RSA NETWITNESS® PLATFORM

Integrate RSA Malware Analysis with Cuckoo Sandbox

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How to Integrate RSA Malware Analysis with Cuckoo Sandbox

Users would like to integrate RSA Malware Analysis with sandbox solutions, so they can:

- Automatically submit malicious artifacts to these other solutions, and
- See the results from RSA Malware Analysis and a sandbox solution together.

This document is based on work presented by Luiz Borges luiz.borges@techbiz.com.br at the 2016 RSA Techfest.

In this document, we consider the Cuckoo Sandbox, and describe how to integrate this solution with RSA Malware Analysis.

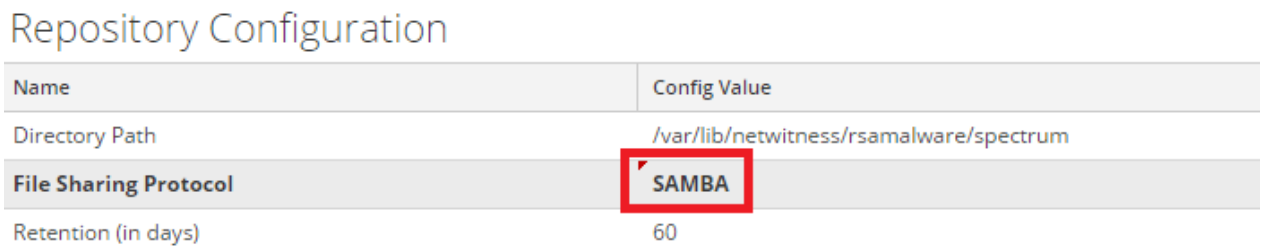
You will need:

- RSA NetWitness for Packets, with the Malware Analysis module.
- Cuckoo Sandbox

Enable the File Sharing Protocol

The first step is to enable the File Sharing Protocol on the RSA Malware Analysis Service.

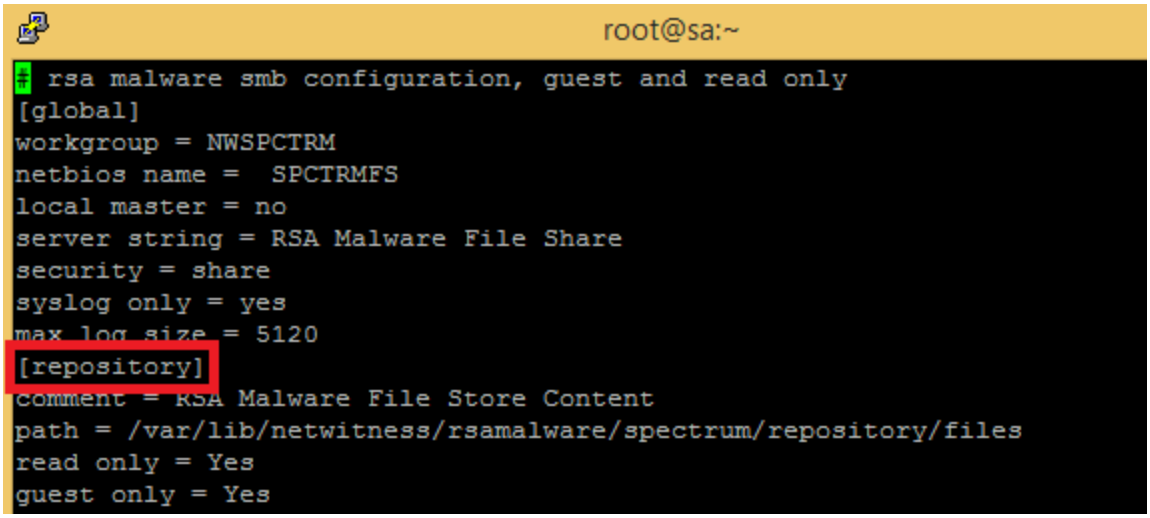
1. In the RSA NetWitness UI, navigate to **ADMIN > Services**.
2. Select a Malware Analysis service, and click  **View > Config**.
3. In the **General** tab, in the **Repository Configuration** section, enter **SAMBA** for the **File Sharing Protocol**.



Change the Share Name

Next, you need to change the share name on the Malware Analysis service.

1. Connect to the RSA Malware Analysis service through SSH.
2. Change the share name from **File Store** to **repository**.



3. Restart the **smb** service.

```
/etc/init.d/smb restart
```

Configure the Cuckoo Sandbox

On the Cuckoo Sandbox, you need to create a script file.

1. Connect to the Cuckoo Sandbox through SSH.
2. Create a directory named **/mnt/rsamalware**.
3. Create a script file named **rsamalware.sh** in Cuckoo's **utils** directory, and set executable permission for the file.
4. Enter the following code into the script file using a text editor (replace ***your_rsa_malware*** with the IP

address for your RSA Malware Analysis service):

```
#!/bin/bash

df -h | grep -i malware
RESULT=$?

if [ $RESULT -eq 1 ]; then

        echo Not mounted.
        echo Mounting...
        mount -t cifs //your_rsa_malware/repository /mnt/rsamalware/ -o guest
        RESULT=$?

        if [ $RESULT -eq 0 ]; then

                df -h | grep -i malware
                echo Mounted successfully

                find /mnt/rsamalware/ -mmin -5 -type f | while read line; do

                python submit.py $line
                sleep 30

                done

        fi

        else echo Is mounted.

        find /mnt/rsamalware/ -mmin -5 -type f | while read line; do

        python submit.py $line
        sleep 30

        done

fi
```

Run the Script Periodically

Finally, add a cron job to run the script periodically, for example every 5 minutes. You can change the period based on the demands of your installation.

In the following procedure, we set the frequency so the script runs every 5 minutes.

1. Open a terminal on your Cuckoo sandbox.
2. Run the following command:

   ```
   crontab -e
   ```

   This opens crontab in a vim editor.

3. Press 'i' to enter edit mode, and navigate to the final line in the file.
4. Copy the following line into the editor:

   ```
   */5 * * * * /utils/rsamalware.sh
   ```

   This runs the script every 5 minutes.
5. Press the Escape key, then enter **:wq!** to save your work and close the vim editor.

   The following message is displayed, indicating that the job is installing correctly:

   ```
   crontab: installing new crontab
   ```

The job will run every 5 minutes.

Script Contents

Below is the text version of the **rsamalware.sh** script. You can copy this code when you are editing your file.

> **Note:** Replace the example IP address, **10.100.255.255**, with the IP address of your RSA Malware Analysis service.

```
#!/bin/bash

df -h | grep -i malware
RESULT=$?

if [ RESULT -eq 1 ]; then

      echo Not mounted.
      echo Mounting...
      mount -t cifs //10.100.255.255/repository /mnt/rsamalware/ -o guest
      RESULT=$?

      if [ $RESULT -eq 0 ]; then

            df -h | grep -i malware
            echo Mounted successfully

            find /mnt/rsamalware/ -mmin -5 -type f | while read line; do

            python submit.py $line
            sleep 30

            done

      fi

      else echo Is mounted.

      find /mnt/rsamalware/ -mmin -5 -type f | while read line; do

      python submit.py $line
      sleep 30

      done

fi
```