

M'AthCloud 3.0.0 – Livrables

1.Introduction

Cette documentation décrit les livrables physiques ainsi que leur déploiement sur un environnement VM Linux Ubuntu Server vierge.

2.Livrables

Les livrables sont constitués de 5 archives:

1. L' API (back-end) nécessaire au fonctionnement de l'écosystème: *api.zip*
2. L'application Web (front-end) Physician & CRO: *www.zip*
3. L'application Web (front-end) pour l'administration CRO: *cro.zip*
4. L'application Web (front-end) pour l'administration IIMT: *admin.zip*
5. Les bases de données: *database.zip*

3.AZNetwork

Le déploiement est effectué sur l'environnement HDS, chez AZNetwork:

Les adresses de la VM sont:

- LAN: 172.18.55.96/28
- Public: 91.247.75.188

Pour se connecter à la VM, un accès VPN est nécessaire:

- <https://vpnmcld.aznetwork.eu/profiles/f69b2602e960e694b549b5151bb4049cb01037b235e91df56654f816367743d1/>
- user: fabrice.poupon.iimt
- pass: 70Jhzfhuem

Cependant, il faut contacter AZNetwork pour mettre à jour votre clé SSH.

Pour un accès depuis un poste Linux:

- `sudo apt-get install openvpn`
- `sudo apt-get install gadmin-openvpn-client`
- Importer la configuration ci-dessus
- `sudo openvpn --config ovpn.david.fortier.iimt.ovpn`
- `ssh -i ~/.ssh/id_rsa iimtadm@172.18.55.97`
- Vous êtes maintenant logué sur la VM
- Pour passer en root:
 - `sudo -s`
 - Le mot-de-passe est dans le fichier `~/home/mypass.txt`

4. Serveur Web

Pour configurer le serveur Web Apache2 et les 3 sous-domaines nécessaires au bon fonctionnement (api, www, cro):

- sites / subdomains
 - sudo a2enmod rewrite
 - sudo a2enmod headers
- .htaccess (déjà présent dans l'archive du livrable)
- Ajouter cette directive header dans le fichier /etc/apache2/sites-available/api.ipsocloud.com.conf:
 - Header set Access-Control-Allow-Origin "*" pour permettre l'accès direct aux média depuis des appels JS front-end

5. Base de données

Pour configurer la base de données:

- apt-get update
- apt-get install mariadb-server
- mysql_secure_installation #password
- CREATE USER 'newuser'@'localhost' IDENTIFIED BY 'password';
- GRANT ALL PRIVILEGES ON * . * TO 'newuser'@'localhost';
- FLUSH PRIVILEGES;
- apt-get install phpmyadmin

6. Divers

Ajouter les packet DICOM (DCMTK):

- apt-get install dcmtool

Ajouter les divers outils nécessaires:

- apt-get install php-gd
- apt-get install qt5-default
- apt-get install curl
- apt-get install ffmpeg
- apt-get install wget
- apt-get install zip
- apt-get install unzip

A ne pas oublier:

- Modifier la configuration PHP par défaut pour permettre l'upload de fichiers plus imposants
- Penser à la configuration réseau concernant les ports forwarding pour la configuration DICOM
- Les certificats SSL sont installés et configurés dans les fichiers de configuration apache ci-dessous
- Enfin, vérifier que la zone DNS du domaine pointe vers la bonne adresse IP

7. Annexes

7.1. api.conf

```
<IfModule mod_ssl.c>
    <VirtualHost _default_:443>
        ServerAdmin webmaster@localhost
        ServerName api.ipsocloud.com

        DocumentRoot /var/www/api

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined

        SSLEngine on
        SSLCertificateFile /etc/ssl/ipsocloud.crt
        SSLCertificateKeyFile/etc/ssl/ipsocloud.key
        SSLCACertificateFile /etc/ssl/ipsocloud.ca

        <FilesMatch "\.(cgi|shtml|phtml|php)$">
            SSLOptions +StdEnvVars
        </FilesMatch>
        <Directory /usr/lib/cgi-bin>
            SSLOptions +StdEnvVars
        </Directory>
        <Directory /var/www/api/>
            Options Indexes FollowSymLinks
            AllowOverride All
            SSLOptions +StdEnvVars
            Require all granted
            Header set Access-Control-Allow-Origin "*"
        </Directory>

    </VirtualHost>
</IfModule>
```

7.2. www.conf

```
<IfModule mod_ssl.c>
    <VirtualHost _default_:443>
        ServerAdmin webmaster@localhost
        ServerName www.ipsocloud.com

        DocumentRoot /var/www/www

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined

        SSLEngine on
        SSLCertificateFile /etc/ssl/ipsocloud.crt
```

```
SSLCertificateKeyFile/etc/ssl/ipsocloud.key
SSLCACertificateFile /etc/ssl/ipsocloud.ca
```

```
<FilesMatch "\.(cgi|shtml|phtml|php)$">
    SSLOptions +StdEnvVars
</FilesMatch>
<Directory /usr/lib/cgi-bin>
    SSLOptions +StdEnvVars
</Directory>
</VirtualHost>
</IfModule>
```

7.3. cro.conf

```
<IfModule mod_ssl.c>
    <VirtualHost _default_:443>
        ServerAdmin webmaster@localhost
        ServerName cro.ipsocloud.com

        DocumentRoot /var/www/cro

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined

        SSLEngine on
        SSLCertificateFile    /etc/ssl/ipsocloud.crt
        SSLCertificateKeyFile/etc/ssl/ipsocloud.key
        SSLCACertificateFile /etc/ssl/ipsocloud.ca

        <FilesMatch "\.(cgi|shtml|phtml|php)$">SSLOptions +StdEnvVars
        </FilesMatch>
        <Directory /usr/lib/cgi-bin>
            SSLOptions +StdEnvVars
        </Directory>
    </VirtualHost>
</IfModule>
```

7.4. Certificats SSL

7.4.1. Certificat SSL

```
-----BEGIN CERTIFICATE-----
MIIGVDCCBTygAwIBAgIQdRHg5KxP4w/eugGmeObQuDANBgkqhkiG9w0BAQsFADBu
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z
dGljbyBSU0EgRFYgQ0EwHhcNMjEwNjE0MDAwMDAwWhcNMjEwNjE0MDAwMDAwMDAw
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```

yWYYpBtZ13G8cXnvLHp46MRV+9oweXop2k7MtVts3atCVgBAXKSKUDDgzQHEunq2
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OjAlMCMGCCsGAQUFBwIBFhdodHRwczovL3NlY3RpZ28uY29tL0NQZuAIBgZngQwB
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BPOcxflnLp9g5GIAWzqHvYduL9JbtyB6df09t2IEsZeZX44zzSLn0zTAq5IYpSxWE
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zdj3us4PkBpepA2xLT+78AVNPQuOWRfMEweYfZchDKcLWbXZ6bBf/A==
-----END CERTIFICATE-----

7.4.2. Clé privé du certificat

-----BEGIN PRIVATE KEY-----

MIIEvgIBADANBgkqhkiG9w0BAQEFAASCBAKgwggSkAgEAAoIBAQDh2qHt88ntQpZe
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ZM1QMffnojT4nqMtMixmt1Bn
-----END PRIVATE KEY-----

7.4.3. Certificat de l'autorité de certification

-----BEGIN CERTIFICATE-----

MIEMjCCAxqgAwIBAgIBATANBgkqhkiG9w0BAQUFADB7MQswCQYDVQQGEwJHqJeb
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BwwHU2FsZm9yZDEaMBGGA1UECgwRQ29tb2RvIENBIExpbl0ZWQxITAfBgNVBAMM
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-----END CERTIFICATE-----

-----BEGIN CERTIFICATE-----

MIIFjCCBGagAwIBAgIQZ970PvF72uJP9ZQGBtLAhDANBgkqhkiG9w0BAQwFADB7
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-----BEGIN CERTIFICATE-----

VQQDEyJDT01PRE8gUlNBIENlcnRpZmljYXRpb24gQXV0aG9yaXR5MB4XDTE3MDkwODAwMDAwMFoXDTI3MDkwODIzNTk1OVowbjELMAkGA1UEBhMCR0IxZzANBgNVBAgT

GzAZMA0GCysGAQQBsjEBAgi6MAgGBmeBDAECATBMbgNVHR8ERTBDMEGgP6A9hjtodHrZwOi8vY3JsLmNvbW9kb2NhLmNvbS9DT01PRE9SU0FDZXJ0aWZpY2F0aW9uQXV0aG9yaXR5LmNybDBxBggrBgEFBQcBAQRIMGMwOwYIKwYBBQUHMAKGL2h0dHA6Ly9jcnQuY29tb2RvY2EuY29tL0NPTU9ET1JTQUFkZFRydXN0Q0EuY3J0MCQGCCsGAQUFBzABhhhhdHRwOi8vb2NzcC5jb21vZG9jYS5jb20wDQYJKoZIhvcNAQEMBQADggIBAGy1WTIYN/X9cVXJl11gC3mYfXZniNMq3u49K+/0+GJiAZB1PfXtP+kQhwQp3F5FYxN2OhPu7C8Db1ML8CTwzCGK8r/m5O3SwINSdLqCmX5/j2LUDrnCQqf3jcETdaZU+HmFWpUdRL7DD6/hUDsGEVPNxcgARdtFSz78WlsvdCd7K+XWhteQAMNIw8EdXrcIYsfxo3rHh/t4BfEm/N1VWavip59qa7A5HvBuGTA4Xg08hSsTVQOEMSzKSe+cpNwVmzrTuiMuIzwAzbAJotAYf4q3+l10OegBDJQvG0b4a43mRhiVyZ4B/AkTt+it3HpU0FGcK/WwwJKNH5EkZ4cJMo//+mqbeg8KeDpL38r1llqSjWTsNnSwYlXhCNvcMCYBWTamCiKd401QZqD5uwzxsImj4n+aCETqF+0JUeda3pR44w7xwSavGLzIMlmIMQ/1fa2i7QA+a2N2sL2VHsF2KQ2eShBAccHAhMgQSAIwFz/fWIXFdZik/i/05FTgGqc+xlPXLWR/Chch5Nrb8M0bTsYYqQUUDSYlg6Jm4VcV0tTZO+632ZlhPWnebQdFew5GZ7KbhTyF/NOkaz3b0n29XYDW2VQi/JV07AYmbTHgoIh9KvrXNauJTWpZ2WH69nNJufKYwKWgXcz1Gdj87G6isak26Skc/sH8u8GqhRBI51uP

7.4.4. Requête de création du certificat initial

-----BEGIN CERTIFICATE REQUEST-----

```
MIIC1TCCAb0CAQAwgY8xGzAZBgqhkiG9w0BCQEWdHBqdHdAaWltdC5mcjELMAkG
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MCijQ9ueMKre
```

-----END CERTIFICATE REQUEST-----

8. Production

Pour chaque site (www.ipsocloud.com, cro.ipsocloud.com), générer le code de production :

```
npm install
npm build-dev
```

Le code “production” du site se trouve alors dans les répertoires `www/`.

Copier leur contenu dans les répertoires respectifs sur le serveur (`/var/www/www/`, `/var/www/cro`).

Pour l’API, copier directement les répertoires `api/` et `bin/` des sources api.ipsocloud.com/ dans le répertoire `var/www/api/`.