Epreuve E4 Mission

Mise en place de Nagios et de ses extensions

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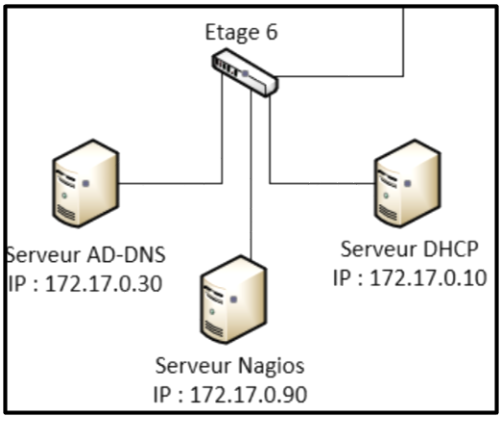
1) Ajout du serveur au domaine et connection utilisateur AD



Installation des paquets

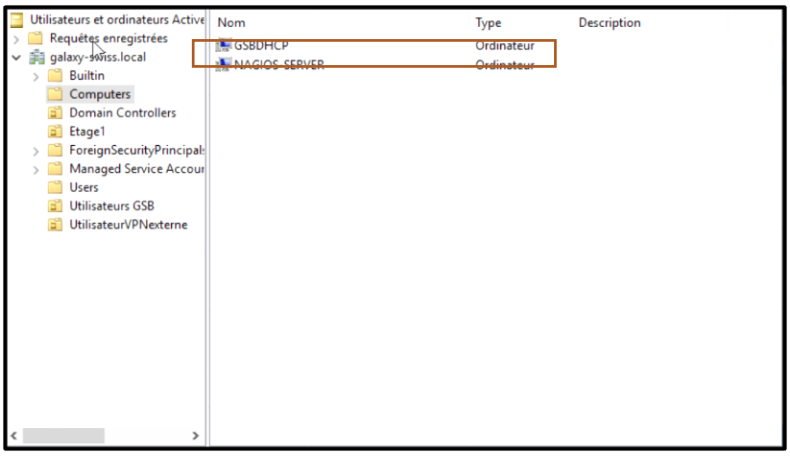
```
root@Nagios-Server:~# apt install realmd sssd sssd-tools libnss-sss libpam-sss
adcli samba-common-bin oddjob oddjob-mkhomedir packagekit
```

Test de communication du domaine

```
root@Nagios-Server:~# realm discover galaxy-swiss.local
galaxy-swiss.local
  type: kerberos
  realm-name: GALAXY-SWISS.LOCAL
  domain-name: galaxy-swiss.local
  configured: no
  server-software: active-directory
  client-software: sssd
  required-package: sssd-tools
  required-package: sssd
  required-package: libnss-sss
  required-package: libpam-sss
  required-package: adcli
  required-package: samba-common-bin
root@Nagios-Server:~#
```

Ajout de la machine dans le domaine :

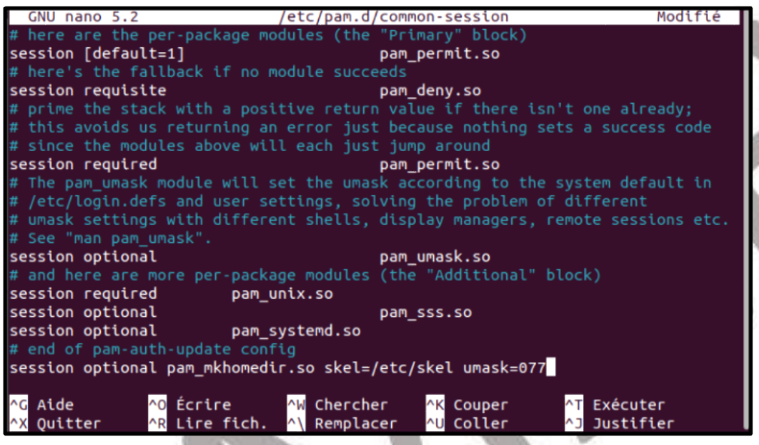
```
root@Nagios-Server:~# realm join --user=JFMARTIN galaxy-swiss.local
Password for JFMARTIN:
root@Nagios-Server:~#
```



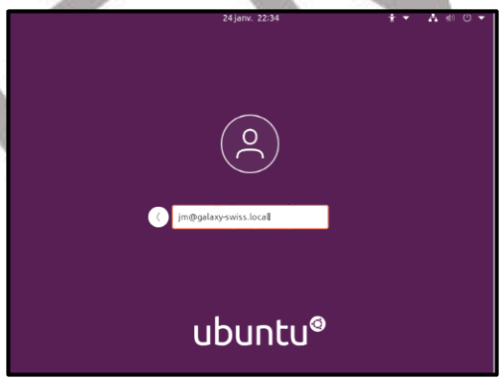
Connection aux utilisateurs AD et création automatique du répertoire home

Création automatique du fichier home via /etc/pam.d/common-session

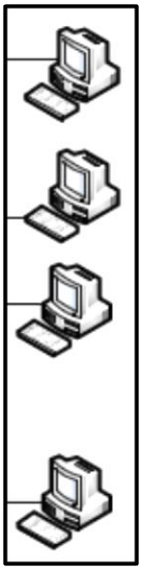
Ajout de la ligne : *session optional pam_mkhomedir.so skel=/etc/skel umask=077*



Connection à l'utilisateur :



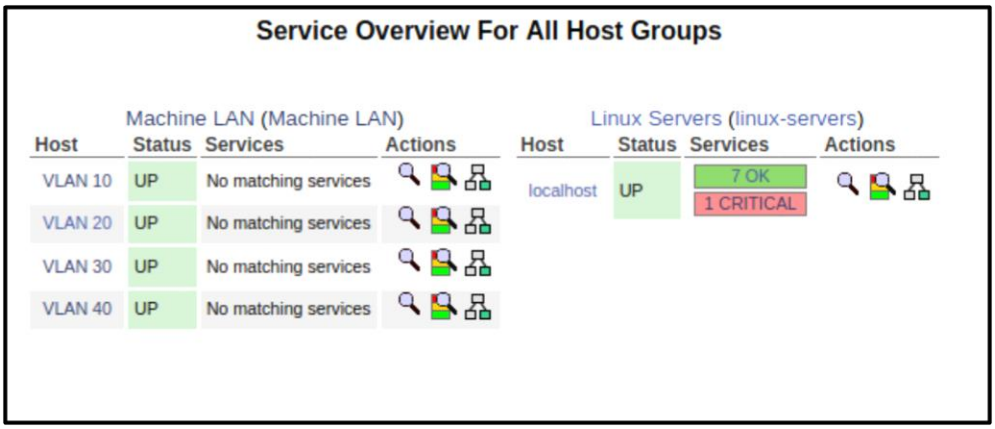
2) Mise en place Nagios disque et supervision via NCPA



Apres l'installation de la version 4.6.4 de Nagios il faut mettre en places la supervision :

- Ping des machines :

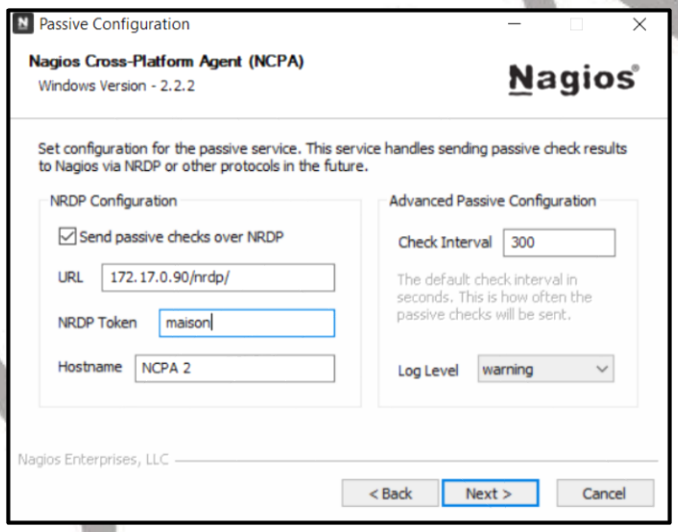
```
  GNU nano 5.2                    /etc/nagios4/objects/pclan.cfg
define hostgroup{
        hostgroup_name  Machine LAN ; The name of the hostgroup
        alias           Machine LAN ; Long name of the group
        members         VLAN 10,VLAN 20,VLAN 30,VLAN 40
        }


define host{
        use             linux-server  ; Inherit default values from a template
        host_name       VLAN 10       ; The name we're giving to this host
        alias           VLAN 10       ; A longer name associated with>
        address         192.168.10.11     ; IP address of the host
        }

define host{
        use             linux-server  ; Inherit default values from a template
        host_name       VLAN 20       ; The name we're giving to this host
        alias           VLAN 20       ; A longer name associated with>
        address         192.168.20.11     ; IP address of the host
        }

define host{
        use             linux-server  ; Inherit default values from a template
        host_name       VLAN 30       ; The name we're giving to this host
        alias           VLAN 310       ; A longer name associated with>
        address         192.168.30.11     ; IP address of the host
        }

define host{
        use             linux-server  ; Inherit default values from a template
        host_name       VLAN 40       ; The name we're giving to this host
        alias           VLAN 40       ; A longer name associated with>
        address         192.168.40.11     ; IP address of the host
        }
```



- Installation Serveur NRDP + token

```
 GNU nano 5.2                  /usr/local/nrdp/server/config.inc.php
<?php
//
// NRDP Config File
//
// Copyright (c) 2010-2017 - Nagios Enterprises, LLC.
// License: Nagios Open Software License <http://www.nagios.com/legal/licenses>
//

// An array of one or more tokens that are valid for this NRDP install
// a client request must contain a valid token in order for the NRDP to response or honor the>
// NOTE: Tokens are just alphanumeric strings - make them hard to guess!
$cfg['authorized_tokens'] = array(
    //"mysecrettoken",  // <-- not a good token
    //"90dfs7jwn3",   // <-- a better token (don't use this exact one, make your own)
      "maison" , <-- token
);
```

On installe NCPA plugin sur chaque machine



Rajout du plugin check_ncpa.py et création de la commande

```
define command {
    command_name    check_ncpa
    command_line    $USER1$/check_ncpa.py -H $HOSTADDRESS$ $ARG1$
}
```

Définition du service :

```
define host {
    host_name                   VLAN40
    hostgroups                  Supervision LAN
    address                     192.168.40.11
    check_command               check_ncpa!-t 'maison' -P 5693 -M system/agent_version
    max_check_attempts          5
    check_interval              5
    retry_interval              1
    check_period                24x7
    contacts                    nagiosadmin
    notification_interval       60
    notification_period         24x7
    notifications_enabled       0
    register                    1
}

define service {
    host_name                   VLAN40
    service_description         CPU Usage
    check_command               check_ncpa!-t 'maison' -P 5693 -M cpu/percent -w 75 -c 85 -q 'aggreate=avg'
    max_check_attempts          5
    check_interval              5
    retry_interval              1
    check_period                24x7
    contacts                    nagiosadmin
    notification_interval       60
    notification_period         24x7
    notifications_enabled       0
    register                    1
}

define service {
    host_name                   VLAN40
    service_description         Memory Usage
    check_command               check_ncpa!-t 'maison' -P 5693 -M memory/virtual -u G
    max_check_attempts          5
    check_interval              5
    retry_interval              1
    check_period                24x7
    contacts                    nagiosadmin
    notification_interval       60
    notifcation_period          24x7
    notifications_enabled       0
    register                    1
}
```

Service Status Details For Host 'VLAN40'

mit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
VLAN40	CPU Usage	OK	01-25-2021 16:14:32	0d 0h 4m 22s	1/5	OK: Percent was 2.90 %
	Memory Usage	OK	01-25-2021 16:17:05	0d 0h 1m 49s	1/5	OK: Used memory was 73.90 % (Available: 0.56 GB, Total: 2.15 GB, Free: 0.56 GB, Used: 1.59 GB)

Rajout disque dur :

```
define service {
    host_name                   VLAN40
    service_description         Disk C
    check_command               check_ncpa! -H 192.168.40.11 -t maison -P 5693 -M 'disk/logical/C:|/free' -w
    max_check_attempts          5
    check_interval              5
    retry_interval              1
    check_period                24x7
    contacts                    nagiosadmin
    notification_interval       60
    notification_period         24x7
    notifications_enabled       0
    register                    1
}
```

Host	Service	Status	Last Check	Duration	Attempt	Status Information
VLAN40	CPU Usage	OK	01-25-2021 16:27:45	0d 0h 1m 33s	1/5	OK: Percent was 3.10 %
	Disk C	OK	01-25-2021 16:26:04	0d 0h 3m 14s	1/5	OK: Free was 32.55 GB
	Memory Usage	OK	01-25-2021 16:28:11	0d 0h 1m 7s	1/5	OK: Used memory was 76.40 % (Available: 0.51 GB, Total: 2.15 GB, Free: 0.51 GB, Used: 1.64 GB)

Création pour les 3 autres machines :

Service Overview For All Host Groups

Machine LAN (Machine LAN)

Host	Status	Services	Actions
VLAN 10	UP	No matching services	
VLAN 20	UP	No matching services	
VLAN 30	UP	No matching services	
VLAN 40	UP	No matching services	

Supervision LAN (Supervision LAN)

Host	Status	Services	Actions
VLAN10	UP	3 OK	
VLAN20	UP	3 OK	
VLAN30	UP	3 OK	
VLAN40	UP	3 OK	

Linux Servers (linux-servers)

Host	Status	Services	Actions
localhost	UP	7 OK 1 CRITICAL	

3) Supervision machine client linux via NRPE

Pour superviser une machine linux en dehors du localhost je vais utiliser le protocole NRPE

Tout d'abord je l'installe sur le serveur nagios avec un paquet github puis une compilation

Une fois cela fait je l'autorise le port d'écoute dans UFW

```
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo mkdir -p /etc/ufw/applications.d
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo sh -c "echo '[NRPE]' > /etc/ufw/applications.d/nagios"
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo sh -c "echo 'title=Nagios Remote Plugin Executor' >> /etc/ufw/applications.d/nagios"
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo sh -c "echo 'description=Allows remote execution of Nagios plugins' >> /etc/ufw/applic
ations.d/nagios"
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo sh -c "echo 'ports=5666/tcp' >> /etc/ufw/applications.d/nagios"
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# sudo ufw allow NRPE
La règle a été ajoutée
La règle a été ajoutée (v6)
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# ufw reload
Pare-feu rechargé
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# ufw status
État : actif

Vers                       Action      De
----                       ------      --
137/udp                    ALLOW       Anywhere
138/udp                    ALLOW       Anywhere
139/tcp                    ALLOW       Anywhere
445/tcp                    ALLOW       Anywhere
Apache Full                ALLOW       Anywhere
81/tcp                     ALLOW       Anywhere
444/tcp                    ALLOW       Anywhere
NRPE                       ALLOW       Anywhere
```

Puis je modifie le fichier /usr/local/nagios/etc/nrpe.cfg

Je mets l'ip de la machine dans allowed_hosts

```
allowed_hosts=127.0.0.1,172.17.0.90
```

Puis modifie le dont_blame

```
dont_blame_nrpe=1
```

Puis je démarre le service

Maintenant je vérifie dans un premier temps que la machine localhost répond bien a sont ip de loopback et l'ip ajouté dans le fichier de conf

```
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# /usr/local/nagios/libexec/check_nrpe -H 127.0.0.1
NRPE v4.0.3
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# /usr/local/nagios/libexec/check_nrpe -H 172.17.0.90
NRPE v4.0.3
```

J'ai bien la version qui est donné donc tout est ok

Maintenant je rajoute une machine dans le LAN GSB sous debian 10.8 en ligne de commande pour faire les tests

J'installe le paquet nagios-nrpe-server

Maintenant je paramètre le paquet dans /etc/nagios/nrpe.cfg

Je modifie le allowed_host

```
allowed_hosts=172.17.0.90,::1
```

Puis plus bas je modifie la commande concernant le disque dur pour mettre la partition sda1

```
command[check_sda1]=/usr/lib/nagios/plugins/check_disk -w 20% -c 10% -p /dev/sda1
```

Je redémarre le service

Puis sur le serveur nagios je vérifie que j'ai une réponse de la machine test

```
root@nagios-server:/tmp/nrpe-nrpe-4.0.3# /usr/local/nagios/libexec/check_nrpe -H 192.168.30.12
NRPE v3.2.1
```

J'ai bien une réponse donc la machine peut être supervisé sur Nagios

Je rajoute la commande NRPE sur le serveur nagios dans /usr/local/nagios/etc/objects/command.cfg

```
#NRPE

define command{

command_name check_nrpe
command_line /usr/lib/nagios/plugins/check_nrpe -H $HOSTADDRESS$ -t 30 -c $ARG1$
}
```

Je redemarre nagios, si pas d'erreur je continue

Puis je créer le fichier de conf avec tous les détails de la supervision de la machine test

```
define hostgroup {

    hostgroup_name          NRPE            ; The name of the hostgroup
    alias                   NRPE            ; Long name of the group
    members                 client NRPE             ; Comma separated list of h>
}

define host {

    use                     linux-server            ; Name of host template to >
                                                    ; This host definition will>
                                                    ; in (or inherited by) the >
    host_name               client NRPE
    alias                   client NRPE
    address                 192.168.30.12
}

##Check PING
define service{
        use                             generic-service
        host_name                       client NRPE
        service_description             PING
        check_command               check_ping!100.0,20%!500.0,60%
        }

##Check NRPE sda1
define service{
        use                             generic-service
        host_name                       client NRPE
        service_description             Sda1
        check_command               check_nrpe!check_sda1
        }

##Check NRPE users
define service{
        use                             generic-service
        host_name                       client NRPE
        service_description             Users
        check_command               check_nrpe!check_users
        }

##Check NRPE load
define service{
        use                             generic-service
        host_name                       client NRPE
        service_description             Load
        check_command               check_nrpe!check_load
        }
```

Puis j'ajoute le plugin dans /usr/lib/nagios/plugins suite à une erreur

```
cp check_nrpe /usr/lib/nagios/plugins/
```

Je redémarre nagios

client NRPE	Load	OK	05-16-2021 14:59:17	0d 0h 10m 48s+	1/3	OK - load average: 0.00, 0.00, 0.00
	PING	OK	05-16-2021 15:01:24	0d 0h 10m 48s+	1/3	PING OK - Paquets perdus = 0%, RTA = 2.14 ms
	Sda1	OK	05-16-2021 14:55:09	0d 0h 10m 48s+	1/3	DISK OK - free space: / 673 MB (37% inode=72%):
	Total Procs	OK	05-16-2021 14:57:16	0d 0h 10m 48s+	1/3	PROCS OK: 92 processes
	Users	OK	05-16-2021 14:59:22	0d 0h 10m 48s+	1/3	USERS OK - 1 users currently logged in

Puis j'ajoute les graphs (expliqué plus tard)

```
##Check PING
define service{
        use                             generic-service,graphed-service
        host_name                       client NRPE
        service_description             PING
        check_command                 check_ping!100.0,20%!500.0,60%
        }

##Check NRPE sda1
define service{
        use                             generic-service,graphed-service
        host_name                       client NRPE
        service_description             Sda1
        check_command                 check_nrpe!check_sda1
        }

##Check NRPE users
define service{
        use                             generic-service,graphed-service
        host_name                       client NRPE
        service_description             Users
        check_command                 check_nrpe!check_users
        }
```

Host	Service	Status
client NRPE	Load	OK
	PING	OK
	Sda1	OK
	Total Procs	OK
	Users	OK

Je fais pareil pour toute les machines linux du réseau

Pour les machines qui ont des firewalls sur la route, je dois rajouter l'IP du firewall dans allowed_hosts pour laisser passer le traffic

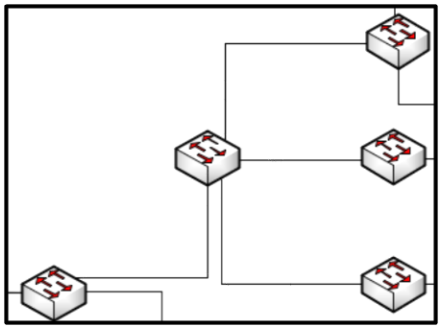
```
allowed_hosts=172.17.0.90,172.20.1.254,172.21.1.254,172.21.1.1,172.21.1.2,::1
```

Je redémarre le service et je rajoute chaque machine dans nagios sur le même modèle que client NRPE en pensant selon la machine à ajouter les IP des FW (les warnings et critical sont normaux)

NRPE (NRPE)

Host	Status	Services	Actions
BDD-backup	UP	5 OK	
BDD-master	UP	5 OK	
LB-int	UP	5 OK	
Server WEB	UP	5 OK	
Server WEB RED	UP	5 OK	
Server WEB ext	UP	4 OK 1 WARNING	
Server WEB ext RED	DOWN	5 CRITICAL	
client NRPE	UP	5 OK	

4) Supervision switch virtuel via SNMP



Activation du protocole SNMP sur les switch

```
snmp-server community public RO
```

Ajout d'une IP à chaque switch/routeur dans le VLAN26 pour isoler les VLAN et mieux sécuriser

SWetage6 : 172.17.0.80 255.255.255.0

SWArchi : 172.17.0.81 255.255.128.0

SWEtage1 : 172.17.0.82 255.255.128.0

SWEtage4 : 172.17.0.83 255.255.128.0

SWEtage5 : 172.17.0.84 255.255.128.0

Routeur : 172.17.0.85 255.255.128.0

Création de la commande dans /etc/nagios4/objects/commands.cfg

```
define command{

command_name    check_snmp_int

command_line    /usr/lib/nagios/plugins/check_snmp_int.pl -H $HOSTADDRESS$ -C $ARG1$ -n $ARG2$ -v 2c

}
```

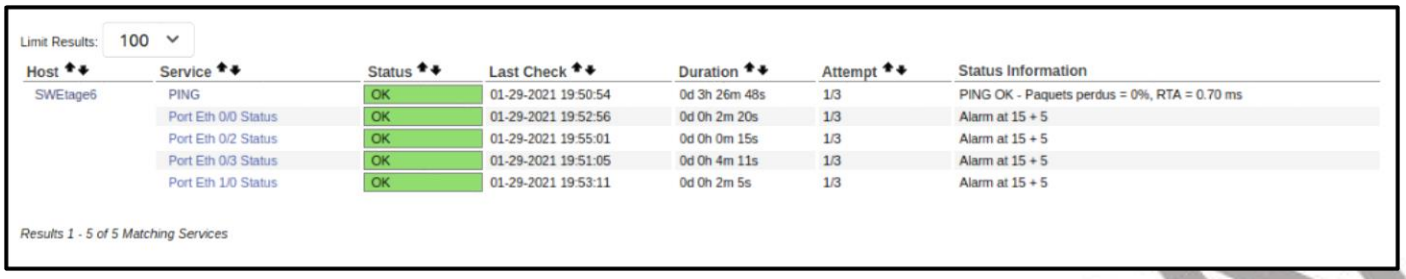
Création du fichier Host avec host,hostgroup et service

```
define host{
        use             generic-switch          ; Inherit default values from a template
        host_name       SWEtage6                ; The name we're giving to this switch
        alias           SWEtage6                ; A longer name associated with the switch
        address         172.17.0.80             ; IP address of the switch
        hostgroups      switches                ; Host groups this switch is associated with
        }
```

```
define service{
        use                     generic-service ; Inherit values from a template
        host_name               SWEtage6        ; The name of the host the service is associated with
        service_description     PING            ; The service description
        check_command           check_ping!200.0,20%!600.0,60%  ; The command used to monitor the service
        check_interval  5               ; Check the service every 5 minutes under normal conditions
        retry_interval  1               ; Re-check the service every minute until its final/hard state is determined
        }
```

```
define service{
        use                     generic-service ; Inherit values from a template
        host_name               SWEtage6
        service_description     Port Eth 0/0 Status
        check_command           check_snmp_int!public!Ethernet0/0
        }
```

Répétition pour les autres interfaces du switch

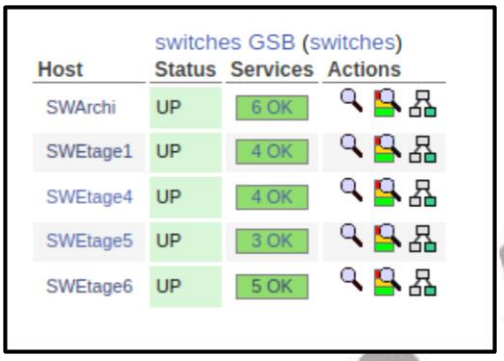


Limit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
SWEtage6	PING	OK	01-29-2021 19:50:54	0d 3h 26m 48s	1/3	PING OK - Paquets perdus = 0%, RTA = 0.70 ms
	Port Eth 0/0 Status	OK	01-29-2021 19:52:56	0d 0h 2m 20s	1/3	Alarm at 15 + 5
	Port Eth 0/2 Status	OK	01-29-2021 19:55:01	0d 0h 0m 15s	1/3	Alarm at 15 + 5
	Port Eth 0/3 Status	OK	01-29-2021 19:51:05	0d 0h 4m 11s	1/3	Alarm at 15 + 5
	Port Eth 1/0 Status	OK	01-29-2021 19:53:11	0d 0h 2m 5s	1/3	Alarm at 15 + 5

Results 1 - 5 of 5 Matching Services

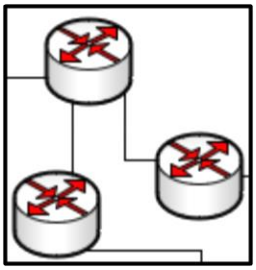
Répétitions pour les autres switches :



switches GSB (switches)

Host	Status	Services	Actions
SWArchi	UP	6 OK	
SWEtage1	UP	4 OK	
SWEtage4	UP	4 OK	
SWEtage5	UP	3 OK	
SWEtage6	UP	5 OK	

5) Supervision routeur virtuel



Ajout d'une adresse de Loopback

```
interface Loopback0
 ip address 172.25.1.5 255.255.255.0
```

Et d'une commande d'accès interface

```
logging source-interface Loopback0
```

Ajouté à Nagios

Host	Service	Status	Last Check	Duration	Attempt	Status Information
Routeur	PING	OK	02-01-2021 23:27:27	0d 0h 6m 25s	1/3	PING OK - Paquets perdus = 0%, RTA = 1.64 ms
	Port Eth 0/0 Status	OK	02-01-2021 23:24:56	0d 0h 3m 56s	1/3	Alarm at 15 + 5
	Port Eth 0/1.10 Status	OK	02-01-2021 23:27:19	0d 0h 1m 33s	1/3	Alarm at 15 + 5

Puis j'ajoute toutes les interfaces virtuelles

Routeur	PING	OK	05-05-2021 14:45:17	0d 0h 19m 0s	1/3	PING OK - Paquets perdus = 0%, RTA = 1.36 ms
	Port Eth 0/0 Status	OK	05-05-2021 14:48:29	0d 0h 20m 45s	1/3	Alarm at 15 + 5
	Port Eth 0/1 Status	OK	05-05-2021 14:40:35	0d 0h 18m 39s	1/3	Alarm at 15 + 5
	Port Eth 0/1.10 Status	OK	05-05-2021 14:42:45	0d 0h 16m 32s	1/3	Alarm at 15 + 5
	Port Eth 0/1.20 Status	OK	05-05-2021 14:44:51	0d 0h 14m 26s	1/3	Alarm at 15 + 5
	Port Eth 0/1.30 Status	OK	05-05-2021 14:48:34	0d 0h 20m 40s	1/3	Alarm at 15 + 5
	Port Eth 0/1.300 Status	OK	05-05-2021 14:40:40	0d 0h 18m 34s	1/3	Alarm at 15 + 5
	Port Eth 0/1.40 Status	OK	05-05-2021 14:42:50	0d 0h 16m 27s	1/3	Alarm at 15 + 5

Puis je fais de même pour tous les routeurs

Routerdesortie	UP	3 OK	
Routeur	UP	8 OK	

6) Supervision internet

```
define hostgroup {

    hostgroup_name          Internet            ; The name of the hostgroup
    alias                   Internet            ; Long name of the group
    members                 Google                ; Comma separated list of hosts that belong to this group
}

define host {

    use                     linux-server            ; Name of host template to use
                                                    ; This host definition will inherit all variables that are defined
                                                    ; in (or inherited by) the linux-server host template definition.
    host_name               Google
    alias                   Google
    address                 8.8.8.8
}
```

Host	Status	Last Check	Duration	Status Information
Google	UP	02-10-2021 18:33:25	0d 0h 0m 11s+	PING OK - Paquets perdus = 0%, RTA = 19.40 ms

7) Ajout des serveurs via NCPA

Ajout des serveurs sur le modèle de NCPA et pour Nagios Log Server juste l'ajout d'un host

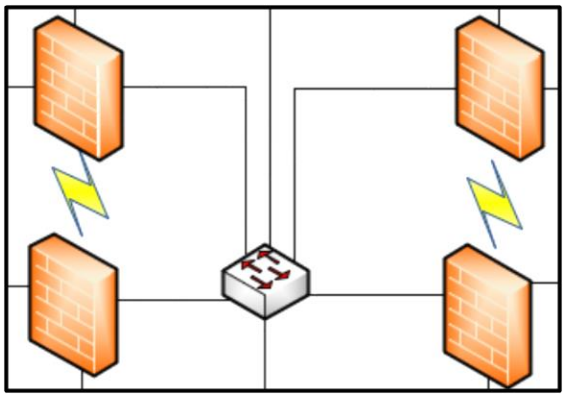
Servers (Servers)

Host	Status	Services	Actions
AD/DNS/DHCP-Server	UP	4 OK	
Nagios-Server	UP	7 OK	
NagiosLogs-Server	UP	No matching services	
Redondance-Server	UP	3 OK	

Host	Service	Status	Last Check	Duration	Attempt	Status Information
AD/DNS/DHCP-Server	CPU Usage	OK	02-10-2021 18:56:11	0d 0h 4m 12s	1/5	OK: Percent was 0.00 %, 0.00 %, 0.00 %, 0.00 %, 0.00 %, 0.00 %
	Disk C	OK	02-10-2021 19:00:01	0d 0h 5m 48s	1/5	OK: Free was 41.48 GB
	Disk Partage A	OK	02-10-2021 18:58:53	0d 0h 1m 30s	1/5	OK: Free was 107.27 GB
	Memory Usage	OK	02-10-2021 18:56:18	0d 0h 4m 5s	1/5	OK: Used memory was 63.10 % (Available: 0.79 GB, Total: 2.15 GB, Free: 0.79 GB, Used: 1.35 GB)

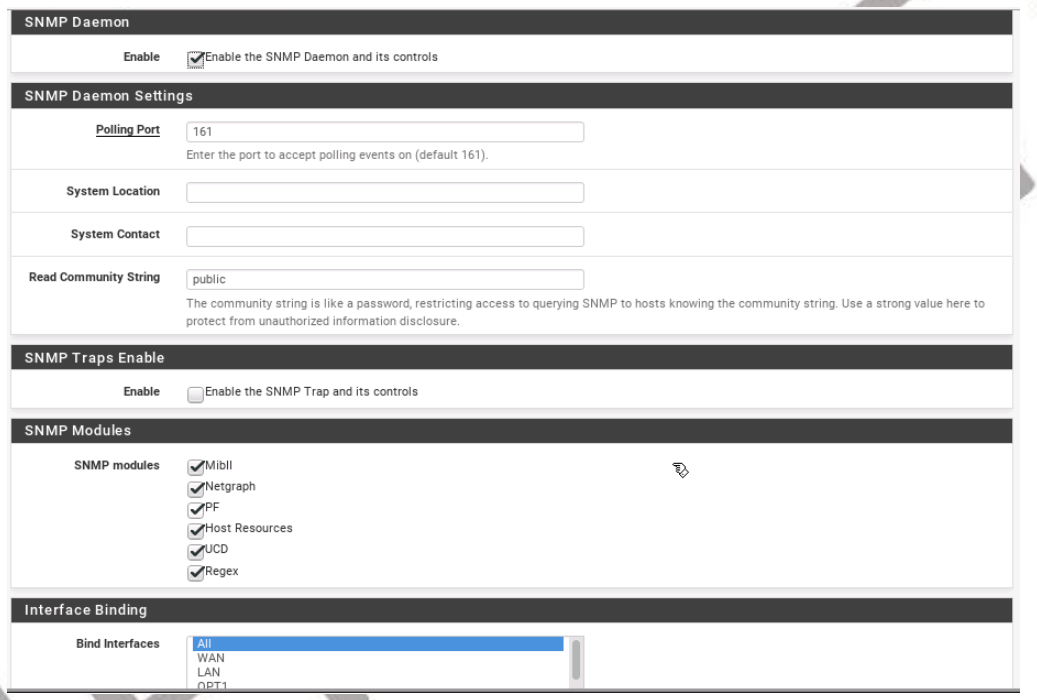
Host	Service	Status	Last Check	Duration	Attempt	Status Information
Redondance-Server	CPU Usage	OK	02-10-2021 18:58:53	0d 0h 12m 7s	1/5	OK: Percent was 9.40 %, 34.40 %, 0.00 %, 0.00 %, 0.00 %, 17.10 %
	Disk C	OK	02-10-2021 18:56:42	0d 0h 14m 18s	1/5	OK: Free was 41.25 GB
	Memory Usage	OK	02-10-2021 18:58:53	0d 0h 12m 7s	1/5	OK: Used memory was 56.80 % (Available: 0.93 GB, Total: 2.15 GB, Free: 0.93 GB, Used: 1.22 GB)

8) Supervision Firewalls



Pour superviser mes Firewalls je vais aussi utiliser le protocole SNMP

J'active le SNMP sur les firewalls



Puis je paramètre je firewall dans firewall.cfg

```
define service {

    use                     generic-service
    host_name               Firewall INT
    service_description     LAN
    check_command           check_snmp_int!public!em0
    }

define service {

    use                     generic-service
    host_name               Firewall INT
    service_description     WAN
    check_command           check_snmp_int!public!em2
    }

define service {

    use                     generic-service
    host_name               Firewall INT
    service_description     OPT1
    check_command           check_snmp_int!public!em1
    }
```

Puis je redémarre nagios et vérifie le bon fonctionnement

Host	Service	Status	Last Check	Duration	Attempt	Status Information
Firewall INT	LAN	OK	04-23-2021 09:46:06	1d 11h 39m 32s	1/3	Alarm at 15 + 5
	OPT1	OK	04-23-2021 09:38:06	1d 11h 37m 31s	1/3	Alarm at 15 + 5
	WAN	OK	04-23-2021 09:40:07	1d 11h 35m 30s	1/3	Alarm at 15 + 5

Je fais la même chose pour le firewall de redondance

Firewall INT	UP	3 OK	
Firewall INT Redondance	UP	3 OK	

Puis sur les **Firewalls EXT** je fais la même chose en adaptant les IP sur Nagios

Firewall EXT	UP	3 OK	
Firewall EXT Redondance	UP	3 OK	

Vérifications du fonctionnement de tout les Firewalls dans nagios

Firewall EXT	UP	3 OK	
Firewall EXT Redondance	UP	3 OK	
Firewall INT	UP	3 OK	
Firewall INT Redondance	UP	3 OK	

9) Mise en place NagiosGraph (linux)

Installation de nagios graph 1.5.2

Apres compilation de nagios graph et installation des paramètre par default j'ajoute les « data using » nagiosgraph dans nagios .cfg

```
# process nagios performance data using nagiosgraph
process_performance_data=1
service_perfdata_file=/tmp/perfdata.log
service_perfdata_file_template=$LASTSERVICECHECK$||$HOSTNAME$||$SERVICEDESC$||$SERVICEOUTPUT$||$SERVICEPERFDATA$
service_perfdata_file_mode=a
service_perfdata_file_processing_interval=30
service_perfdata_file_processing_command=process-service-perfdata-for-nagiosgraph
# end nagiosgraph configuration
```

Puis la commande nagiosgraph dans commands.cfg

```
# command to process nagios performance data for nagiosgraph
define command {
  command_name process-service-perfdata-for-nagiosgraph
  command_line /usr/local/nagios/libexec/insert.pl
}
# end nagiosgraph configuration
```

Et enfin le service nagiosgraph dans template.cfg

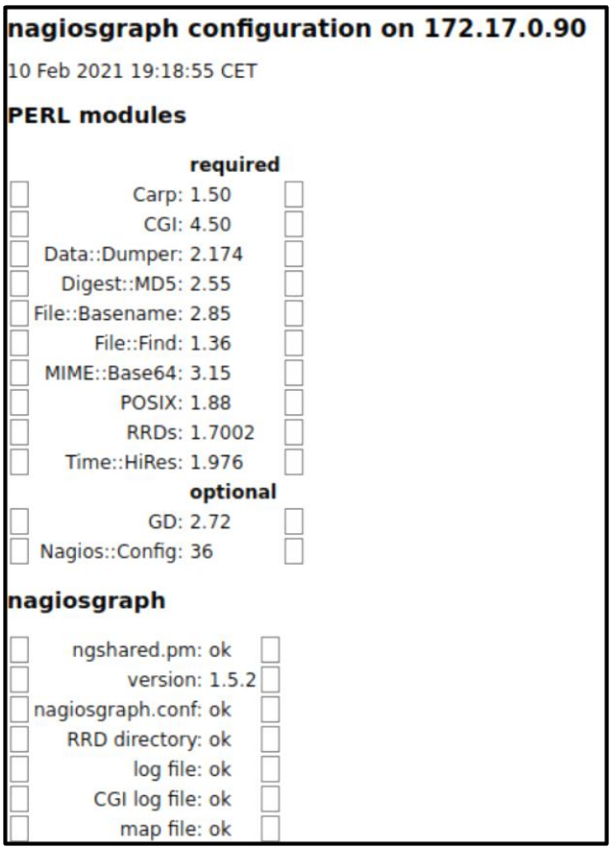
```
define service {

      name              graphed-service

      action_url        /nagios/cgi-bin/show.cgi?host=$HOSTNAME$&service=$SERVICEDESC$' onMouseOver='showGraphPo

      register        0

      }
```

Puis pour le bon fonctionnement des graphs et de tous les outils nagios je rajoute des paquets

Pour RRD : apt install **libnagios-object-perl librrds-perl**

Pour Nagios Config : **perl -MCPAN -e shell** puis **install Nagios::Config**

Et pour l'ensemble des service nagiosgraph : apt install **libnet-snmp-perl libsensors-config libsnmp-base libtalloc2 libtdb1 libwbclient0 snmp whois mrtg libcgi-pm-perl librrds-perl libgd-perl libnagios-object-perl nagios-plugins-contrib**



nagiosgraph configuration on 172.17.0.90

10 Feb 2021 19:18:55 CET

PERL modules

	required	
Carp: 1.50		
CGI: 4.50		
Data::Dumper: 2.174		
Digest::MD5: 2.55		
File::Basename: 2.85		
File::Find: 1.36		
MIME::Base64: 3.15		
POSIX: 1.88		
RRDs: 1.7002		
Time::HiRes: 1.976		
	optional	
GD: 2.72		
Nagios::Config: 36		

nagiosgraph

ngshared.pm: ok
version: 1.5.2
nagiosgraph.conf: ok
RRD directory: ok
log file: ok
CGI log file: ok
map file: ok

Pour finaliser je rajoute un script de graph nagios fournis par le site internet de nagios dans le fichier /usr/local/nagios/etc/nagiosgraph :

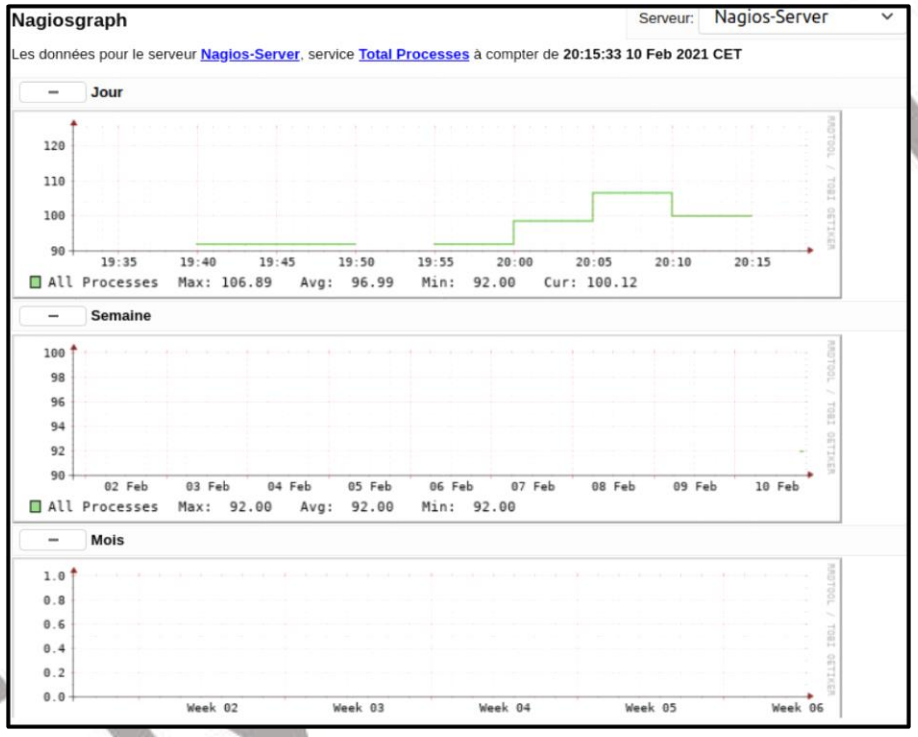
wget https://github.com/mconf/nagios-etc/raw/master/nagiosgraph/ngshared.pm -P /usr/local/nagios/etc/nagiosgraph

J'ajoute le commentaire « graphed-service » sur les services du serveur linux

```
define service {

    use                     local-service,graphed-service          ; Name of service template to use
    host_name               Nagios-Server
    service_description     Root Partition
    check_command           check_local_disk!20%!10%!/
}
```

Puis systemctl restart nagios

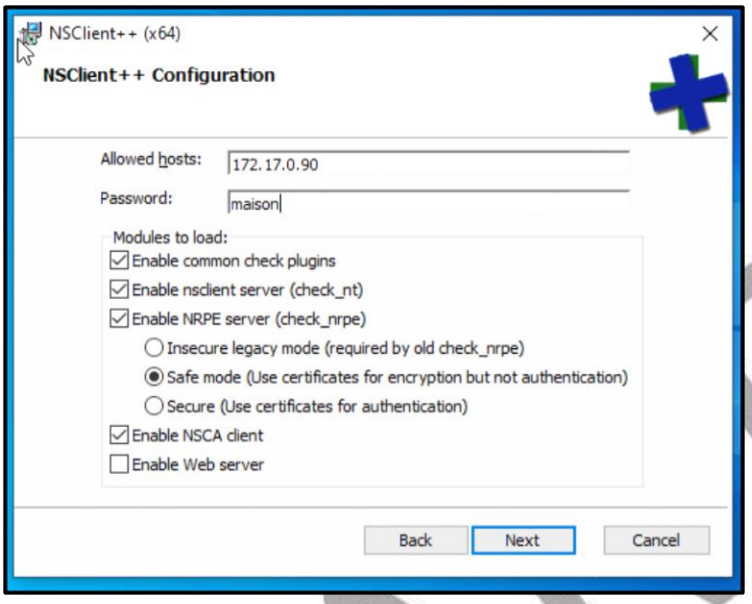
Host	Service	Status	Last Check	Duration	Attempt	Status Information
Nagios-Server	Current Load	OK	02-10-2021 19:19:44	0d 0h 33m 52s	1/4	OK - Charge moyenne: 0.37, 0.29, 0.16
	Current Users	OK	02-10-2021 19:20:02	0d 0h 33m 34s	1/4	UTILISATEURS OK - 1 utilisateurs actuellement connectés sur
	HTTP	OK	02-10-2021 19:17:36	0d 0h 36m 1s	1/4	HTTP OK: HTTP/1.1 200 OK - 11192 octets en 0,000 secondes de temps de réponse
	PING	OK	02-10-2021 19:19:52	0d 0h 33m 44s	1/4	PING OK - Paquets perdus = 0%, RTA = 0.04 ms
	Root Partition	OK	02-10-2021 19:20:02	0d 0h 33m 34s	1/4	DISK OK - free space: / 18825 MiB (67,05% inode=88%):
	Swap Usage	OK	02-10-2021 19:17:43	0d 0h 35m 53s	1/4	SWAP OK - 100% libre (1401 MB sur un total de 1401 MB)
	Total Processes	OK	02-10-2021 19:20:00	0d 0h 33m 36s	1/4	PROCS OK: 90 processus avec ETAT = RSZDT



10) Mise en place NagiosGraph (Windows)

Pour la mise en place sur une machine Windows, j'utiliserais un autre Plugin qui permet d'isoler les machines Windows NSClient ++

Paramétrage du plugin

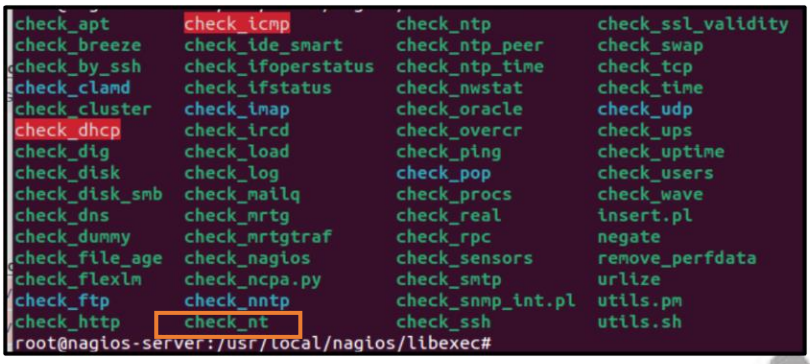


Modification du fichier nsclient.ini (dans C:\Programmes\NSClient++) pour autoriser les divers scripts

```
; in flight - TODO
[/modules]

; Undocumented key
CheckExternalScripts = enabled

; Undocumented key
CheckHelpers = enabled

; Undocumented key
CheckNSCP = enabled

; Undocumented key
CheckDisk = enabled

; Undocumented key
CheckSystem = enabled

; Undocumented key
NSClientServer = enabled

; Undocumented key
CheckEventLog = enabled

; Undocumented key
NSCAClient = enabled

; Undocumented key
NRPEServer = enabled
```

Puis redémarrer le service

La commande check_nt est déjà intégré à Nagios donc je vais l'utiliser



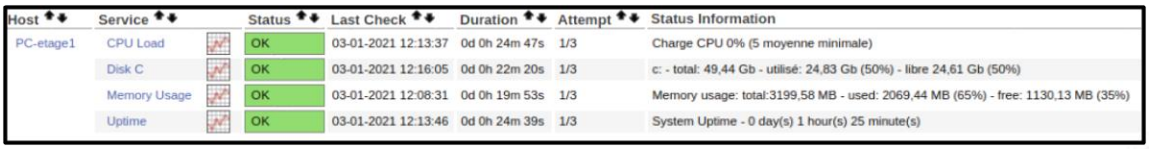
Adaptation de la commande dans command.cfg avec le mot de passe

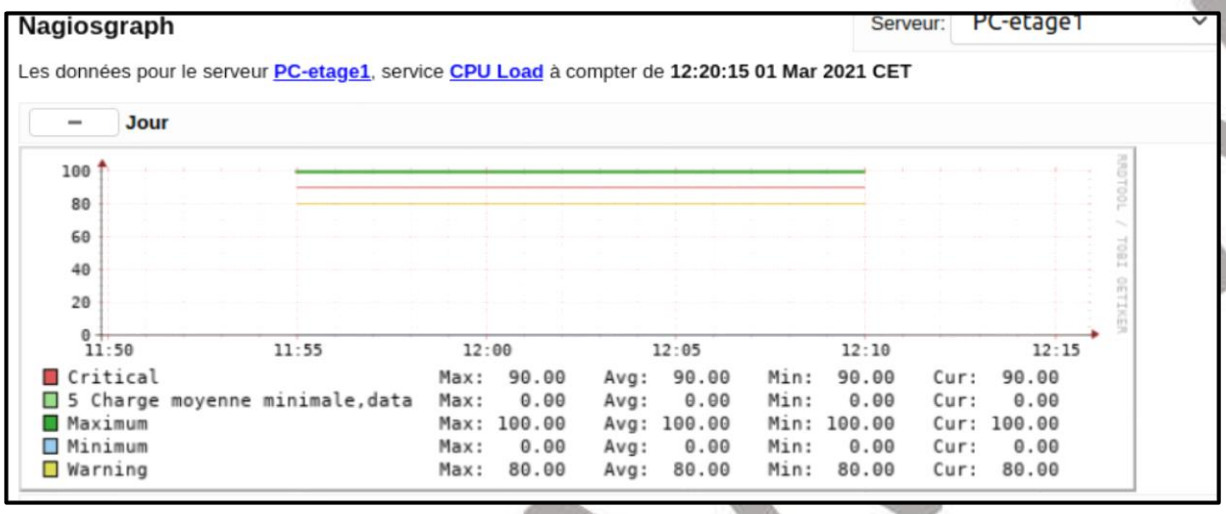
```
define command {

    command_name    check_nt
    command_line    $USER1$/check_nt -H $HOSTADDRESS$ -p 12489 -s maison -v $ARG1$ $ARG2$
}
```

Création du fichier de configuration nsclient.cfg avec plusieurs services **en ajoutant bien les graphs via graphed -service**

```
define hostgroup {

        hostgroup_name          NSclient
        alias                   NSclient
        members                 PC-etage1
}

define host {

        host_name                       PC-etage1
        hostgroups                      NSclient
        address                         192.168.30.10
        check_command                   check_nt!CLIENTVERSION
        max_check_attempts              5
        check_interval                  5
        retry_interval                  1
        check_period                    24x7
        contacts                        nagiosadmin
        notification_interval           60
        notification_period             24x7
        notifications_enabled           1
        register                        1
}

define service {
        use                             generic-service,graphed-service
        host_name                       PC-etage1
        service_description             Uptime
        check_command                   check_nt!UPTIME
}
```

Redémarre de Nagios et vérifications





Ajout de toute les machines du LAN