

Installation de wordpress et Load balancer sur deux VM

Installation de wordpress et load balancer sur deux VM's par script.

Driton Gorani

20/06/2022 15:35

Copy commit SHA GITLAB: `e7a9b5524d29867e6fd16679270adc5fd29b49a4`

Recuperation des donnés.

```
echo "Enter your ressource group name?"
read RGname
#echo "Enter your VM username?"
#read Vmusername
#echo "Enter your VM password?"
#read Vmpassword
#echo "Enter your Mariadb name?"
#read MdbName
#echo "Enter your Mariadb username?"
#read Mariadbuser
#echo "Enter your Mariadb password?"
#read Mariadbpass
Vmusername=tonytony
Vmpassword=Driton123456.
MdbName=mymariadbtony
Mariadbuser=dritontony
Mariadbpass=Tonytony123456.
location=eastus
```

Creation d'une groupe de ressource:

```
az group create --name $RGname --location $location
```

Creation d'un virtual network

```
az network vnet create --resource-group $RGname --location $location --name myVNet -
-address-prefixes 10.1.0.0/16 --subnet-name myBackendSubnet --subnet-prefixes
10.1.0.0/24
```

Creation d'un IP Public

```
az network public-ip create --resource-group $RGname --name myPublicIP --sku
```

Standard --location \$location

Creation d'un Load Balancer

```
az network lb create --resource-group $RGname --name myLoadBalancer --sku Standard --public-ip-address myPublicIP --frontend-ip-name myFrontEnd --backend-pool-name myBackEndPool
```

Creation d'un load balancer health probe

```
az network lb probe create --resource-group $RGname --lb-name myLoadBalancer --name myHealthProbe --protocol tcp --port 80
```

Creation d'un load balancer HTTP RULE

```
az network lb rule create --resource-group $RGname --lb-name myLoadBalancer --name myHTTPRule --protocol tcp --frontend-port 80 --backend-port 80 --frontend-ip-name myFrontEnd --backend-pool-name myBackEndPool --probe-name myHealthProbe --disable-outbound-snat true --idle-timeout 15 --enable-tcp-reset true
```

Creation d'une groupe de security NSG

```
az network nsg create --resource-group $RGname --name myNSG
```

Create network security group rule

```
az network nsg rule create --resource-group $RGname --nsg-name myNSG --name myNSGRuleHTTP --protocol '*' --direction inbound --source-address-prefix '*' --source-port-range '*' --destination-address-prefix '*' --destination-port-range 80 --access allow --priority 200
```

NSG Rule pour le port 22 SSH

```
az network nsg rule create --resource-group $RGname --nsg-name myNSG --name NSGule22 --protocol '*' --direction inbound --source-address-prefix '*' --source-port-range '*' --destination-address-prefix '*' --destination-port-range 22 --access-allow --priority 300
```

Créer des interfaces réseau pour les machines virtuelles

```
array=(myNicVM1 myNicVM2)
for vmnic in "${array[@]}"
do
    az network nic create --resource-group $RGname --name $vmnic --vnet-name myVNet --subnet myBackEndSubnet --network-security-group myNSG
done
```

Premier machine virtuelle

```
az vm create --resource-group $RGname --name myVM1 --nics myNicVM1 --image  
Debian:debian-11-daily:11-gen2:0.20220521.1022 --admin-username $Vmusername --admin-  
password $Vmpassword --zone 1 --no-wait --location $location
```

Deuxieme machine virtuelle

```
az vm create --resource-group $RGname --name myVM2 --nics myNicVM2 --image  
Debian:debian-11-daily:11-gen2:0.20220521.1022 --admin-username $Vmusername --admin-  
password $Vmpassword --zone 2 --no-wait --location $location
```

Ajouter des machines virtuelles au pool de back-ends de l'équilibreur de charge

```
array=(myNicVM1 myNicVM2)  
for vmnic in "${array[@]}"  
do  
    az network nic ip-config address-pool add --address-pool myBackendPool -  
-ip-config-name ipconfig1 --nic-name $vmnic --resource-group $RGname --lb-  
name myLoadBalancer  
done
```

Créer une passerelle NAT

IP Adresse publique.

```
az network public-ip create --resource-group $RGname --name myNATgatewayIP --sku Standard --  
zone 1 2 3
```

Ressource de passerelle NAT.

```
az network nat gateway create --resource-group $RGname --name myNATgateway --public-  
ip-addresses myNATgatewayIP --idle-timeout 10
```

Associer une passerelle NAT au sous-réseau.

```
az network vnet subnet update --resource-group $RGname --vnet-name myVNet --name  
myBackendSubnet --nat-gateway myNATgateway
```

Création d'une base de données MARIADB-Server

```
az mariadb server create -l $location -g $RGname -n $MdbName -u $Mariadbuser -p  
$Mariadbpass --sku-name B_Gen5_1 --ssl-enforcement Disabled --backup-retention 10 --  
geo-redundant-backup disabled --storage-size 51200 --tags "key=value" --version 10.2  
``
```

1. Nous devons ajouter une regle NAT Inbound dans Load Balancer pour pouvoir acceder a nos vm's via SSH porte/22.
2. Ajouter une regle Outbound pour pouvoir donner access a nos VMs sur l'internet porte 80 HTTP.
3. Autoriser porte 22/SSH sur nos Vm's pour pouvoir y'accéder.

Ouvrir une porte d'entrer dans load-balancer INBOUND NAT RULE pour nos deux vms, faire la même chose pour deuxieme vm.

The screenshot shows the configuration page for an inbound NAT rule named 'VM1' in the Azure portal. The rule is associated with the 'myLoadBalancer' resource. The configuration details are as follows:

- Name:** VM1
- Type:** Azure virtual machine (selected)
- Target virtual machine:** myVM1 (ResourceGroup: driton_test, AvailabilitySet: -)
- Network IP configuration:** ipconfig1 (10.1.0.4)
- Frontend IP address:** myFrontEnd (20.228.160.44)
- Frontend Port:** 21
- Service Tag:** FTP
- Backend port:** 22
- Protocol:** TCP (selected)

Red arrows point to the 'Name' field, the 'Type' radio button, the 'Frontend Port' field, the 'Backend port' field, and the 'Save' button.

Save **Cancel** [Give feedback](#)

Ajouter une regle Outbound pour pouvoir donner access a nos VMs sur l'internet porte 80 HTTP.

Outbond_Http

myLoadBalancer

Name Outbond_Http

IP Version ☒ IPv4 ☐ IPv6

Frontend IP address * 1 selected

Protocol ☒ All ☐ TCP ☐ UDP

Idle timeout (minutes) 4 Max: 100

TCP Reset ☒ Enabled ☐ Disabled


Backend pool * myBackEndPool (2 instances)




Port allocation

Azure automatically assigns the number of outbound ports to use for source network address translation (SNAT) based on the number of frontend IP addresses and backend pool instances. [Learn more about outbound connectivity](#)

Save Cancel Give feedback

Autoriser porte 22/SSH sur nos Vm's pour pouvoir y'accéder dans: (Networking)

 **Port_SSH**
myNSG

 Save  Discard  Delete

Source ⓘ

Any

Source port ranges * ⓘ

*

Destination ⓘ

Any

Service ⓘ

SSH

Destination port ranges ⓘ

22

Protocol

☐ Any

☒ TCP

☐ UDP

☐ ICMP

Action

☒ Allow

☐ Deny

Priority * ⓘ

1000

Installation de wordpress par script

Data collection

```
data_base_name=wordpresstony  
Mariadbpass=Tonytony123456.  
Mariadbuser=dritontony
```

```
Hostnamewp=mymariadbtony.mariadb.database.azure.com
username_wp=wp-admin
password_wp=Driton123456.
```

```
sudo apt update -y
sudo apt upgrade -y
sudo apt install -y apache2 mariadb-client php-mysql php wget
wget -O /tmp/wordpress.tar.gz https://wordpress.org/latest.tar.gz
sudo tar -xzf /tmp/wordpress.tar.gz -C /var/www/html
sudo chown -R www-data:www-data /var/www/html/wordpress
sudo chmod -R 755 /var/www/html/wordpress
sudo cp var/www/html/wordpress/wp-config-sample.php
var/www/html/wordpress/wp-config.php
sudo chown -R www-data:www-data /var/www/html/
sudo service apache2 reload
```

```
#echo "Enter your Mariadb host name?"
#read MariadbHost
#echo "Enter your mariadb username?"
#read Mariadbuser
#echo "Enter your mariadb password?"
#read Mariadbpass
```

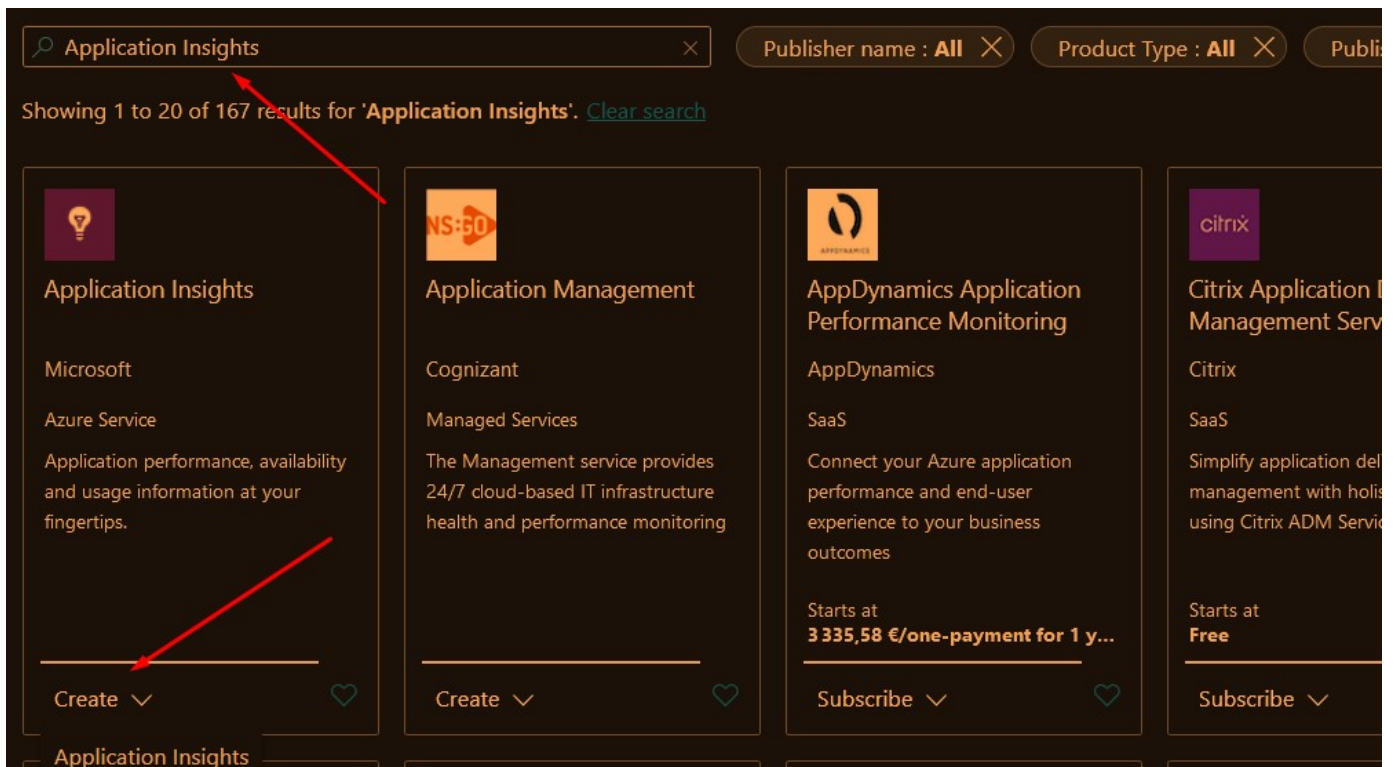
```
cd /var/www/html/wordpress
sudo sed -i "s/database_name_here/$data_base_name/" wp-config.php
sudo sed -i "s/username_here/$Mariadbuser/" wp-config.php
sudo sed -i "s/password_here/$Mariadbpass/" wp-config.php
sudo sed -i "s/localhost/$Hostnamewp/" wp-config.php
```

Nous devons nous connecter sur mariadb-client avec notre adresse de basse nom d'utilisateur et mot de passe,pour créer une basse de donné.

```
mysql -h (hostname) -u (username) -p (pass)
CREATE DATABASE "NOM3";
mysql> GRANT ALL PRIVILEGES ON database_name.* TO
'username'@'localhost';
FLUSH PRIVILEGES;
```

Installation d'Azure Monitor

*Nous chercons "Application Insight" dans la barre de recherche sur le Portail Azure.



Nous remplissons le formulaire

Application Insights

Monitor web app performance and usage including .NET, Node.js and Java EE, hosted on-premises, hybrid, or any public cloud. [Learn more](#)

PROJECT DETAILS

Select a subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource Group * ⓘ [Create new](#)

INSTANCE DETAILS

Name * ⓘ

Region * ⓘ

Resource Mode * ⓘ ☐ Classic ☒ Workspace-based

WORKSPACE DETAILS

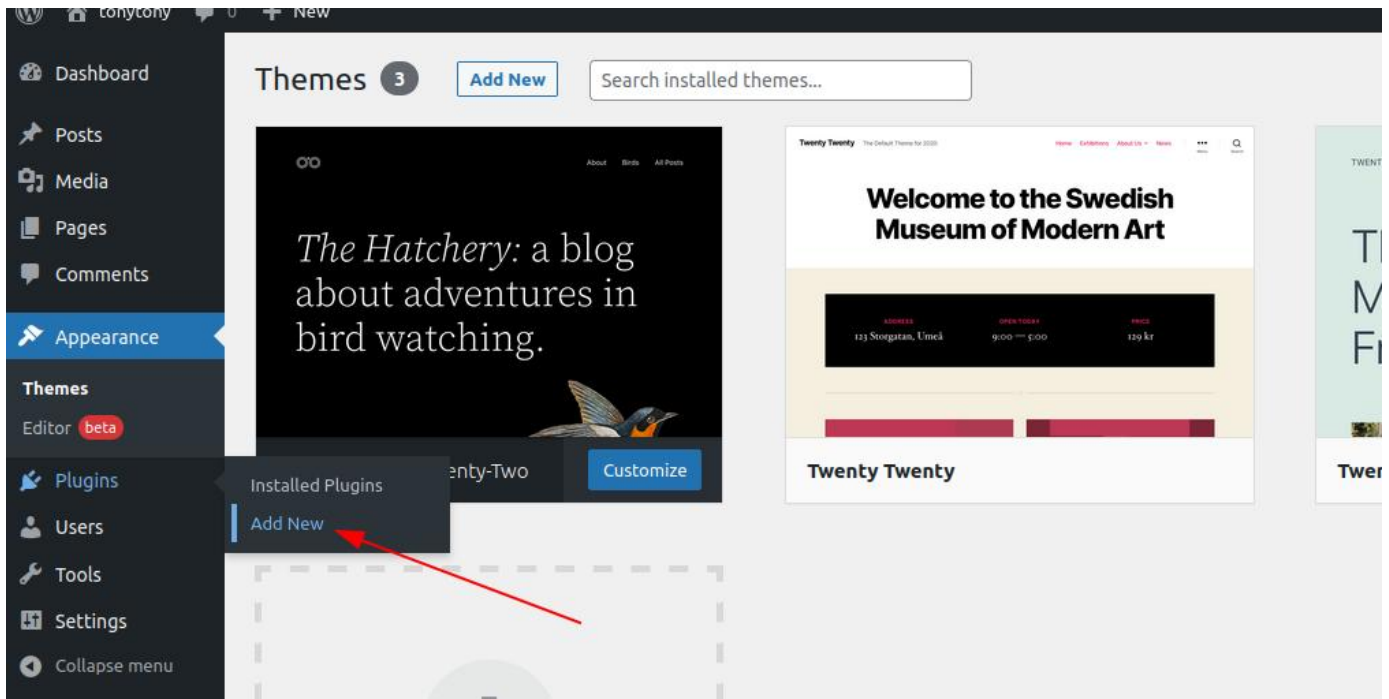
Subscription * ⓘ

*Log Analytics Workspace ⓘ

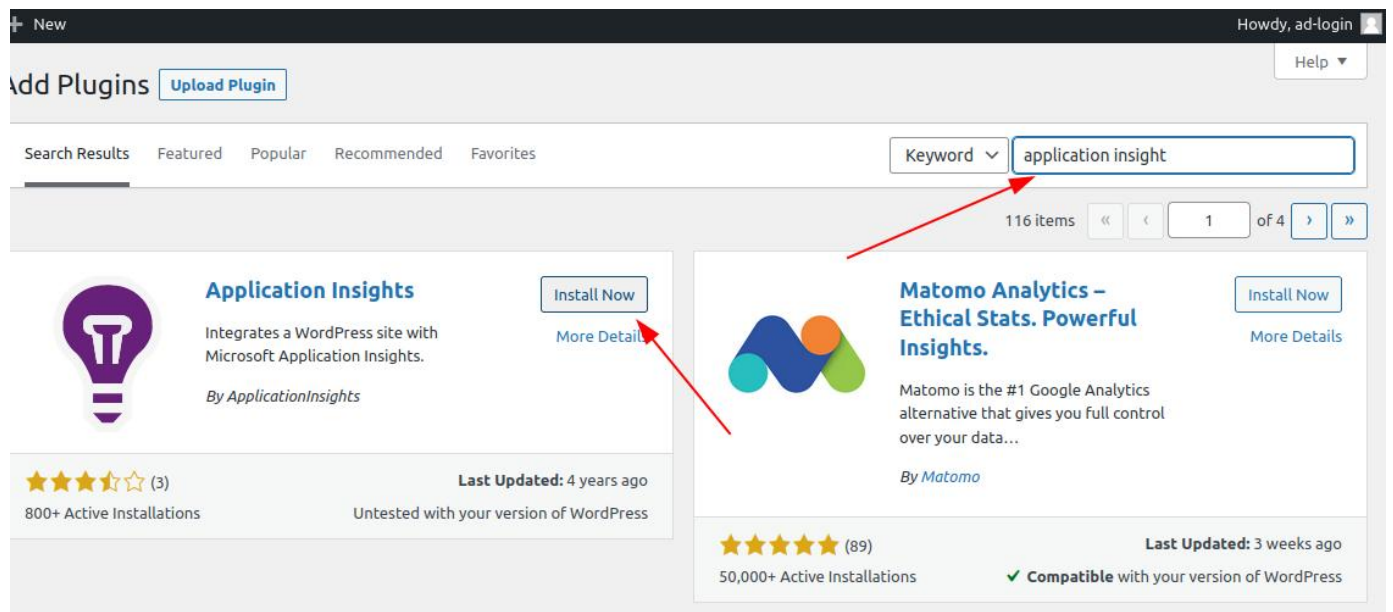
[Review + create](#) [« Previous](#) [Next : Tags >](#)

Nous installons le plugin dans notre site internet wordpress

- Pluggin
- Add new



Nous cherchons application insight dans la barre de recherche



Activer l'application

Plugins [Add New](#) Screen Options Help

All (3) | Inactive (3) | Auto-updates Disabled (3) Search installed plugins...

Bulk actions ▼ [Apply](#) 3 items

<input type="checkbox"/> Plugin	Description	Automatic Updates
<input type="checkbox"/> Akismet Anti-Spam Activate Delete	Used by millions, Akismet is quite possibly the best way in the world to protect your blog from spam . It keeps your site protected even while you sleep. To get started: activate the Akismet plugin and then go to your Akismet Settings page to set up your API key. Version 4.2.4 By Automattic View details	Enable auto-updates
<input type="checkbox"/> Application Insights Activate Delete	Integrates a WordPress site with Microsoft Application Insights. Version 2.3 By ApplicationInsights View details	Enable auto-updates
<input type="checkbox"/> Hello Dolly Activate Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.7.2 By Matt Mullenweg View details	Enable auto-updates
<input type="checkbox"/> Plugin	Description	Automatic Updates

Copier la clef de notre application insight depuis le portail azure

Application Dashboard Getting started Search Logs Monitor resource group Feedback Favorites Rename Delete

Details Copy to clipboard

Resource group (move) : [driton_test](#) Instrumentation Key : 257b868d-4f79-4e67-8ecd-962f2b2e8c31

Location (move) : [East US](#) Connection String : InstrumentationKey=257b868d-4f79-4e67-8ecd-962...

Application (move) : [Simplon ARA - LYON P#20 Admin Cloud](#) Workspace : [defaultworkspace-682603a3-d9f3-417f-98e8-a7b23...](#)

Application ID : 682603a3-d9f3-417f-98e8-a7b2398bc448

(it) : [Click here to add tags](#)

data for last: 30 minutes 1 hour 6 hours 12 hours 1 day 3 days 7 days 30 days

Failed requests ↗ Server response time ↗

Coller la clef directement dans notre site wordpress

- Settings
- Application insight

The image shows the WordPress admin dashboard for a user named 'tonytony'. The left sidebar contains a menu with 'Plugins' highlighted. A sub-menu is open for 'Plugins', showing options like 'General', 'Writing', 'Reading', 'Discussion', 'Media', 'Permalinks', 'Privacy', and 'Application Insights'. The 'Application Insights' option is highlighted with a blue bar and a red arrow points to it. The main content area displays the 'Plugins' page, showing a list of installed plugins. The first plugin is 'Akismet Anti-Spam', which is active. The second plugin is 'Application Insights', which is inactive. The third plugin is 'Hello Dolly', which is active. The 'Application Insights' plugin description is visible, stating it integrates a WordPress site with Microsoft Application Insights. The 'Hello Dolly' plugin description is also visible, stating it is a plugin that symbolizes the hope and enthusiasm of an entire generation.

WordPress Dashboard (tonytony) - Plugins page.

Left sidebar menu items: Dashboard, Posts, Media, Pages, Comments, Appearance, **Plugins**, Users, Tools, Settings, Collapse menu.

Plugins page filters: All (3) | Active (1) | Inactive (2) | Auto-updates Disabled (3).

Plugins list:

- ☐ Plugin Description
- ☐ Akismet Anti-Spam (Active) Used by millions, Akismet is quite possibly the best way in the world to **protect** your site protected even while you sleep. To get started: activate the Akismet p Settings page to set up your API key. Version 4.2.4 | By Automattic | View details
- ☐ Application Insights Integrates a WordPress site with Microsoft Application Insights. Version 2.3 | By ApplicationInsights | View details
- ☐ Hello Dolly This is not just a plugin, it symbolizes the hope and enthusiasm of an entire gen sung most famously by Louis Armstrong: Hello, Dolly. When activated you will r Dolly in the upper right of your admin screen on every page. Version 1.7.2 | By Matt Mullenweg | View details

Bottom of plugins list: Description, Bulk actions, Apply.

Nous arretons une vm pour tester le load balancer, et puis on renverse. Grace a load balancer on doit toujours avoir accès a notre site web même si une serveur est étient.