

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://vpnmcdl.aznetwork.eu/profiles/f69b2602e960e694b549b5151bb4049cb01037b235e91df56654f816367743d1/>
- user: david.fortier.iimt
- pass: sDKj45qVZi

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:
 - `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';`
- `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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```

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-----END CERTIFICATE-----

7.4.2. Clé privé du certificat

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

7.4.3. Certificat de l'autorité de certification

-----BEGIN CERTIFICATE-----
MIIEAjCCAxqgAwIBAgIBATANBgkqhkiG9w0BAQUFADB7MQswCQYDVQQGEwJHbGJlbnQwMBkGA1UECAwSR3JlYXRlciBNYW5jaGVzdGVyMRAwDgYDVQQHDAdTYWxmb3JkMR0wGAYDVQQKDDBFDb21vZG8gQ0EgTGltZXRIZDEhMB8GA1UEAwYQUFBIElncnRpZmljYXRlIFNlcnZpY2VzMB4XDTA0MDEwMTAwMDAwMFOxDTI4MTIzMTIzNTk1OVowezEL

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-----END CERTIFICATE-----

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

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-----END CERTIFICATE-----
-----BEGIN CERTIFICATE-----
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7.4.4. Requête de création du certificat initial

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