

Running Nagios and Ansible in an EC2

Goal is to be able to examine stress tests on an EC2 on Nagios. Configuring nagios to monitor the EC2 will be done with anisble

Installing Nagios on EC2

- Set up EC2 as t2.medium w/ 60gb memory
 - For the purpose of this exercise, all traffic is permitted inbound. Otherwise, only permit ports that will be used for monitoring
- Download the Nagios file from the Nagios site to your local machine. Select Linux platform



- Scp from local to EC2

Scp -i path/to/nagios.pem /path/to/xi-5.8.7.tar.gz ubuntu@<publicIP>: /home/ubuntu/

- SSH into Nagios EC2
- Copy paste following into a bash script file. Running this will automatically update ubuntu EC2
 - Update script

```
#!/bin/bash
Sudo apt update
Sudo apt upgrade -y
```
- Ssh-keygen to create new id_rsa and id_rsa.pub keys in ~/.ssh
 - Make new id_rsa pub and priv keys

- To set up environment for nagios with pearl run the following:
 - sudo install make -y
 - Sudo install cpanminus -y
 - sudo cpanm CPAN
 - select defaults then exit
- Reboot then reconnect
 - Sudo systemctl reboot
 - Then reconnect like normal
- Unzip nagios with
 - tar -xvf xi-5.8.7.tar.gz
 - This will include ansible in the installation

Prepping Test EC2 for SSH connection with Nagios EC2

- Sudo su -
 - to log into root
- Cd .ssh
- Nano authorized keys - add in pub key from nagios
 - Ssh into lamp root from nagios to test connection in separate terminal
 - This will allow us to connect to this EC2 with root permissions
- Set up security policy
 - sudo echo "deb http://security.ubuntu.com/ubuntu bionic-security main" | sudo tee -a /etc/apt/sources.list.d/bionic.list
 - Sudo apt update - this updates the security policy
 - apt-cache policy libssl1.0-dev

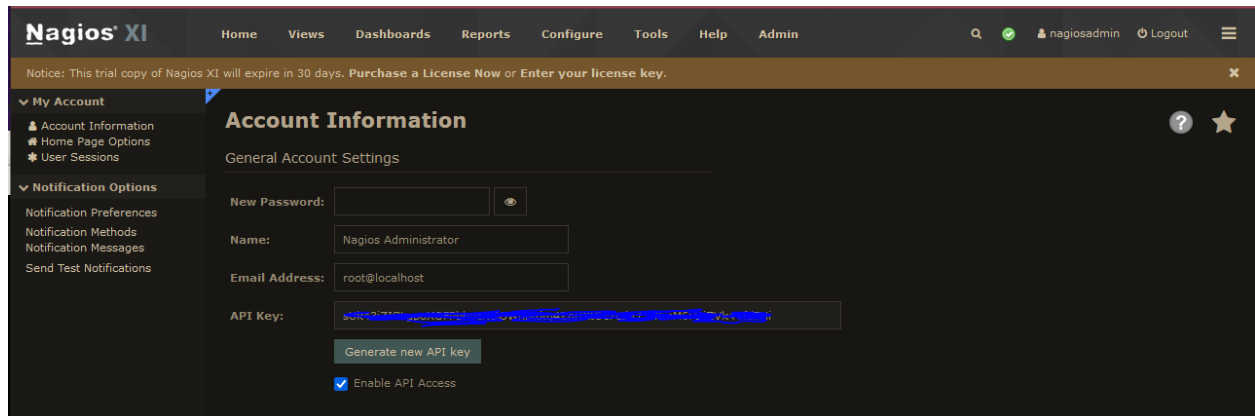
```
libssl1.0-dev:
  Installed: (none)
  Candidate: 1.0.2n-1ubuntu5.7
  Version table:
     1.0.2n-1ubuntu5.7 500
        500 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages
```

Back to Nagios EC2 Terminal

- Cd /usr/local/nagiosxi/scripts/automation/ansible/ncpa_autoregister
- Change the name of hosts.example to hosts with Mv hosts.example hosts
- Sudo nano hosts and add in:
 - [LAMP] <- I am using an EC2 with a LAMP Stack but it can be anything
 - <Private IP> ansible_connection=ssh ansible_user=root
- Optional: Delete the other entries

Now we will use an ansible playbook to configure the Test EC2 on the Nagios UI

- sudo ansible-vault decrypt secrets.yml --ask-vault-pass
 - Password nagiosxi
 - Decrypts secret in secrets.yml to be used
- Edit api key in secrets file with the key from nagios ui
 - Click on nagiosadmin or the name of your account



- Optional: in the secrets.yml, edit the NCPA key to an appropriate name
- Sudo nano ncpa_install_and_register.yml
 - Update the xi_ip: with the private IP of your nagios EC2
- sudo ansible-playbook -i hosts --private-key=/home/ubuntu/.ssh/id_rsa ncpa_install_and_register.yml -u root --ask-vault-pass
 - Password nagiosxi
 - This should add the Test EC2 to the host status page. If you see it there the nthe playbook successfully ran

Back to Test EC2

- Exit root
- Sudo apt install stress
- Run stress tests of your choosing
 - Examples
 - CPU test: stress-ng --cpu 0 -t 1m
 - MEM test: stress-ng --vm 2 --vm-bytes 80%
 - Disk: stress-ng --hdd 1 --hdd-bytes 100%
- While the command runs, go to nagios UI > host status > IP of test EC2> Services tab > component you chose to test> force immediate check
- In a moment it will shoot to critical and a high percentage of use. This will indicate that ansible is able to connect between the nagios EC2 and the test EC2 as well as run commands that ansible has set

Nagios XI Home Views Dashboards Reports Configure Tools Help Admin

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Service Status Detail

CPU
192.168.0.25

Overview

CRITICAL: Percent was 100.00 %

Status Details

Service State:	Critical
Duration:	1s
Service Stability:	Changing
Current Check:	1 of 2
Last Check:	2021-11-13 21:31:56
Next Check:	2021-11-13 21:32:56

Quick Actions

- Disable notifications
- Force an immediate check

Misc
No notes or misc info

Acknowledgements and Comments
No comments or acknowledgements.

You can run any other types of stress test that are included in the stress-ng package. And you will be able to observe the changes in the nagios