAoGAeM/wqktVHFBtNwokFzIS
8HIBro+zg17lG2+EooyV6lk0VjPTxu+HZNrSaTRgjU8swz2ops2tAa/2Yi6/oXKQ
PierIGq7BbFFUZFojtsKjQlKCUIXL9w8fNHv9p1NKwyXpu1u3YE9tsOOKD3ue20q
SjkRPNH97A+S1gMPWkPojhkCgYB4kDnWUOXuvLIA1ZmaAO8/Mdw8WEbkyu9NYqpA
n2beMH0W6mlEbswYJkVZ2VmsUTK/hlZmDoUhDizF2WAfVrZFYbDoSPmtwT+6MwbF
BlHLisxbaiHstY+k7NJA2itrv9vJP6UryEalgWgHRu4mKoQfP7SWIKJJODOivYvE
ENJDxwKBgACE1x8FE3m51X+HV9PoSdtjB52pQ0sGzwPUEsmG+c2KAhjQf3TdgFc+
cypU83HV38fowIvQbZeDY450xO5VWL5Ey0rzHlUu6UHIFS0ftKfsDgJZZK4fGH1J
IVRuzxeNqHrgANz6rgxDgl3diYGGZKAYJah4+yEyNDSwWUxnjcqi
-----END RSA PRIVATE KEY-----
```

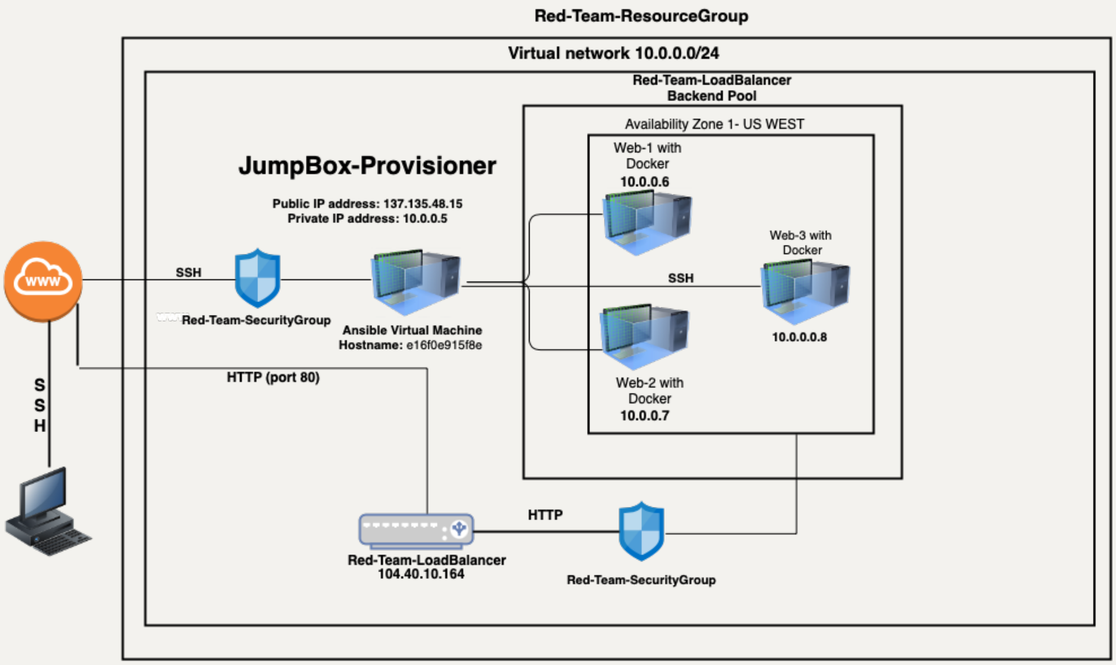
Virtual Machines

	JUMPBOX-PROVISONER	WEB-1	WEB-2	WEB-3
Internal IP Address	10.0.0.5	10.0.0.6	10.0.0.7	10.0.0.8
External IP Address	137.135.48.15	-	-	-
Availiability Zone	US-West	US-West	US-West	US-West
Operating System	Ubuntu 18.04 LTS	Ubuntu 18.04 LTS	Ubuntu 18.04 LTS	Ubuntu 18.04 LTS
Username	azadmin	azadmin	azadmin	azadmin
Password	-	-	-	-
SSH Key	SSH Key 1	SSH Key 2	SSH Key 2	SSH Key 2
Enabled Services	Docker	Docker	Docker	Docker
vCPUs	1	1	1	1
RAM	1 GB	2 GB	2 GB	2 GB

- **Load Balancer**
    - Name: Red-Team-LoadBalancer (*AzureLoadBalancer*)
    - Public IP Address: `104.40.10.164`
    - Backend Pool Machines:
        - **Web-1**
        - **Web-2**
        - **Web-3**
    - Health Probes:
        - **Name:** Red-Team-HealthProbe
        - **Protocol:** TCP
        - **Port:** 80
        - **Used By:** Red-Team-LBalanceRule

- **Public Endpoints** (Remote Endpoint Machines)
    - There is at least one endpoint machine on an external network with public IP address 78.215.163.192.
    - This machine has an unknown private key that was generated concurrently with a public key (stored at one point as an SSH password on the JumpBox-Provisioner VM) that allows administrative access to the terminal on the JumpBox-Provisioner, and thus access to the local Ansible VM.

Network Diagram



Threat Agents

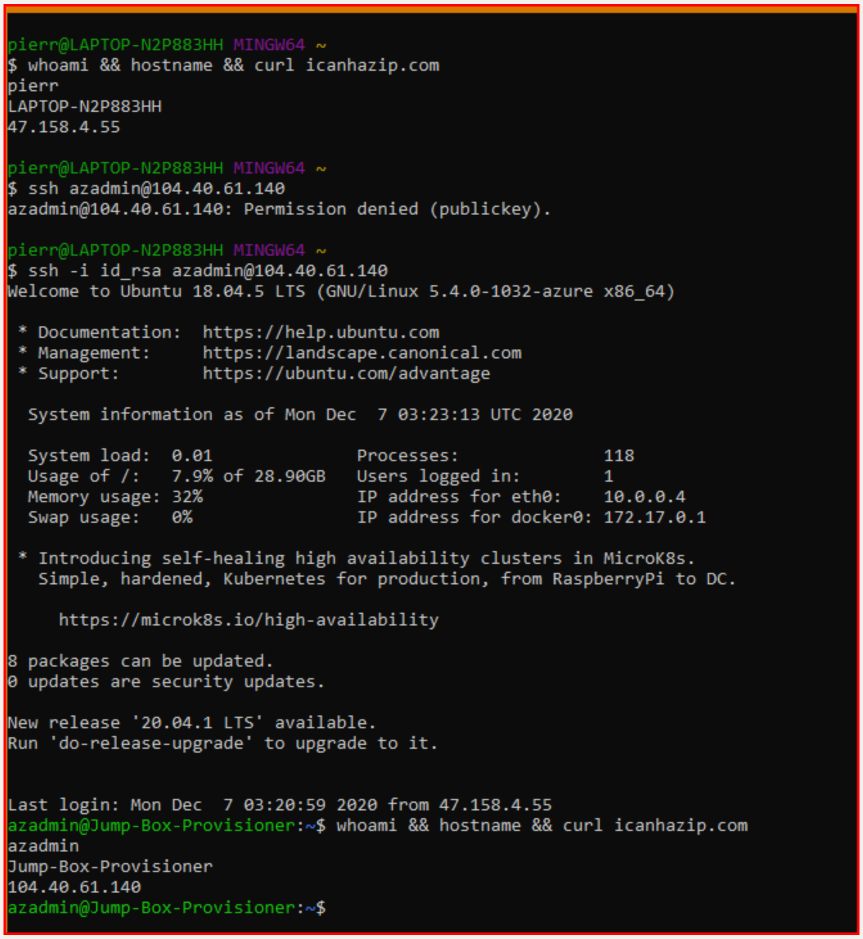
- Public SSH keys which have access to Jumpbox-Provisioner have been generated and stored on remote endpoint machines.
- Since these endpoints exist on unmanaged external networks, there is no way to prevent a breach of that endpoint, which will contain configuration files listing the private SSH key used to connect to JumpBox-Provisioner.
- A threat actor with *any* device on the unmanaged external network can use `nmap` to scan the Load Balancer.
- Unsecure software can lead to a breach with minimal effort. By using older software versions, the system is opened to known compromises and vulnerabilities previously discovered.
- Vulnerabilities in these key software programs could result in minor system errors (such as the DoS vulnerability) to full system take-overs with root privileges (Non-root users could execute code as root), based on the particular software version.
- Without proper traffic analysis, the provided network could be susceptible to packet flooding (DDoS, Denial of Service). Due to the limited security monitoring of the anomalous traffic, it would not be detected by the load balancer and could result in a full loss of network activity.
- Since the Azure Cloud Platform is accessible from any endpoint with access to the internet, complete access can be attained with an account ID (or email) and password. Additionally, there is a *Remember Me* option for a session when logging in that has been enabled, removing the requirement of entering a password should the session timeout.

Potential Attacks

- **Threat 1:** DDoS (Denial of Service)
    - If a threat actor gains access to virtual machines Web-1, Web-2, and Web-3 they could be employed in a Denial of Service (DoS) or a Distributed Denial of Service (DDoS) attack against other networks or they could become targets of a DoS or DDoS. Incorporation in a DoS or a DDoS would see the virtual machines used to perform buffer overflow attacks, ICMP flooding, or SYN flooding, rendering the target unfunctional. These machines could also experience the same attack rendering them unusable.

- **Threat 2:** Unprotected/Weak SSH
    - User within the endpoint's external network can assess the Load Balancer's ports and server information.
    - If outdated, the threat actor can research potential unpatched vulnerabilities.
    - It could be possible for the SSH keys in the Ansible container in the Jump Box Provisioner to become compromised, allowing access to the private keys and subsequent access to services using those keys. The SSH keys are not password or certificate protected and once an attacker is in the system it would be possible to gain these credentials and pose as the original user to gain access where connections have been made previously and to set up new connections as the user. This would prevent repudiation, with any actions performed with these credentials being in the name of the user.

      Proof of Concept:



```
pierr@LAPTOP-N2P883HH MINGW64 ~
$ whoami && hostname && curl icanhazip.com
pierr
LAPTOP-N2P883HH
47.158.4.55

pierr@LAPTOP-N2P883HH MINGW64 ~
$ ssh azadmin@104.40.61.140
azadmin@104.40.61.140: Permission denied (publickey).

pierr@LAPTOP-N2P883HH MINGW64 ~
$ ssh -i id_rsa azadmin@104.40.61.140
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.4.0-1032-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Mon Dec  7 03:23:13 UTC 2020

  System load:  0.01              Processes:              118
  Usage of /:   7.9% of 28.90GB   Users logged in:        1
  Memory usage: 32%               IP address for eth0:    10.0.0.4
  Swap usage:   0%                IP address for docker0: 172.17.0.1

 * Introducing self-healing high availability clusters in MicroK8s.
   Simple, hardened, Kubernetes for production, from RaspberryPi to DC.

     https://microk8s.io/high-availability

8 packages can be updated.
0 updates are security updates.

New release '20.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Mon Dec  7 03:20:59 2020 from 47.158.4.55
azadmin@Jump-Box-Provisioner:~$ whoami && hostname && curl icanhazip.com
azadmin
Jump-Box-Provisioner
104.40.61.140
azadmin@Jump-Box-Provisioner:~$
```

- **Threat 3:** Poor System Management
- There is minimal system management within the Azure cloud infrastructure. There are no security auditing tools on the virtual machines, and updates have not been automated. Additionally, there is no system in place to monitor network activity. Lack of visibility can lead to attacks/breaches going undetected and failing to keep the system up-to-date at all times will increase the vulnerability of the network.

Common Vulnerability Scoring & Risk Priority

	VECT.	COMP.	PRIV.	INTER.	SCOPE	CONFID.	INTEG.	AVAIL.	SCORE
Threat 1	NT	L	L	N	C	N	N	H	**7.7**
Threat 2	NT	L	H	N	C	H	H	H	**8.2**
Threat 3	NT	L	N	N	U	N	N	L	**5.3**

Calculated with: https://www.first.org/cvss/calculator/3.0

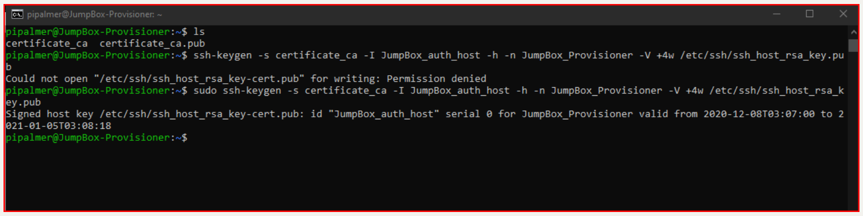
- **Category Key:**
  - **VECT** = *Attack Vector*
  - **COMP** = *Attack Complexity*
  - **PRIV** = *Privileges Required*
  - **INTER** = *User Interaction*
  - **SCOPE** = *Scope*
  - **CONFID** = *Confidentiality*
  - **INTEG** = *Integrity*
  - **AVAIL** = *Availability*
- **Value Key:**
  - **NT** = *Network*
  - **A** = *Adjacent*
  - **LO** = *Local*
  - **P** = *Physical*
  - **N** = *None*
  - **L** = *Low*
  - **H** = *High*
  - **R** = *Required*
  - **U** = *Unchanged*
  - **C** = *Changed*
- **Attack Vector Strings:**
  - **Threat 1:** `CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:C/C:N/I:N/A:H`
  - **Threat 2:** `CVSS:3.0/AV:L/AC:L/PR:H/UI:N/S:C/C:H/I:H/A:H`
  - **Threat 3:** `CVSS:3.0/AV:N/AC:L/PR:N/UI:N/S:U/C:N/I:N/A:L`

Mitigations

- Cloudfare Comprehensive DDoS Protection.
    - **Info:** Cloudfare offers DDoSAAS (or DDoS Protection as a Service) that is capable of securing the Web VMs and their Docker containers while also rerouting illegitimate, malicous traffic that could potentetially overload the Load Balancer.
    - **Link:** https://dash.cloudflare.com/sign-up
- Using certificates in conjunction with SSH keys.
    - **Info:** Utilizing certificates (Certificate Authority) reduces a variety of weaknesses from ssh-keys including managing issues with an abundance of keys to sort through. Create a certificate authority on a trusted server by making a private key using `ssh-keygen` with the `-f CA` option. Creating a private key will verify and sign host and user keys for login. The authentication login will exchange certificates instead of keys, making the CA's public key valid. Using this certificate flow allows the benefits of allowing expiration dates to disable a certificate key to gain access. Factors utilizing certificates authentication factor allows for the creation of an expiration date utilization.
    - **Generate Key & Certificate Command:** `ssh-keygen -f CA`
    - **Sign Host Keys and Create Certificates:**

      `ssh-keygen -h -s CA -n LIST-OF-PRINCIPALS -I ID -V +4w KEYFILE.pub`
    - **Explanation:**
        - **`-s`**: This is the private key that we just created that we will use to sign all of the other keys.
        - **`-I`**: This is a name that is used to identify the certificate. It is used for logging purposes when the certificate is used for authentication.
        - **`-h`**: This marks the resulting certificate as a host key, as opposed to a client key.
        - **`-n`**: This is used to identify the name (user or host) that is associated with this certificate.
        - **`-V`**: This specifies how long the certificate is valid for. In this instance, we specify that the certificate will expire in 4 weeks.

    - **Example:**

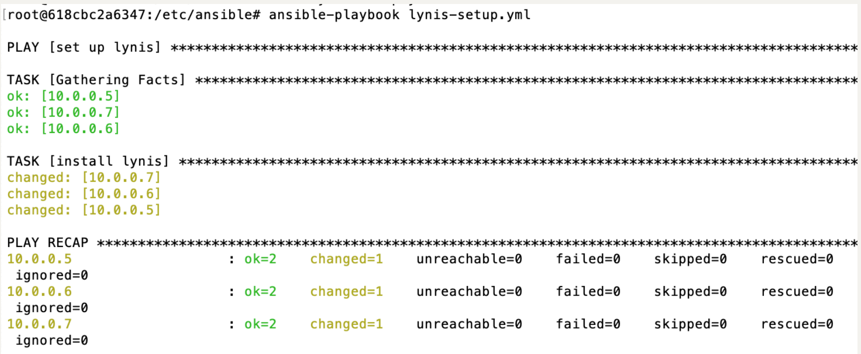


```
pipalmer@JumpBox-Provisioner:~$ ls
certificate_ca  certificate_ca.pub
pipalmer@JumpBox-Provisioner:~$ ssh-keygen -s certificate_ca -I JumpBox_auth_host -h -n JumpBox_Provisioner -V +4w /etc/ssh/ssh_host_rsa_key.pu
b
Could not open "/etc/ssh/ssh_host_rsa_key-cert.pub" for writing: Permission denied
pipalmer@JumpBox-Provisioner:~$ sudo ssh-keygen -s certificate_ca -I JumpBox_auth_host -h -n JumpBox_Provisioner -V +4w /etc/ssh/ssh_host_rsa_k
ey.pub
Signed host key /etc/ssh/ssh_host_rsa_key-cert.pub: id "JumpBox_auth_host" serial 0 for JumpBox_Provisioner valid from 2020-12-08T03:07:00 to 2
021-01-05T03:08:18
pipalmer@JumpBox-Provisioner:~$
```

- Multifactor identification for the Azure Cloud Platform.
    - Multifactor identification is the process of registering multiple devices for a user to authenticate access. Secure access to the Azure Web Portal by using multifactor identification and disable the *Remember Me* option.
- Use **SELinux** to define access controls for applications, processes, and files on the system.
    - **Info:** SELinux is a Linux kernal security module for Linux systems that is compatible with Ubuntu 18.04 LTS that allows administration over system access. Access controls are defined for applications, processes, and files alongside with security policies that enforce predefined access.
    - **Install Command:** `sudo apt install selinux`
    - **Enforcing Command:** `sudo sed -i 's/SELINUX=.*/SELINUX=enforcing/' /etc/selinux/config`
    - **Permissive Command:** `sudo sed -i 's/SELINUX=.*/SELINUX=permissive/' /etc/selinux/config`
    - **Note:** Be sure to reboot the machine within Azure for changes to take effect.
    - **Install `lynis` (security tool that performs health scans on the system) on VMs:**

```yaml
#lynis-setup.yml
#Ansible playbook that will install lynis on the Web VMs
---

- name: set up lynis
  hosts: webservers
  become: true
  tasks:

  - name: install lynis
    command: apt -y install lynis

```

- **Successful Play Example:**



```
root@618cbc2a6347:/etc/ansible# ansible-playbook lynis-setup.yml

PLAY [set up lynis] ************************************************************************************

TASK [Gathering Facts] *********************************************************************************
ok: [10.0.0.5]
ok: [10.0.0.7]
ok: [10.0.0.6]

TASK [install lynis] ***********************************************************************************
changed: [10.0.0.7]
changed: [10.0.0.6]
changed: [10.0.0.5]

PLAY RECAP *********************************************************************************************
10.0.0.5                   : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0
 ignored=0
10.0.0.6                   : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0
 ignored=0
10.0.0.7                   : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0
 ignored=0
```

- **Use Lynis to audit** `JumpBox-Provisioner`, `Web-1`, `Web-2`, `Web-3` .
    - **Info:** Lynis is a security audit tool for Linux systems that is compatible with Ubuntu 18.04 LTS which scans systems and their security defense for the purposes of system hardening. Lynis will provide a report that offers suggestions to better secure the system.
- **Automate Lynis scans as well as updates with** `apt`**:**
    - Aptitude Update Script:

```
#update.sh
#shell script that will keep system up-to-date

#!/bin/bash

sudo apt update -y && sudo apt upgrade -y && sudo apt full-upgrade -y && sudo apt-get autoremove --purge -y

```

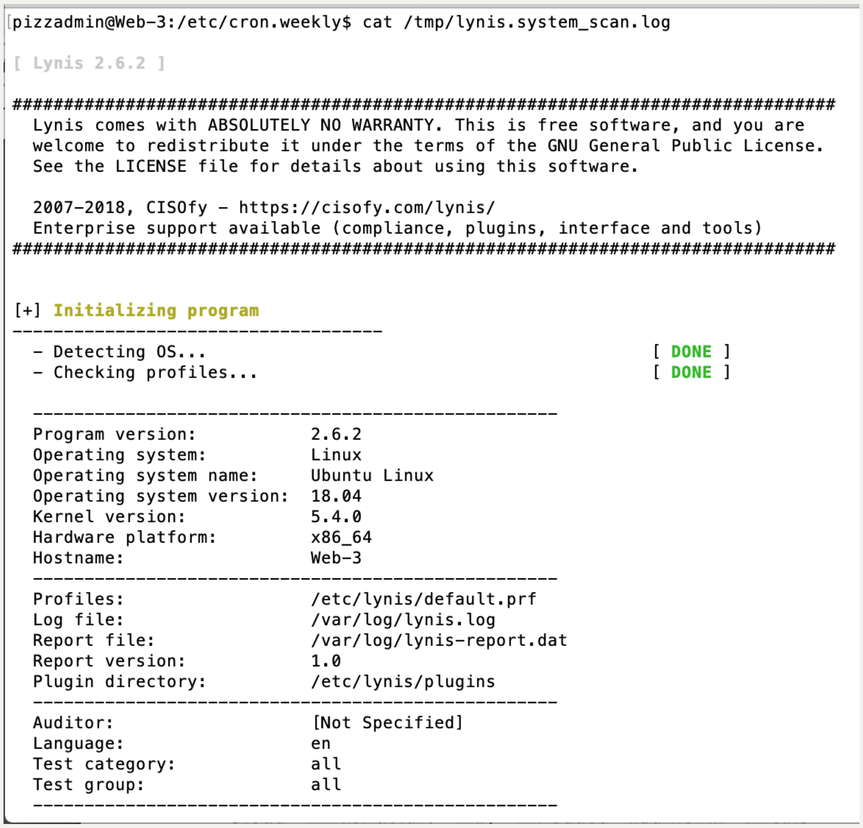
    - Lynis Scan Script:

```
#lynis-scan.sh
#shell script that will save a full system lynis audit to a log file in /tmp
#!/bin/bash


sudo lynis audit system >> /tmp/lynis.system_scan.log

```

- Cron YAML Setup:

```yaml
#cron-setup.yml
#Ansible playbook that will copy the update.sh and lynis-scan.sh to /etc/cron.weekly so that the report and updates will be carried automatically on a weekly basis
---

- name: set up cron jobs for lynis scans and apt update
  hosts: webservers
  become: true
  tasks:

  - name: drop in lynis script
    copy:
       src: /etc/ansible/scripts/lynis-scan.sh
       dest: /etc/cron.weekly
       mode: a+x

  - name: drop in update script
    copy:
       src: /etc/ansible/scripts/update.sh
       dest: /etc/cron.weekly
       mode: a+x

```

- **Successful Lynis Scan Example:**

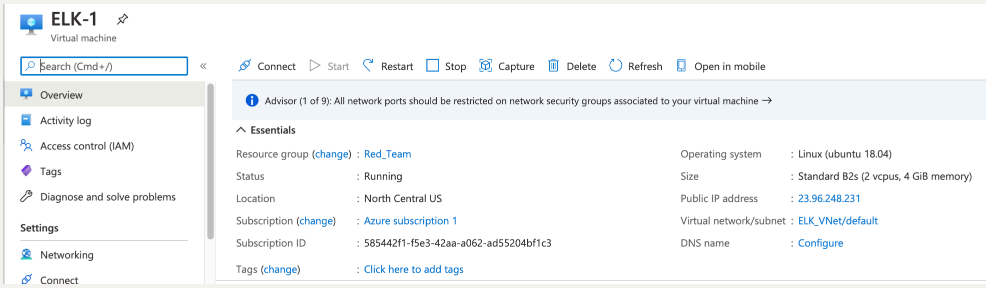


```
pizzadmin@Web-3:/etc/cron.weekly$ cat /tmp/lynis.system_scan.log

[ Lynis 2.6.2 ]

################################################################################
  Lynis comes with ABSOLUTELY NO WARRANTY. This is free software, and you are
  welcome to redistribute it under the terms of the GNU General Public License.
  See the LICENSE file for details about using this software.

  2007-2018, CISOfy - https://cisofy.com/lynis/
  Enterprise support available (compliance, plugins, interface and tools)
################################################################################


[+] Initializing program
------------------------------------
  - Detecting OS...                                           [ DONE ]
  - Checking profiles...                                      [ DONE ]

  ---------------------------------------------------
  Program version:           2.6.2
  Operating system:          Linux
  Operating system name:     Ubuntu Linux
  Operating system version:  18.04
  Kernel version:            5.4.0
  Hardware platform:         x86_64
  Hostname:                  Web-3
  ---------------------------------------------------
  Profiles:                  /etc/lynis/default.prf
  Log file:                  /var/log/lynis.log
  Report file:               /var/log/lynis-report.dat
  Report version:            1.0
  Plugin directory:          /etc/lynis/plugins
  ---------------------------------------------------
  Auditor:                   [Not Specified]
  Language:                  en
  Test category:             all
  Test group:                all
  ---------------------------------------------------
```

- Set up and deploy an ELK stack in order to monitor and analyze network activity.
    - **ELK YAML Configuration:**

```
elk-config.yml
#Ansible playbook that configures our ELK server VM
---

- name: configures ELK VM with docker
  hosts: elk
  become: true
  tasks:

  - name: increase virutal memory
    command: sysctl -w vm.max_map_count=262144

  - name: use more memory
    sysctl:
      name: vm.max_map_count
      value: '262144'
      state: present
      reload: yes

  - name: install packages
    apt:
      name: ['docker.io', 'python3-pip']
      state: present
      force_apt_get: yes
      update_cache: yes

  - name: install docker
    pip:
      name: docker
      state: present

  - name: download/launch a docker elk container
    docker_container:
      name: elk
      image: sebp/elk:761
      state: started
      restart_policy: always
      published_ports:
        - 5601:5601
        - 9200:9200
        - 5044:5044


```

- **ELK server VM properties overview:**



ELK-1
Virtual machine

Search (Cmd+/)

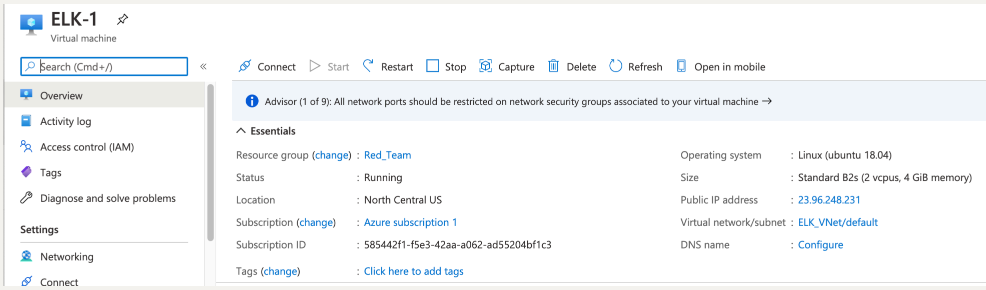
Advisor (1 of 9): All network ports should be restricted on network security groups associated to your virtual machine →

Essentials

Resource group (change) : Red_Team
Status : Running
Location : North Central US
Subscription (change) : Azure subscription 1
Subscription ID : 585442f1-f5e3-42aa-a062-ad55204bf1c3
Tags (change) : Click here to add tags

Operating system : Linux (ubuntu 18.04)
Size : Standard B2s (2 vcpus, 4 GiB memory)
Public IP address : 23.96.248.231
Virtual network/subnet : ELK_VNet/default
DNS name : Configure

Allowing access from the same trusted external network to the Kibana web page in order to view ELK stack network analysis.



ELK-1
Virtual machine

Search (Cmd+/)

Advisor (1 of 9): All network ports should be restricted on network security groups associated to your virtual machine →

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