

TP part 1 :

Installation de puppet :

Sur le serveur puppet master installation, changement du hostname et du fichier hosts et installation des packages :

```

root@puppetmaster:/home/vincent# hostname
puppetmaster
root@puppetmaster:/home/vincent# hostname -f
puppetmaster.iutbeziers.fr

```

```

192.168.1.100    roguel.iutbeziers.fr
192.168.1.200    puppetmaster.iutbeziers.fr    puppetmaster
127.0.0.1        localhost
#127.0.1.1       debian10.linuxvmimages.local    debian10

```

```

# The following lines are desirable for IPv6 capable hosts
::1    localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
~

```

```

root@puppetmaster:/home/vincent# apt install puppetmaster vim-syntastic
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
  libjsoncpp1
Use 'apt autoremove' to remove it.
The following additional packages will be installed:
  augeas-lenses debconf-utils facter fonts-lato hiera libaugeas0
  libboost-log1.67.0 libboost-program-options1.67.0 libboost-regex1.67.0
  libcpp-hocon0.1.7 libfactor3.11.0 libjs-jquery lib Leatherman1.4.2 libruby2.5
  libyaml-cpp0.6 puppet puppet-master rake ruby ruby-augeas ruby-deep-merge
  ruby-did-you-mean ruby-json ruby-minitest ruby-net-telnet ruby-power-assert
  ruby-selinux ruby-shadow ruby-test-unit ruby-xmllrpc ruby2.5
  rubygems-integration vim-addon-manager zip
Suggested packages:
  augeas-doc mcollective-common puppet-common augeas-tools ruby-rrd ruby-hocon
  ri ruby-dev bundler sparse splint cppcheck foodcritic libxml2-utils hlint
  tidy checkstyle closure-linter libperl-critic-perl puppet-lint python-flake8
  pep8 pyflakes pylint chktext lacheck shellcheck
The following NEW packages will be installed:
  augeas-lenses debconf-utils facter fonts-lato hiera libaugeas0
  libboost-log1.67.0 libboost-program-options1.67.0 libboost-regex1.67.0
  libcpp-hocon0.1.7 libfactor3.11.0 libjs-jquery lib Leatherman1.4.2 libruby2.5
  libyaml-cpp0.6 puppet puppet-master puppetmaster rake ruby ruby-augeas
  ruby-deep-merge ruby-did-you-mean ruby-json ruby-minitest ruby-net-telnet
  ruby-power-assert ruby-selinux ruby-shadow ruby-test-unit ruby-xmllrpc
  ruby2.5 rubygems-integration vim-addon-manager vim-syntastic zip
0 upgraded, 36 newly installed, 0 to remove and 26 not upgraded.
Need to get 12.7 MB of archives.
After this operation, 57.8 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://deb.debian.org/debian buster/main amd64 fonts-lato all 2.0-2 [2,698 kB]
Get:2 http://deb.debian.org/debian buster/main amd64 augeas-lenses all 1.11.0-3 [442 kB]
Get:3 http://deb.debian.org/debian buster/main amd64 debconf-utils all 1.5.71 [57.1 kB]
Get:4 http://deb.debian.org/debian buster/main amd64 libboost-program-options1.67.0 amd64 1.

```

Sur le serveur Rogue1, même opération :

```
root@rogue1:/home/vincent# hostname
rogue1
root@rogue1:/home/vincent# hostname -f
rogue1.iutbeziers.fr
```

```
192.168.1.200    puppetmaster.iutbeziers.fr
192.168.1.100    rogue1.iutbeziers.fr      rogue1
127.0.0.1       localhost
#127.0.1.1      debian10.linuxvmimages.local    debian10

# The following lines are desirable for IPv6 capable hosts
::1            localhost ip6-localhost ip6-loopback
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```

```
root@rogue1:/home/vincent# apt install puppet vim-syntastic
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following package was automatically installed and is no longer required:
  libjsoncpp1
Use 'apt autoremove' to remove it.
The following additional packages will be installed:
  augeas-lenses debconf-utils factor fonts-lato hiera libaugeas0
  libboost-log1.67.0 libboost-program-options1.67.0 libboost-regex1.67.0
  libcpp-hocon0.1.7 libfactor3.11.0 libjs-jquery libleatherman1.4.2 libruby2.5
  libyaml-cpp0.6 rake ruby ruby-augeas ruby-deep-merge ruby-did-you-mean
  ruby-json ruby-minitest ruby-net-telnet ruby-power-assert ruby-selinux
  ruby-shadow ruby-test-unit ruby-xmlrpc ruby2.5 rubygems-integration
  vim-addon-manager zip
Suggested packages:
  augeas-doc mcollective-common puppet-common augeas-tools ruby-rrd ruby-hocon
  ri ruby-dev bundler sparse splint cppcheck foodcritic libxml2-utils hlint
  tidy checkstyle closure-linter libperl-critic-perl puppet-lint python-flake8
  pep8 pyflakes pylint chktex lacheck shellcheck
The following NEW packages will be installed:
  augeas-lenses debconf-utils factor fonts-lato hiera libaugeas0
  libboost-log1.67.0 libboost-program-options1.67.0 libboost-regex1.67.0
  libcpp-hocon0.1.7 libfactor3.11.0 libjs-jquery libleatherman1.4.2 libruby2.5
  libyaml-cpp0.6 puppet rake ruby ruby-augeas ruby-deep-merge
  ruby-did-you-mean ruby-json ruby-minitest ruby-net-telnet ruby-power-assert
  ruby-selinux ruby-shadow ruby-test-unit ruby-xmlrpc ruby2.5
  rubygems-integration vim-addon-manager vim-syntastic zip
0 upgraded, 34 newly installed, 0 to remove and 26 not upgraded.
Need to get 12.7 MB of archives.
After this operation, 57.7 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://deb.debian.org/debian buster/main amd64 fonts-lato all 2.0-2 [2,698 kB]
Get:2 http://deb.debian.org/debian buster/main amd64 augeas-lenses all 1.11.0-3 [442 kB]
Get:3 http://deb.debian.org/debian buster/main amd64 debconf-utils all 1.5.71 [57.1 kB]
Get:4 http://deb.debian.org/debian buster/main amd64 libboost-program-options1.67.0 amd64 1.67.0-13+deb10u1 [357 kB]
Get:5 http://deb.debian.org/debian buster/main amd64 libboost-regex1.67.0 amd64 1.67.0-13+deb10u1 [485 kB]
```

Sur le puppetmaster création du fichier site.pp :

```
root@puppetmaster:/home/vincent# mkdir -p /etc/puppet/code/environments/production/manifests
root@puppetmaster:/home/vincent# touch /etc/puppet/code/environments/production/manifests/ /site.pp
```

Sur le rogue1, modification du puppet.conf :

```
root@rogue1:/home/vincent# cat /etc/puppet/puppet.conf
[main]
server=puppetmaster.iutbeziers.fr
ssldir = /var/lib/puppet/ssl

[master]
vardir = /var/lib/puppet
cadir  = /var/lib/puppet/ssl/ca
dns_alt_names = puppet
root@rogue1:/home/vincent#
```

Passons maintenant aux certificats.

Sur le rogue1, création des certificats :

```
root@rogue1:/home/vincent# puppet agent -t
Info: Creating a new SSL key for rogue1.iutbeziers.fr
Info: Caching certificate for ca
Info: csr_attributes file loading from /etc/puppet/csr_attributes.yaml
Info: Creating a new SSL certificate request for rogue1.iutbeziers.fr
Info: Certificate Request fingerprint (SHA256): 3C:01:28:44:5A:A2:1C:EC:B5:63:F9:01:89:A4:69:85:66:4D:0E:FE:A9:E1:08:1D:FA:46:CF:6D:52:EE:05:5C
Info: Caching certificate for ca
Exiting; no certificate found and waitforcert is disabled
```

Vérifications du certificat sur le puppetmaster :

```
root@puppetmaster:/home/vincent# puppet cert list
Warning: `puppet cert` is deprecated and will be removed in a future release.
(location: /usr/lib/ruby/vendor_ruby/puppet/application.rb:370:in `run')
"rogue1.iutbeziers.fr" (SHA256) 3C:01:28:44:5A:A2:1C:EC:B5:63:F9:01:89:A4:69:85:66:4D:0E:FE:A9:E1:08:1D:FA:46:CF:6D:52:EE:05:5C
```

Il y est, on le signe :

```
root@puppetmaster:/home/vincent# puppet cert sign rogue1.iutbeziers.fr
Warning: `puppet cert` is deprecated and will be removed in a future release.
(location: /usr/lib/ruby/vendor_ruby/puppet/application.rb:370:in `run')
Signing Certificate Request for:
"rogue1.iutbeziers.fr" (SHA256) 3C:01:28:44:5A:A2:1C:EC:B5:63:F9:01:89:A4:69:85:66:4D:0E:FE:A9:E1:08:1D:FA:46:CF:6D:52:EE:05:5C
Notice: Signed certificate request for rogue1.iutbeziers.fr
Notice: Removing file Puppet::SSL::CertificateRequest rogue1.iutbeziers.fr at '/var/lib/puppet/ssl/ca/requests/rogue1.iutbeziers.fr.pem'
```

Exercice 1 :

Si on veut signer tous les certificats d'un coup on fait puppet cert sign --all

Tous les certificats

Vérification de la connexion depuis le rogue1 :

```
root@rogue1:/home/vincent# puppet agent -t
Info: Caching certificate for rogue1.iutbeziers.fr
Info: Caching certificate_revocation_list for ca
Info: Caching certificate for rogue1.iutbeziers.fr
Info: Using configured environment 'production'
Info: Retrieving pluginfacts
Info: Retrieving plugin
Info: Retrieving locales
Info: Caching catalog for rogue1.iutbeziers.fr
Info: Applying configuration version '1615284453'
Info: Creating state file /var/cache/puppet/state/state.yaml
Notice: Applied catalog in 0.02 seconds
root@rogue1:/home/vincent# puppet agent --enable
root@rogue1:/home/vincent# puppet agent -t
Info: Using configured environment 'production'
Info: Retrieving pluginfacts
Info: Retrieving plugin
Info: Retrieving locales
Info: Caching catalog for rogue1.iutbeziers.fr
Info: Applying configuration version '1615284490'
Notice: Applied catalog in 0.01 seconds
root@rogue1:/home/vincent#
```

Node HelloWorld :

```
root@puppetmaster:/etc/puppet/code/environments/production/manifests# cat sites.pp
node 'rogue1' {
  notify { 'HelloWorld!': }
}
root@puppetmaster:/etc/puppet/code/environments/production/manifests# █
```

Exercice 2 :

La ligne pour afficher HelloWorld sur tous les serveurs aurait été « node "rogue[1-9]" { »

La regex nous permet de prendre tous nos serveurs.

```
root@rogue1:/home/vincent# puppet agent -t
Info: Using configured environment 'production'
Info: Retrieving pluginfacts
Info: Retrieving plugin
Info: Retrieving locales
Info: Caching catalog for rogue1.iutbeziers.fr
Info: Applying configuration version '1615285679'
Notice: HelloWorld!
Notice: /Stage[main]/Main/Node[rogue1]/Notify[HelloWorld!]/message: defined 'message' as 'HelloWorld!'
Notice: Applied catalog in 0.02 seconds
root@rogue1:/home/vincent# █
```

Exercice 3 :

Mon init.pp ressemble à ça :

```
class sudo {
  package { ['sudo']:
    ensure => installed,
  }
  file { ['/etc/sudoers':
    ensure => present,
    owner  => 'root',
    group  => 'root',
    mode   => '0440',
    source => 'puppet:///modules/sudo/sudoers',
  ]
}
```

Le premier ensure vérifie que le package sudo est installé et le deuxième vérifie qu'il est présent.

Pour la source on spécifie l'endroit où puppet va chercher la conf de sudo.

Notre fichier sudoers ressemble à ça :

```
##### under puppet control #####
# See the man page for details on how to write a sudoers file.
#
Defaults env_reset
Defaults mail_badpass
Defaults
secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
# Host alias specification
# User alias specification
# Cmnd alias specification
# User privilege specification
root ALL=(ALL:ALL) ALL
# Allow members of group sudo to execute any command
%sudo ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "#include" directives:
#include_dir /etc/sudoers.d
~
```

Exercice 4 :

Pour être sûr que le package sudo est bien installé on rajoute dans notre site.pp include sudo pour pouvoir le tester avec le client rogue1 :

```
node 'rogue1' {
  notify { 'HelloWorld!': }
  include sudo
}
~
```

Test depuis l'agent rogue 1 :

```
root@rogue1:/home/vincent# puppet agent -t
Info: Using configured environment 'production'
Info: Retrieving pluginfacts
Info: Retrieving plugin
Info: Retrieving locales
Info: Caching catalog for rogue1.iutbeziers.fr
Info: Applying configuration version '1615287232'
Notice: HelloWorld!
Notice: /Stage[main]/Main/Node[rogue1]/Notify[HelloWorld!]/message: defined 'message' as 'HelloWorld!'
Notice: /Stage[main]/Sudo/File[/etc/sudoers]/content:
--- /etc/sudoers      2020-12-07 17:11:19.372976433 -0600
+++ /tmp/puppet-file20210309-3236-lullfq  2021-03-09 04:53:54.260852764 -0600
@@ -1,28 +1,18 @@
-#
-# This file MUST be edited with the 'visudo' command as root.
-#
-# Please consider adding local content in /etc/sudoers.d/ instead of
-# directly modifying this file.
-#
+##### under puppet control #####
+ # See the man page for details on how to write a sudoers file.
+ #
-Defaults      env_reset
-Defaults      mail_badpass
-Defaults      secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
-
+Defaults env_reset
+Defaults mail_badpass
+Defaults
+secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin
+:/bin"
+ # Host alias specification
-
+ # User alias specification
-
+ # Cmnd alias specification
-
+ # User privilege specification
- root    ALL=(ALL:ALL) ALL
- vincent  ALL=(ALL:ALL) ALL
-
- vincent  ALL=(ALL:ALL) ALL
-
+ root ALL=(ALL:ALL) ALL
+ # Allow members of group sudo to execute any command
- %sudo    ALL=(ALL:ALL) NOPASSWD:ALL
+ %sudo ALL=(ALL:ALL) ALL
-
+ # See sudoers(5) for more information on "#include" directives:
-
+ #includedir /etc/sudoers.d

Info: Computing checksum on file /etc/sudoers
Info: /Stage[main]/Sudo/File[/etc/sudoers]: Filebucketed /etc/sudoers to puppet with sum 4d9bd118043ecca983c98c91da3e26f5
Notice: /Stage[main]/Sudo/File[/etc/sudoers]/content: content changed '{md5}4d9bd118043ecca983c98c91da3e26f5' to '{md5}660a5d6d0bfe776633d5998bfb07f11b'
Notice: Applied catalog in 0.25 seconds
root@rogue1:/home/vincent#
```

Aucune erreur le package sudo est bien installé.