Mobiliya

Security and Surveillance Installation Guide

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Installation of Security and Surveillance Modules

Prerequisites

- Nvidia Jetson or Movidius.
- Ubuntu Machine to run aggregator
- RTSP urls for Cameras

Modules

Following modules need to set up and installed before accessing SnS portal.

1. Cloud Services
2. Aggregator
3. Compute Engine

A. Cloud Services Deployment:

Prerequisite:

1. PowerBI account.
2. Published report Url

Please refer user document at $(repo_url)/PowerBI

RestServer, FaceComputeEngine and Webapp will be deployed on Cloud. Please refer ARMScripts at $(repo_url)/ARMScripts to deploy Webapp, RestServer, ComputeEngine, and Database.

B. Compute Engine Module Setup.

Compute-Engine Module for Human/Object Detection is needed to be installed on Nvidia Jetson Device.

Prerequisite:

1. Nvidia Jetson with ubuntu.

Refer document - **Jetson-Flashing.docx** for Jetson board preparation.

Follow below steps to install Compute Engine.
Note: Commands to be run on Jetson command-line shell :

1. **Clone the Compute Engine Repository-**
$ git clone $(repo_url)/Compute-Engine-Yolo

2. **Install Cmake, GIT and Curl :**

$ sudo apt-get install cmake curl git

3. **Install Node Js:**
$ curl -sL https://deb.nodesource.com/setup_6.x | sudo -E bash -
$ sudo apt-get install -y nodejs

4. **Install JSON library for C:**
$ sudo apt-get install -y libjson0 libjson0-dev
$ sudo apt-get install -y libjson0-dbg

5. **Install Curl library**
$ sudo apt-get install -y libcurl4-gnutls-dev

6. **To make executable files:**
$ cd Compute-Engine-Yolo && cd darknet
$ make

7. **Install npm modules.**
$ cd ../jetsonNodeServer
$ sudo npm install

8. **Start the server**
$ node jetsonServer.js

9. **To start server in background download forever npm package and start server as follows:**
$ sudo npm install forever -g
$ forever start jetsonServer.js

C. Aggregator Module Setup.

Aggregator Module needs to setup on an Ubuntu system.

Pre-requisites:
1. Ubuntu Machine or Jetson with Ubuntu
2. Node Js (4.0.0 and above) (Follow step **B.3** to install Node JS)
3. Python (2.7 and above)
4. OpenCV 3+ (Steps to install OpenCV are mentioned in sub-step **C.2**)

Perform following steps in command-line shell:

1. **Clone the repository:**
$ git clone $(repo_url)/jetson-device-client

2. Install OpenCV
$ cd jetson-device-client
$ mv install-opencv.sh ~/

```
$ cd ~/
$ chmod +x install-opencv.sh
$ ./install-opencv.sh
```

3. Install npm packages.

```
$ cd jetson-device-client
$ npm run pythonPackages
$ npm install
```

4. Starting the Aggregator server:

```
$ node aggregatorServer.js
```

5. To start server in background:

```
$ sudo npm install forever -g
$ forever start aggregatorServer.js
```

D. Starting the Web Application.

Please refer User Guide/Demo Video for Portal details