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# Rapport : Net Monitoring & Automatisation

Montoro Stéphane • 18/03/2024

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# Vue d'ensemble

## Objectif

Mettre en place une solution d'automatisation et de supervision d'un parc informatique

## Machines concerné

- Ansible (debian)
- Linux (debian)
- Windows Server 2019
- Centreon Central (Red Hat)
- OPNSense

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# L'automatisation avec Ansible

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# Vue global des tâches Ansible

Installation et configuration du service SNMP pour une machine Linux et une machine Windows.

Automatiser l'ajout des machines Windows et Linux dans la supervision Centreon.

Automatisation de la gestion des mots de passe.

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# Installation et configuration SNMP

```
Ansible@Ansible: ~  
PLAY [SNMP Configuration] *****  
  
TASK [SNMP_configure : SNMP Configuration | Linux Tasks] *****  
skipping: [10.0.4.4]  
included: /etc/ansible/roles/SNMP_configure/tasks/snmp_cfg_linux.yml for 10.0.3.2  
  
TASK [SNMP_configure : Linux SNMP Installation] *****  
changed: [10.0.3.2] => (item=snmp)  
changed: [10.0.3.2] => (item=snmpd)  
  
TASK [SNMP_configure : starting Linux SNMP Daemon service] *****  
ok: [10.0.3.2]  
  
TASK [SNMP_configure : SNMP Configuration | Windows Tasks] *****  
skipping: [10.0.3.2]  
included: /etc/ansible/roles/SNMP_configure/tasks/snmp_cfg_windows.yml for 10.0.4.4  
  
TASK [SNMP_configure : Windows SNMP Installation] *****  
changed: [10.0.4.4]  
  
TASK [SNMP_configure : starting Windows SNMP Daemon service] *****  
ok: [10.0.4.4]  
  
PLAY RECAP *****  
10.0.3.2      : ok=3    changed=1    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0  
10.0.4.4      : ok=3    changed=1    unreachable=0    failed=0    skipped=1    rescued=0    ignored=0
```

```
debian@debian: ~  
root@debian:/home/debian# systemctl status snmpd  
● snmpd.service - Simple Network Management Protocol (SNMP) Daemon.  
   Loaded: loaded (/lib/systemd/system/snmpd.service; enabled; preset: enabled)  
   Active: active (running) since Mon 2024-03-18 02:20:59 CET; 1min 6s ago  
     Main PID: 2736 (snmpd)  
       Tasks: 1 (limit: 2286)  
      Memory: 3.4M  
         CPU: 127ms  
    CGroup: /system.slice/snmpd.service  
            └─2736 /usr/sbin/snmpd -Low -u Debian-snmp -g Debian-snmp -I -smux mteTris>  
  
mars 18 02:20:58 debian systemd[1]: Starting snmpd.service - Simple Network Management>  
mars 18 02:20:59 debian systemd[1]: Started snmpd.service - Simple Network Management >  
lines 1-12/12 (END)
```

# Ajout de machines sur Centreon

Configuration > Hosts

March 17, 2024 9:25 PM

Name	Hostgroup	Poller	Template	Status
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

More actions...  30

<input type="checkbox"/>	Name	Alias	IP Address / DNS	Poller	Templates	Status	Options
<input type="checkbox"/>	Centreon-central	Centreon-central	localhost	Central	App-Monitoring-Centreon-Central	ENABLED	<input type="text" value="1"/>

More actions...  30

More actions...  30

<input type="checkbox"/>	Name	Alias	IP Address / DNS	Poller	Templates	Status	Options
<input type="checkbox"/>	Centreon-central	Centreon-central	localhost	Central	App-Monitoring-Centreon-Central	ENABLED	<input type="text" value="1"/>
<input type="checkbox"/>	linux	linux server	10.0.4.2	Central	OS-Linux-SNMP-custom	ENABLED	<input type="text" value="1"/>
<input type="checkbox"/>	windows	windows server	10.0.4.2	Central	OS-Windows-SNMP-custom	ENABLED	<input type="text" value="1"/>

More actions...  30

```
Activités Terminal 18 mars 02:27 fr, [Icons]
ansible@Ansible: ~
PLAY [Centreon Supervision] *****
TASK [centreon_supervise : Centreon Supervision | Linux Tasks] *****
skipping: [10.0.4.4]
included: /etc/ansible/roles/centreon_supervise/tasks/centreon_supervision_linux.yml for 10.0.3.2
TASK [centreon_supervise : Check Linux SNMP service is running] *****
ok: [10.0.3.2]
TASK [centreon_supervise : Add host to Centreon] *****
changed: [10.0.3.2 -> 10.0.4.2]
TASK [centreon_supervise : Centreon Supervision | Windows Tasks] *****
skipping: [10.0.3.2]
included: /etc/ansible/roles/centreon_supervise/tasks/centreon_supervision_windows.yml for 10.0.4.4
TASK [centreon_supervise : Check Windows SNMP service is running] *****
ok: [10.0.4.4]
TASK [centreon_supervise : Add Windows host to Centreon] *****
changed: [10.0.4.4 -> 10.0.4.2]
PLAY RECAP *****
10.0.3.2 : ok=3 changed=1 unreachable=0 failed=0 skipped=1 rescued=0 ignored
=0
10.0.4.4 : ok=3 changed=1 unreachable=0 failed=0 skipped=1 rescued=0 ignored
=0
```

# Automatisation gestion des mots de passe

Brad, dougdoug, Linux



Brad, 057F51NioinEstwvkJ, Linux

```
Activités Terminal 18 mars 02:40 fr, [icons]
ansible@Ansible: ~
TASK [password_gestion : debug] *****
ok: [localhost] => {
  "msg": "057F51NioinEstwvkJ"
}

TASK [password_gestion : Update password in CSV file] *****
skipping: [localhost] => (item={'username': 'josiane', 'password': 'K$0=VYvHQslr8*4v$', 'os': 'Linux'})
skipping: [localhost] => (item={'username': 'boulet', 'password': 'RvugtK1ZV6Q5AjC1St', 'os': 'Linux'})
skipping: [localhost] => (item={'username': 'jasmine', 'password': 'T6Or4K1Ws0ks08puFB', 'os': 'Windows'})
changed: [localhost] => (item={'username': 'Brad', 'password': 'dougdoug', 'os': 'Linux'})
skipping: [localhost] => (item={'username': 'Katrine', 'password': 'Oq06ujnDUBuNu2p31o', 'os': 'Windows'})

TASK [password_gestion : change Brad's password for Linux] *****
[DEPRECATION WARNING]: Encryption using the Python crypt module is deprecated. The Python crypt module is
deprecated and will be removed from Python 3.13. Install the passlib library for continued encryption
functionality. This feature will be removed in version 2.17. Deprecation warnings can be disabled by setting
deprecation_warnings=False in ansible.cfg.
changed: [localhost -> 10.0.3.2]

TASK [password_gestion : change Brad's password for Windows] *****
skipping: [localhost]

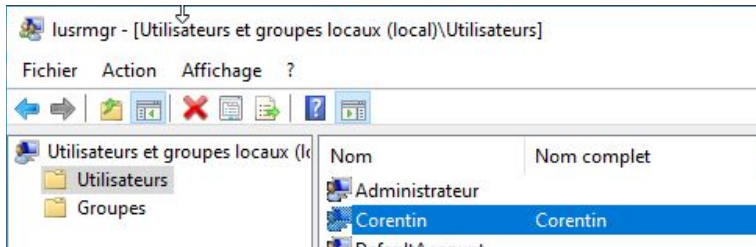
PLAY RECAP *****
localhost : ok=10  changed=2  unreachable=0  failed=0  skipped=1  rescued=0  ignored
=0

root@Ansible:/etc/ansible#
```

# Action ajoutée

## Création d'utilisateur Windows/Linux

La création d'utilisateur sur des machines Windows/Linux a été implémenté.



```
Activités Terminal 18 mars 02:49 fr, [icons] [search] [menu] [close]
ansible@Ansible: ~
[user_creation : pause]
Select an username :
Corentin^Mok: [localhost]

TASK [user_creation : Choose an username] *****
ok: [localhost]

TASK [user_creation : Generate new random password] *****
ok: [localhost]

TASK [user_creation : Create Linux User] *****
skipping: [localhost]

TASK [user_creation : Create Windows User] *****
changed: [localhost -> 10.0.4.4]

TASK [user_creation : Add User Credentials to CSV file] *****
changed: [localhost]

PLAY RECAP *****
localhost : ok=7 changed=2 unreachable=0 failed=0 skipped=
1 rescued=0 ignored=0

root@Ansible:/etc/ansible#
```



# Axes d'amélioration

1. Augmenter la sécurité du fichier contenant les mots de passe avec ansible-vault
2. Ajouter l'automatisation de la suppression/édition d'utilisateurs
3. Mise à jour de certains modules

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# Merci

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