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| Monkeyzoo  GCP testing network for Infection Monkey | purpose  This document describes each machine in Infection Monkey’s private test network and is intended for developers only.  GuardicoreTM |
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# Warning!

This project builds an intentionally vulnerable network. Make sure not to add production servers to the same network and leave it closed to the public.

# Introduction:

MonkeyZoo is a Google Cloud Platform network deployed with terraform. Terraform scripts allows you to quickly setup a network that’s full of vulnerable machines to regression test monkey’s exploiters, evaluate scanning times in a real-world scenario and many more.

# Getting started:

Requirements:

1. Have terraform installed.
2. Have a Google Cloud Platform account (upgraded if you want to test whole network at once).

To deploy:

1. Crete a service account for your project named “you\_name-monkeyZoo-user” and download its **Service account key**. Select JSON format.
2. Get these permissions in monkeyZoo project for your service account:
   1. **Compute Engine -> Compute image user**
3. Change configurations located in the ../monkey/envs/monkey\_zoo/terraform/config.tf file (don’t forget to link to your service account key file):

provider "google" {

project = "project-28054666"

region = "europe-west3"

zone = "europe-west3-b"

credentials = "${file("project-92050661-9dae6c5a02fc.json")}"

}

service\_account\_email="test@project-925243.iam.gserviceaccount.com"

1. Run terraform init

To deploy the network run:

terraform plan (review the changes it will make on GCP)

terraform apply (creates 2 networks for machines)

terraform apply (adds machines to these networks)

# Using islands:

How to get into the islands:

**island-linux-250:** SSH from GCP

**island-windows-251:** In GCP/VM instances page click on island-windows-251. Set password for your account and then RDP into the island.

These are most common steps on monkey islands:

**island-linux-250:**

To run monkey island:

`sudo /usr/run\_island.sh`

To run monkey:

`sudo /usr/run\_monkey.sh`

To update repository:

1. `git pull /usr/infection\_monkey/`

Update all requirements using deployment script:

1. `cd /usr/infection\_monkey/deployment\_scripts`

2. `./deploy\_linux.sh "/usr/infection\_monkey" "develop"`

**island-windows-251:**

To run monkey island:

Execute C:\run\_monkey\_island.bat as administrator

To run monkey:

Execute C:\run\_monkey.bat as administrator

To update repository:

1. Open cmd as an administrator

2. `cd C:\infection\_monkey`

3. `git pull` (updates develop branch)

Update all requirements using deployment script:

1.` cd C:\infection\_monkey\deployment\_scripts`

2. ` ./run\_script.bat "C:\infection\_monkey" "develop"`

# Running tests:

Once you start monkey island you can import test configurations from ../monkey/envs/configs.

fullTest.conf is a good place to start, because it covers all machines.

# Machines’ legend:

“Machines” paragraph describes each network machine one by one.

Background colours meaning:

**Red:** machine is exploited using credentials from configuration (brute-force attack).

**Blue:** machine is exploited trough a vulnerability (no credentials needed).

**Green:** machine is secure.

**Grey:** machine is not implemented/doesn’t work yet.

# Machines:

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| Nr. **2** Hadoop  (10.2.2.2) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | JDK,  [Hadoop 2.9.1](https://hadoop.apache.org/releases.html) |
| Default server’s port: | 8020 |
| Server’s config: | [Single node cluster](https://hadoop.apache.org/docs/stable/hadoop-project-dist/hadoop-common/SingleCluster.html) |
| Scan results: | Machine exploited using Hadoop exploiter |
| Notes: |  |

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| Nr. **3** Hadoop  (10.2.2.3) | |
| OS: | **Windows 10 x64** |
| Software: | JDK,  [Hadoop 2.9.1](https://hadoop.apache.org/releases.html) |
| Default server’s port: | 8020 |
| Server’s config: | [Single node cluster](https://hadoop.apache.org/docs/stable/hadoop-project-dist/hadoop-common/SingleCluster.html) |
| Scan results: | Machine exploited using Hadoop exploiter |
| Notes: |  |

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| Nr. **4** Elastic  (10.2.2.4) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | JDK,  [Elastic 1.4.2](https://www.elastic.co/downloads/past-releases/elasticsearch-1-4-2) |
| Default server’s port: | 9200 |
| Server’s config: | Default |
| Scan results: | Machine exploited using Elastic exploiter |
| Notes: | [Quick](https://www.elastic.co/guide/en/elasticsearch/reference/1.4/_index_and_query_a_document.html) tutorial on how to add entries (was useful when setting up). |
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| Nr. **5** Elastic  (10.2.2.5) | |
| OS: | **Windows 10 x64** |
| Software: | JDK,  [Elastic 1.4.2](https://www.elastic.co/downloads/past-releases/elasticsearch-1-4-2) |
| Default server’s port: | 9200 |
| Server’s config: | Default |
| Scan results: | Machine exploited using Elastic exploiter |
| Notes: | [Quick](https://www.elastic.co/guide/en/elasticsearch/reference/1.4/_index_and_query_a_document.html) tutorial on how to add entries (was useful when setting up). |

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| Nr. **6** Sambacry  (10.2.2.6) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | Samba > 3.5.0 and < 4.6.4, 4.5.10 and 4.4.14 |
| Default server’s port: | - |
| Root password: | ;^TK`9XN\_x^ |
| Server’s config: |  |
| Scan results: | Machine exploited using Sambacry exploiter |
| Notes: |  |
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| Nr. **7** Sambacry  (10.2.2.7) | |
| OS: | **Ubuntu 16.04.05 x32** |
| Software: | Samba > 3.5.0 and < 4.6.4, 4.5.10 and 4.4.14 |
| Default server’s port: | - |
| Root password: | \*.&A7/W}Rc$ |
| Server’s config: |  |
| Scan results: | Machine exploited using Sambacry exploiter |
| Notes: |  |

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| Nr. **8** Shellshock  (10.2.2.8) | |
| OS: | **Ubuntu 12.04 LTS x64** |
| Software: | Apache2, bash 4.2. |
| Default server’s port: | 80 |
| Scan results: | Machine exploited using Shellshock exploiter |
| Notes: | Vulnerable app is under /cgi-bin/test.cgi |
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| Nr. **9** Tunneling M1  (10.2.2.9, 10.2.1.9) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | OpenSSL |
| Default service’s port: | 22 |
| Root password: | `))jU7L(w} |
| Server’s config: | Default |
| Notes: |  |

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| Nr. **10** Tunneling M2  (10.2.1.10) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | OpenSSL |
| Default service’s port: | 22 |
| Root password: | 3Q=(Ge(+&w]\* |
| Server’s config: | Default |
| Notes: | Accessible only trough Nr.9 |

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| Nr. **11** SSH key steal.  (10.2.2.11) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | OpenSSL |
| Default connection port: | 22 |
| Root password: | ^NgDvY59~8 |
| Server’s config: | SSH keys to connect to NR. 11 |
| Notes: |  |
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| Nr. **12** SSH key steal.  (10.2.2.12) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | OpenSSL |
| Default connection port: | 22 |
| Root password: | u?Sj5@6(-C |
| Server’s config: | SSH configured to allow connection from NR.10 |
| Notes: | Don’t add this machine’s credentials to exploit configuration. |
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| Nr. **13** RDP grinder  (10.2.2.13) | |
| OS: | **Windows 10 x64** |
| Software: | - |
| Default connection port: | 3389 |
| Root password: | 2}p}aR]&=M |
| Scan results: | Machine exploited using RDP grinder |
| Server’s config: | Remote desktop enabled  Admin user’s credentials:  m0nk3y, 2}p}aR]&=M |
| Notes: |  |
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| Nr. **14** Mimikatz  (10.2.2.14) | |
| OS: | **Windows 10 x64** |
| Software: | - |
| Admin password: | Ivrrw5zEzs |
| Server’s config: | Has cashed mimikatz-15 RDP credentials  [SMB](https://social.technet.microsoft.com/Forums/windows/en-US/8160d62b-0f5d-48a3-9fe9-5cd319837917/how-te-reenable-smb1-in-windows1o?forum=win10itprogeneral) turned on |
| Notes: |  |

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| Nr. **15** Mimikatz  (10.2.2.15) | |
| OS: | **Windows 10 x64** |
| Software: | - |
| Admin password: | pAJfG56JX>< |
| Server’s config: | It’s credentials are cashed at mimikatz-14  [SMB](https://social.technet.microsoft.com/Forums/windows/en-US/8160d62b-0f5d-48a3-9fe9-5cd319837917/how-te-reenable-smb1-in-windows1o?forum=win10itprogeneral) turned on |
| Notes: | If you change this machine’s IP it won’t get exploited. |
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| Nr. **16** MsSQL  (10.2.2.16) | |
| OS: | **Windows 10 x64** |
| Software: | MSSQL Server |
| Default service port: | 1433 |
| Server’s config: | xp\_cmdshell feature enabled in MSSQL server  Server’s creds (sa): admin, }8Ys#" |
| Notes: | Enabled SQL server browser service  [Enabled remote connections](https://docs.microsoft.com/en-us/sql/relational-databases/lesson-2-connecting-from-another-computer?view=sql-server-2017)  [Changed default password](https://support.plesk.com/hc/en-us/articles/213397429-How-to-change-a-password-for-the-sa-user-in-MS-SQL-) |
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| Nr. **17** Upgrader  (10.2.2.17) | |
| OS: | **Windows 10 x64** |
| Default service port: | 445 |
| Root password: | U??7ppG\_ |
| Server’s config: | [Turn on SMB](https://social.technet.microsoft.com/Forums/windows/en-US/8160d62b-0f5d-48a3-9fe9-5cd319837917/how-te-reenable-smb1-in-windows1o?forum=win10itprogeneral) |
| Notes: |  |
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| Nr. **18** WebLogic  (10.2.2.18) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | JDK,  [Oracle WebLogic server 12.2.1.2](https://www.oracle.com/technetwork/middleware/weblogic/downloads/wls-main-097127.html) |
| Default server’s port: | 7001 |
| Admin domain credentials: | weblogic : B74Ot0c4 |
| Server’s config: | Default |
| Notes: |  |

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| Nr. **19** WebLogic  (10.2.2.19) | |
| OS: | **Windows 10 x64** |
| Software: | JDK,  [Oracle WebLogic server 12.2.1.2](https://www.oracle.com/technetwork/middleware/weblogic/downloads/wls-main-097127.html) |
| Default server’s port: | 7001 |
| Admin servers credentials: | weblogic : =ThS2d=m(`B |
| Server’s config: | Default |
| Notes: |  |

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| Nr. **20** SMB  (10.2.2.20) | |
| OS: | **Windows 10 x64** |
| Software: | - |
| Default service’s port: | 445 |
| Root password: | YbS,<tpS.2av |
| Server’s config: | [SMB](https://social.technet.microsoft.com/Forums/windows/en-US/8160d62b-0f5d-48a3-9fe9-5cd319837917/how-te-reenable-smb1-in-windows1o?forum=win10itprogeneral) turned on |
| Notes: |  |

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| Nr. **21** Scan  (10.2.2.21) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | Apache tomcat 7.0.92 |
| Default server’s port: | 8080 |
| Server’s config: | Default |
| Notes: | Used to scan a machine that has no vulnerabilities (to evaluate scanning speed for e.g.) |
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| Nr. **22** Scan  (10.2.2.22) | |
| OS: | **Windows 10 x64** |
| Software: | Apache tomcat 7.0.92 |
| Default server’s port: | 8080 |
| Server’s config: | Default |
| Notes: | Used to scan a machine that has no vulnerabilities (to evaluate scanning speed for e.g.) |
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| Nr. **23** Struts2  (10.2.2.23) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | JDK,  struts2 2.3.15.1,  tomcat 9.0.0.M9 |
| Default server’s port: | 8080 |
| Server’s config: | Default |
| Notes: |  |

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| Nr. **24** Struts2  (10.2.2.24) | |
| OS: | **Windows 10 x64** |
| Software: | JDK,  struts2 2.3.15.1,  tomcat 9.0.0.M9 |
| Default server’s port: | 8080 |
| Server’s config: | Default |
| Notes: |  |
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| Nr. **250 MonkeyIsland**  (10.2.2.250) | |
| OS: | **Ubuntu 16.04.05 x64** |
| Software: | MonkeyIsland server, git, mongodb etc. |
| Default server’s port: | 22, 443 |
| Private key passphrase: | - |
| Notes: | Only accessible trough GCP |
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| Nr. **251 MonkeyIsland**  (10.2.2.251) | |
| OS: | **Windows Server 2016 x64** |
| Software: | MonkeyIsland server, git, mongodb etc. |
| Default server’s port: | 3389, 443 |
| Private key passphrase: | - |
| Notes: | Only accessible trough GCP |
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# Network topography:

