Anexo A

Acrónimos

- **HTTP:** HyperText Transfer Protocol.
- **HTTPS:** Hypertext Transfer Protocol Secure.
- **AWS:** Amazon Web Service.
- **ELK:** ElasticSearch, Logstash, Kibana.
- **UML:** Unified Modeling Language.
- **FHIR:** Fast Healthcare Interoperability Resources.
- **AMI:** Amazon Machine Images.
- **IDLE:** Integrated Development and Learning Environment.
- **JSON:** JavaScript Object Notation.
- **HTML:** HyperText Markup Language.
- **DOM:** Document Object Model.
- **SQL:** Structured Query Language.
- **RAM:** Random Access Memory.
- **PHP:** Hypertext Pre-Processor.

- **YAML:** YAML Ain't Another Markup Language.
- **SSH:** Secure SHell.
- **API:** Application Programming Interface.
- **REST:** REpresentational State Transfer.
- **URI:** Uniform Resource Identifier.
- **TCP:** Transmission Control Protocol.
- **FTP:** File Transfer Protocol.
- **UTC:** Universal Time Coordinated.
- **NAT:** Network Address Translation.
- **SSL:** Secure Sockets Layer.
- **PNG:** Portable Network Graphics.
- **IP:** Internet Protocol.

Anexo B

DataSources

Al realizar una petición al Fitness Store para obtener los dataSources disponibles se reciben una gran cantidad de elementos. A continuación se muestra un extracto del conjunto de dataSources recibidos donde se muestran los tres correspondientes a la pulsera Xiaomi Mi Band 2 cuyo *packageName* se corresponde con el texto *com.xiaomi.hm.health*.

```
{
  u'dataSource': [
    {
      u'dataStreamName':
        u'derive_step_deltas<-raw:com.google.step_count.
        cumulative:LENOVO:Lenovo X3c50:e7059e03:Cywee
        Step Counter',
      u'dataType': {
        u'field': [
          {
            u'name': u'steps',
            u'format': u'integer'
          }
        ],
        u'name': u'com.google.step_count.delta'
```

```
    },
    u'dataQualityStandard': [ ],
    u'application': {
      u'packageName': u'com.google.android.gms'
    },
    u'device': {
      u'model': u'Lenovo X3c50',
      u'version': u'',
      u'type': u'phone',
      u'uid': u'e7059e03',
      u'manufacturer': u'LENOVO'
    },
    u'dataStreamId':
      u'derived:com.google.step_count.delta:com.google
      .android.gms:LENOVO:Lenovo X3c50:e7059e03:
      derive_step_deltas<-raw:com.google.step_count.
      cumulative:LENOVO:Lenovo X3c50:e7059e03:
      Cywee Step Counter',
    u'type': u'derived'
  },

  ...

  {
    u'name': u'GoogleFitUtil- sleep segments',
    u'dataStreamName': u'',
    u'dataType': {
      u'field': [
        {
          u'name': u'activity',
          u'format': u'integer'
```

```
        }
      ],
      u'name': u'com.google.activity.segment'
    },
    u'dataQualityStandard': [ ],
    u'application': {
      u'packageName': u'com.xiaomi.hm.health'
    },
    u'dataStreamId':
      u'raw:com.google.activity.segment:
      com.xiaomi.hm.health:',
    u'type': u'raw'
  },
  {
    u'name': u'GoogleFitUtil- calories0',
    u'dataStreamName': u'',
    u'dataType': {
      u'field': [
        {
          u'name': u'calories',
          u'format': u'floatPoint'
        }
      ],
      u'name': u'com.google.calories.expended'
    },
    u'dataQualityStandard': [ ],
    u'application': {
      u'packageName': u'com.xiaomi.hm.health'
    },
    u'dataStreamId':
      u'raw:com.google.calories.expended:
```

```
        com.xiaomi.hm.health:',
      u'type': u'raw'
    },
    {
      u'name': u'GoogleFitUtil- steps',
      u'dataStreamName': u'',
      u'dataType': {
        u'field': [
          {
            u'name': u'steps',
            u'format': u'integer'
          }
        ],
        u'name': u'com.google.step_count.delta'
      },
      u'dataQualityStandard': [ ],
      u'application': {
        u'packageName': u'com.xiaomi.hm.health'
      },
      u'dataStreamId':
        u'raw:com.google.step_count.delta:
        com.xiaomi.hm.health:',
      u'type': u'raw'
    }
  ]
}
```

Anexo C

DataSets

Cuando se quieren obtener datos del Fitness Store se ha de realizar una petición para obtener los dataSets. Este conjunto de datos viene delimitado entre dos timestamps que se envían en la petición (*minStartTimeNs* y *maxEndTimeNs*). Estas marcas de tiempo vienen expresadas como los nanosegundos transcurridos desde un punto de referencia conocido como *epoch*.

A continuación se muestra un extracto del conjunto de dataSets recibidos. Como se puede ver en él, el intervalo total requerido se divide en subintervalos donde se muestra el número de pasos realizados en dicho subintervalo temporal. En los DataSets también se muestra otra información como el tipo de datos (com.google.step_count.delta, pasos) o el *id* del DataSource (com.google.step_count.delta:com.xiaomi.hm.health).

```
{u'minStartTimeNs': u'1478131201000000000',
 u'maxEndTimeNs': u'1478201691580455936',
 u'dataSourceId':
    u'raw:com.google.step_count.delta:com.xiaomi.hm.health:',
 u'point': [
            {u'modifiedTimeMillis': u'1478197579311',
             u'startTimeNanos': u'1478157180000000000',
             u'endTimeNanos': u'1478160180000000000',
             u'value': [
                        {u'mapVal': [],
                         u'intVal': 1942}
                       ],
             u'dataTypeName': u'com.google.step_count.delta',
             u'originDataSourceId':
                u'raw:com.google.step_count.delta:com.xiaomi
                .hm.health:'},
            {u'modifiedTimeMillis': u'1478197579311',
             u'startTimeNanos': u'1478160240000000000',
             u'endTimeNanos': u'1478166300000000000',
             u'value': [
                        {u'mapVal': [],
                         u'intVal': 32}
                       ],
             u'dataTypeName': u'com.google.step_count.delta',
             u'originDataSourceId':
                u'raw:com.google.step_count.delta:com.xiaomi
                .hm.health:'},
            {u'modifiedTimeMillis': u'1478197579311',
             u'startTimeNanos': u'1478166360000000000',
             u'endTimeNanos': u'1478168100000000000',
```

```
                u'value': [
                            {u'mapVal': [],
                             u'intVal': 608}
                           ],
                u'dataTypeName': u'com.google.step_count.delta',
                u'originDataSourceId':
                    u'raw:com.google.step_count.delta:com.xiaomi
                    .hm.health:'},

                \dots

               {u'modifiedTimeMillis': u'1478197579311',
                u'startTimeNanos': u'14781957600000000000',
                u'endTimeNanos': u'14781974092640000000',
                u'value': [
                            {u'mapVal': [],
                             u'intVal': 189}
                           ],
                u'dataTypeName': u'com.google.step_count.delta',
                u'originDataSourceId':
                    u'raw:com.google.step_count.delta:com.xiaomi
                    .hm.health:'}
               ]
}
```

Anexo D

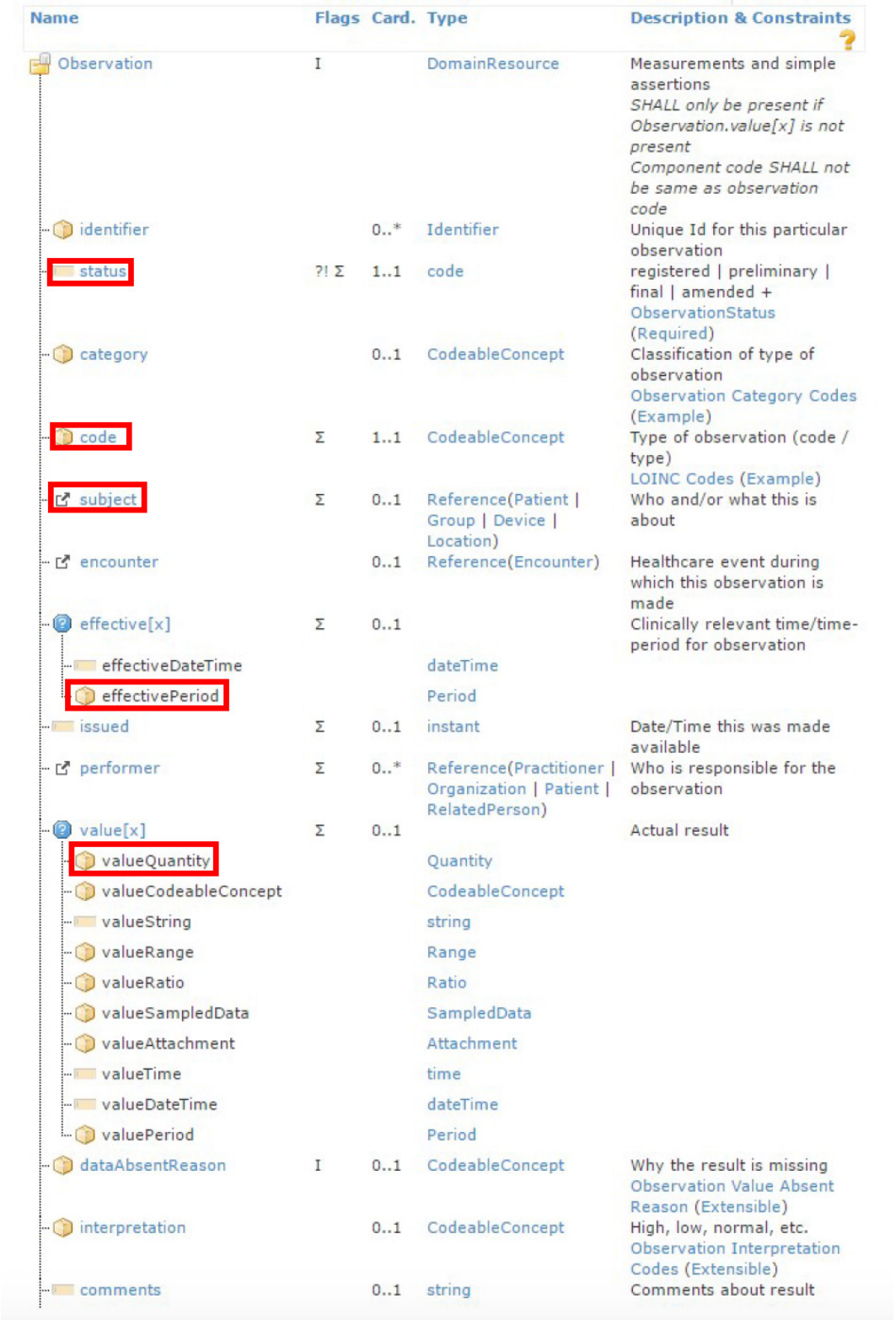
Recurso FIHR "Observation"

En este anexo se expande la información referente al recurso FIHR sobre las observaciones.

Se ha elegido este recurso ya que, aunque está destinado al intercambio de datos relacionado con pruebas clínicas, es el que mejor encaja para modelar cada una de las tres muestras planteadas (pasos, calorías y actividad).

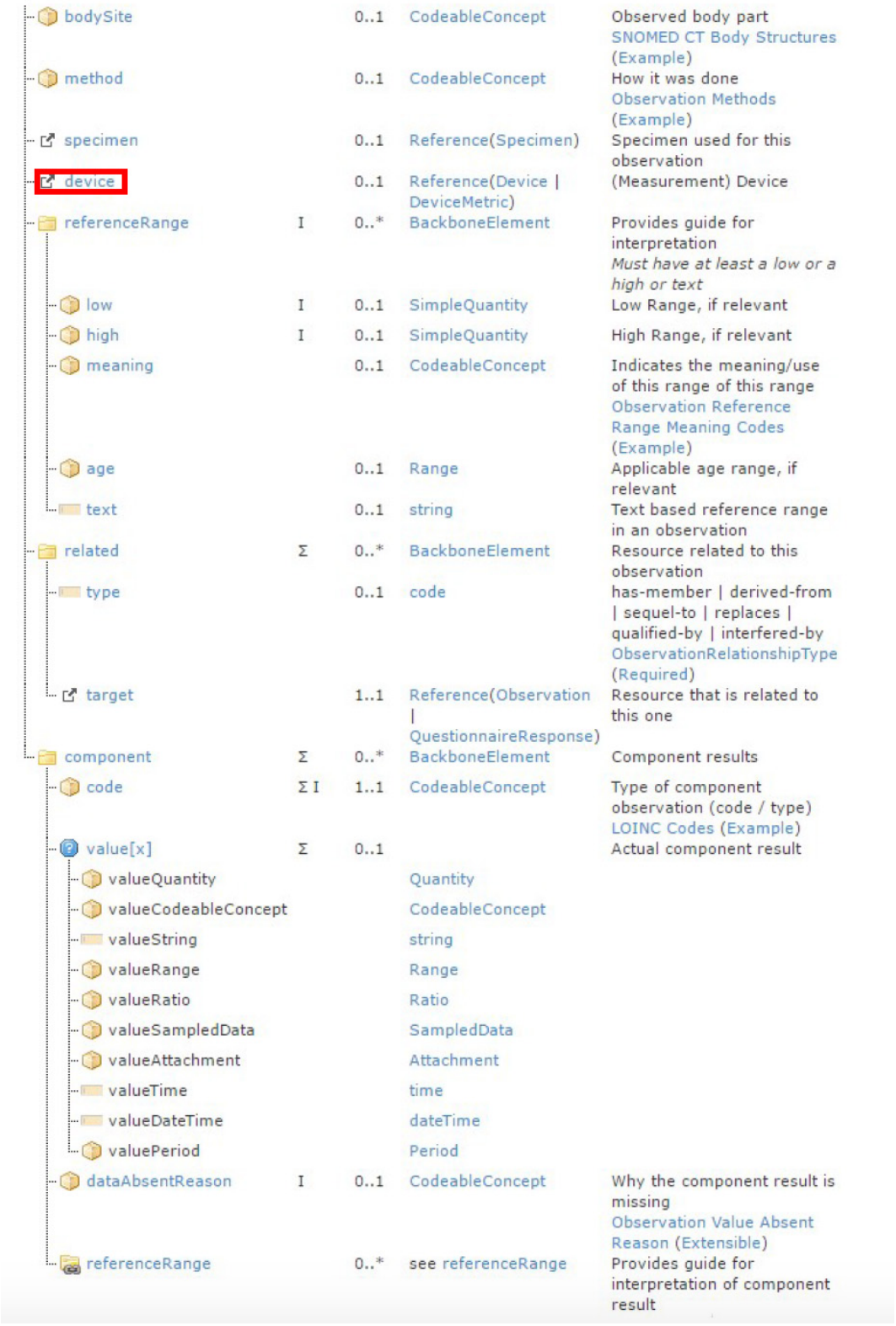
En las figuras D.1 y D.2 se muestran recuadrados los campos utilizados en el JSON empleado en la arquitectura.

Como se muestra en la bibliografía, este recurso se encuentra accesible en la siguiente dirección: https://www.hl7.org/fhir/observation.html



Name	Flags	Card.	Type	Description & Constraints
Observation	I		DomainResource	Measurements and simple assertions *SHALL only be present if Observation.value[x] is not present* *Component code SHALL not be same as observation code*
identifier		0..*	Identifier	Unique Id for this particular observation
status	?! Σ	1..1	code	registered | preliminary | final | amended + ObservationStatus (Required)
category		0..1	CodeableConcept	Classification of type of observation Observation Category Codes (Example)
code	Σ	1..1	CodeableConcept	Type of observation (code / type) LOINC Codes (Example)
subject	Σ	0..1	Reference(Patient | Group | Device | Location)	Who and/or what this is about
encounter		0..1	Reference(Encounter)	Healthcare event during which this observation is made
effective[x]	Σ	0..1		Clinically relevant time/time-period for observation
effectiveDateTime			dateTime	
effectivePeriod			Period	
issued	Σ	0..1	instant	Date/Time this was made available
performer	Σ	0..*	Reference(Practitioner | Organization | Patient | RelatedPerson)	Who is responsible for the observation
value[x]	Σ	0..1		Actual result
valueQuantity			Quantity	
valueCodeableConcept			CodeableConcept	
valueString			string	
valueRange			Range	
valueRatio			Ratio	
valueSampledData			SampledData	
valueAttachment			Attachment	
valueTime			time	
valueDateTime			dateTime	
valuePeriod			Period	
dataAbsentReason	I	0..1	CodeableConcept	Why the result is missing Observation Value Absent Reason (Extensible)
interpretation		0..1	CodeableConcept	High, low, normal, etc. Observation Interpretation Codes (Extensible)
comments		0..1	string	Comments about result

Figura D.1: Estructura del recurso *Observation*.



bodySite		0..1	CodeableConcept	Observed body part SNOMED CT Body Structures (Example)
method		0..1	CodeableConcept	How it was done Observation Methods (Example)
specimen		0..1	Reference(Specimen)	Specimen used for this observation
device		0..1	Reference(Device | DeviceMetric)	(Measurement) Device
referenceRange	I	0..*	BackboneElement	Provides guide for interpretation *Must have at least a low or a high or text*
low	I	0..1	SimpleQuantity	Low Range, if relevant
high	I	0..1	SimpleQuantity	High Range, if relevant
meaning		0..1	CodeableConcept	Indicates the meaning/use of this range of this range Observation Reference Range Meaning Codes (Example)
age		0..1	Range	Applicable age range, if relevant
text		0..1	string	Text based reference range in an observation
related	Σ	0..*	BackboneElement	Resource related to this observation
type		0..1	code	has-member | derived-from | sequel-to | replaces | qualified-by | interfered-by ObservationRelationshipType (Required)
target		1..1	Reference(Observation | QuestionnaireResponse)	Resource that is related to this one
component	Σ	0..*	BackboneElement	Component results
code	Σ I	1..1	CodeableConcept	Type of component observation (code / type) LOINC Codes (Example)
value[x]	Σ	0..1		Actual component result
valueQuantity			Quantity	
valueCodeableConcept			CodeableConcept	
valueString			string	
valueRange			Range	
valueRatio			Ratio	
valueSampledData			SampledData	
valueAttachment			Attachment	
valueTime			time	
valueDateTime			dateTime	
valuePeriod			Period	
dataAbsentReason	I	0..1	CodeableConcept	Why the component result is missing Observation Value Absent Reason (Extensible)
referenceRange		0..*	see referenceRange	Provides guide for interpretation of component result

Figura D.2: Estructura del recurso *Observation*.

Anexo E

WebScraping

Como se ha comentado, el WebScraping es una técnica utilizada mediante programas de software para extraer información de sitios web.

En este trabajo se ha generado un script que combina JavaScript y JQuery para obtener y manipular las gráficas de Kibana y así crear una nueva estructura HTML que contiene la información deseada. Posteriormente, utilizando las librerías de PhantomJS para Python, se realiza una captura de pantalla de la nueva página web generada y se almacena en el servidor donde se aloja el bot de Telegram. Esta captura es la imagen que finalmente se le envía al usuario.

Para obtener las tres gráficas disponibles se han generado tres scripts diferentes en los que cambia la manipulación del HTML origen (HTML obtenido de Kibana).

Como ejemplo se expone el código del script realizado para la obtención de la gráfica de los pasos.

```
var args = require('system').args;
var url = args[1];
var webpage = require('webpage').create();

webpage.viewportSize = { width: 1150, height: 430 };
webpage.clipRect = { top: 0, left: 0, width: 1150,
height: 450 };

webpage.open(url, function (status) {
 if (status !== 'success') {
   console.log('Unable to load the address!');
   phantom.exit();
 } else {
   window.setTimeout(function () {
   webpage.evaluate(function() {
    var head = document.getElementsByTagName('head')[0];
    var style1 = document.createElement("style");
    style1.setAttribute("type","text/css");
    style1.innerHTML = '
           .gridster [data-col="4"]{ left:183.5px; }
           .gridster [data-col="3"] { left:124px; }
           .gridster [data-col="2"] { left:64.5px; }
           .gridster [data-col="1"] { left:5px; }
           .gridster [data-row="4"] { top:335px; }
           .gridster [data-row="3"] { top:225px; }
           .gridster [data-row="2"] { top:115px; }
           .gridster [data-row="1"] { top:5px; }
           .gridster [data-sizey="1"] { height:100px; }
           .gridster [data-sizey="2"] { height:210px; }
           .gridster [data-sizey="3"] { height:320px; }
```

```
        .gridster [data-sizey="4"] { height:430px; }
        .gridster [data-sizex="1"] { width:49.5px; }
        .gridster [data-sizex="2"] { width:109px; }
        .gridster [data-sizex="3"] { width:168.5px; }
        .gridster [data-sizex="4"] { width:228px; }';
    head.appendChild(style1);
    head.removeChild(document.getElementsByTagName
    ('style')[5]);
    var visualize = $('visualize.panel-content.ng
    -scope.ng-isolate-scope')[0];
    var visContainer = $('div.vis-container')[0];
    var visualizeChart = $('div.visualize-chart')
    [0].outerHTML;
    visContainer.innerHTML = visualizeChart;
    visualize.innerHTML = visContainer.outerHTML;
    var panelHeading = document
    .getElementsByClassName('panel-heading')[0];
    var panelTitle = document.getElementsByClassName
    ('panel-title ng-binding')[0].outerHTML;
    panelHeading.innerHTML = panelTitle;
    var divPanel = $('div.panel.panel-default
    .ng-scope')[0];
    divPanel.innerHTML = panelHeading.outerHTML
    + visualize.outerHTML;
    var dashboardPanel = document.createElement
    ('dashboard-panel');
    dashboardPanel.innerHTML = divPanel.outerHTML;
    var li = $('li.ng-scope.gs-w')[0];
    li.innerHTML = dashboardPanel.outerHTML;
    var ul = document.createElement('ul');
    ul.setAttribute('class','gridster');
```

```
      ul.innerHTML = li.outerHTML;
      var dashboardGrid = $('dashboard-grid.ready')[0];
      dashboardGrid.innerHTML = ul.outerHTML;
      var body = document.getElementById('kibana-body');
      document.getElementsByTagName("body")[0]
      .style.overflow = "hidden";
      document.getElementsByTagName("body")[0]
      .style.height = "500px";
      document.getElementsByTagName("body")[0]
      .style.maxHeight = "500px";
      body.innerHTML = dashboardGrid.outerHTML;
      html = document.createElement('html');
      document.getElementsByTagName("html")[0]
      .style.overflow = "hidden";
      document.getElementsByTagName("html")[0]
      .style.height = "500px";
      document.getElementsByTagName("html")[0]
      .style.maxHeight = "500px";
      html.innerHTML = head.outerHTML + body.outerHTML;
      });
      webpage.render('Pasos.png', {format: 'png',
      quality: '50'});
      phantom.exit();
    }, 12000);
  }
});
```

Anexo F

Configuración de Vagrant

Como se ha explicado en la memoria, Vagrant es una herramienta que facilita el despliegue de máquinas virtuales ya que permite establecer una pre-configuración que se define en un archivo llamado *Vagrantefile*.

En este archivo se definen algunos parámetros como la RAM a dedicar a la máquina virtual, el entorno de virtualización a utilizar o las configuraciones de red a aplicar. En este caso se han tenido que configurar tanto la dirección IP a utilizar (192.168.1.21) como el routing que se aplicará (especificar la dirección IP del router como destino por defecto para la interfaz creada, *eth1*).

Al final de este archivo se especifica que, una vez se realice la configuración de la máquina virtual, se utilice un Playbook de Ansible, *playbook.yml*, para realizar las instalaciones necesarias en la dicho entorno virtual. Estas instalaciones se realizan mediante una conexión SSH entre el equipo que alberga la máquina virtual (host) con la máquina virtual (guest).

```
# -*- mode: ruby -*-
# vi: set ft=ruby :

# All Vagrant configuration is done below. The "2" in
#Vagrant.configure configures the configuration version.

Vagrant.configure(2) do |config|

  # Every Vagrant development environment requires a box.
  config.vm.box = "hemangajmera/centos7-gnome"

  # Create a public network, which generally matched to
  #bridged network. Bridged networks make the machine
  #appear as another physical device on your network.
  config.vm.network "public_network", bridge:
        "en5: Ethernet Thunderbolt", ip: "192.168.1.21"
   # interfaz thunderbolt MacBook Pro:
   # 'en5: Ethernet Thunderbolt'

  # default router
  config.vm.provision "shell",
    run: "always",
    inline: "sudo route add default gw 192.168.1.1"

  config.vm.provision "shell",
    run: "always",
    inline: "sudo route add -net 192.168.1.0/24
            gw 192.168.1.1 eth1"
```

```
  # Provider-specific configuration.
  config.vm.provider "virtualbox" do |vb|
  # Display the VirtualBox GUI when booting the machine
      vb.gui = true

  # Customize the amount of memory on the VM:
      vb.name = "Vagrant-VM"
      vb.memory = 4096
  end

  config.vm.provision "ansible" do |ansible|
    ansible.verbose = "v"
    ansible.playbook = "playbook.yml"
  end
end
```

Anexo G

Configuración de Ansible

Ansible permite la configuración de entornos virtuales mediante un fichero de configuración llamado Playbook (Playbook.yml). En este archivo se incluyen las tareas a ejecutar en el *guest*.

Se ha desarrollado un script que permite configurar el firewall, instalar todas las librerías necesarias, los módulos del stack ELK, el proxy inverso Nginx y configurar todos los elementos antes mencionados. También descarga del repositorio de Github los archivos necesarios para ejecutar completamente la arquitectura.

Es, por lo tanto, un archivo que en unos pocos minutos permite tener la arquitectura funcionando.

Al principio del script se especifican los equipos a los que se aplicará la configuración (hosts), los permisos que se utilizarán (become, become_method con *sudo* para super-usuario) y, finalmente, las tareas a ejecutar (tasks).

```
---
- name: Configuring the Virtual Machine
  hosts: all
  become: yes
  become_method: sudo
  gather_facts: no
  tasks:

  - name: Start firewalld
    service: name=firewalld
             state=started
  - name: Add bridged interface to public zone
    command: firewall-cmd --permanent
      --zone=public --add-interface=eth1
  - name: Open http service in firewall
    command: firewall-cmd --permanent
      --zone=public --add-service=http
  - name: Open https service in firewall
    command: firewall-cmd --permanent
      --zone=public --add-service=https
  - name: Open 80 port in the firewall
    command: firewall-cmd --permanent
      --zone=public --add-port=80/tcp
  - name: Open 8088 port in the firewall
    command: firewall-cmd --permanent
      --zone=public --add-port=8088/tcp
  - name: Open 8443 port in the firewall
    command: firewall-cmd --permanent
      --zone=public --add-port=8443/tcp
  - name: Load the newest firewall configuration
```

```
    command: firewall-cmd --reload

  - name: Install pip
    easy_install: name=pip
                  state=latest

  - name: Install pyTelegramBotAPI
    pip: name=pyTelegramBotAPI
         state=latest

  - name: Install GoogleAPI
    pip: name=google-api-python-client
         state=latest

  - name: Install Java 1.8
    yum: name=java-1.8.0
         state=latest

  - name: Import ElasticSearch package
    command:
    rpm --import http://packages.elastic.co/GPG-
    KEY-elasticsearch

  - copy:
      src: ./config_files/elasticsearch.repo
      dest: /etc/yum.repos.d/elasticsearch.repo
      mode: "u+rwx,g+rwx,o+rwx"

  - name: Install ElasticSearch
    yum: name=elasticsearch
         state=installed
```

```
- name: Remove elasticsearch.yml
  file:
    state: absent
    path: "/etc/elasticsearch/elasticsearch.yml"

- copy:
    src: ./config_files/elasticsearch.yml
    dest: /etc/elasticsearch/elasticsearch.yml
    mode: "u+rwx,g+rwx,o+rwx"

- name: Give permission to /var/log/elasticsearch
  file:
    path: /var/log/elasticsearch
    mode: 0777

- name: Creates directory for elasticsearch backups
  file:
    path: /etc/elasticsearch/backup
    state: directory
    mode: 0777

- name: Give permission to elasticsearch backups
  file:
    path: /etc/elasticsearch/backup
    mode: 0777

- name: Install Unzip
  yum: name=unzip
       state=installed
```

```
- name: Start ElasticSearch
  service: name=elasticsearch
           state=started

- name: Set runlevel to start on ElasticSearch service
  command: chkconfig elasticsearch on

- name: Reload daemon
  command: systemctl daemon-reload

- name: Enable ElasticSearch service
  command: systemctl enable elasticsearch.service

- copy:
    src: ./config_files/kibana.repo
    dest: /etc/yum.repos.d/kibana.repo
    mode: "u+rwx,g+rwx,o+rwx"

- name: Install Kibana
  yum: name=kibana
       state=installed

- name: Remove kibana.yml
  file:
    state: absent
    path: "/opt/kibana/config/kibana.yml"

- copy:
    src: ./config_files/kibana.yml
    dest: /opt/kibana/config/kibana.yml
    mode: "u+rwx,g+rwx,o+rwx"
```

```
- name: Start kibana
  service: name=kibana
           state=started

- name: Set runlevel to start on Kibana service
  command: chkconfig kibana on

- name: Install epel-release
  yum: name=epel-release
       state=latest

- name: Install list of packages
  yum: name={{item}}
       state=installed
  with_items:
     - nginx
     - httpd-tools

- name: Remove nginx.conf
  file:
    state: absent
    path: "/etc/nginx/nginx.conf"

- copy:
    src: ./config_files/nginx.conf
    dest: /etc/nginx/nginx.conf
    mode: "u+rwx,g+rwx,o+rwx"

- copy:
    src: ./config_files/kibana.conf
```

```
    dest: /etc/nginx/conf.d/kibana.conf
    mode: "u+rwx,g+rwx,o+rwx"

- name: Start Nginx
  service: name=nginx
           state=started

- name: Enable kibana on nginx
  command: setsebool -P httpd_can_network_connect=1

- copy:
    src: ./config_files/logstash.repo
    dest: /etc/yum.repos.d/logstash.repo
    mode: "u+rwx,g+rwx,o+rwx"

- name: Install Logstash
  yum: name=logstash
       state=installed

- copy:
    src: ./config_files/02-tcp-input.conf
    dest: /etc/logstash/conf.d/02-tcp-input.conf
    mode: "u+rwx,g+rwx,o+rwx"

- copy:
    src: ./config_files/10-filter.conf
    dest: /etc/logstash/conf.d/10-filter.conf
    mode: "u+rwx,g+rwx,o+rwx"

- copy:
    src: ./config_files/30-elasticsearch-
```

```
    output.conf
    dest: /etc/logstash/conf.d/30-elasticsearch-
    output.conf
    mode: "u+rwx,g+rwx,o+rwx"

- name: Start Logstash
  service: name=logstash
           state=started

- name: Set runlevel to start on Logstash service
  command: chkconfig logstash on

- name: Creates directory for Telegram bot
  file:
    path: /usr/lib64/python2.7/site-packages/mibandbot
    state: directory
    mode: 0777

- name: Install git
  yum: name=git
       state=latest

- git:
    repo: "https://github.com/alegr3/MiBandBot.git"
    dest: /usr/lib64/python2.7/site-packages/mibandbot
    recursive: yes
    version: readme-edits

- copy:
    src: ./config_files/client_secrets_web.json
    dest: /usr/lib64/python2.7/site-packages/
```

```
            mibandbot/
    client_secrets_web.json
    mode: "u+rwx,g+rwx,o+rwx"

- name: Create certificate and private key for webhook
  command: openssl req -newkey rsa:2048 -sha256 -x509
  -nodes -days 3650 -subj '/C=ES/ST=Zaragoza/L=Aragon/
     CN=mibandbot.myddns.me'
  -keyout /usr/lib64/python2.7/site-packages/
     mibandbot/webhookutiles/webhook.key
  -out /usr/lib64/python2.7/site-packages/mibandbot/
     webhookutiles/webhook.pem

- name: Install Flask
  pip: name=Flask
       state=latest

- name: copy your folder using a work around
  unarchive: src=./config_files/ES_backup/
                            kibana_dashboards.zip
             dest=/etc/elasticsearch/backup

- name: Map ElasticSearch backup folder
  command: curl -XPUT 'http://localhost:9200/
    _snapshot/my_backup' -d "{\"type\":\"fs\",
    \"settings\":{\"location\":\"/etc/elasticsearch/
    backup\",\"compress\":true}}"

- name: Give permisions to backup folder recursive
  command: chmod 777 -R /etc/elasticsearch/backup
```

```
- name: Close .kibana index
  command: curl -XPOST 'localhost:9200/.kibana/_close'

- name: Restore ElasticSearch backup
  command: curl -XPOST 'localhost:9200/_snapshot/
     my_backup/snapshot_2/_restore?
     wait_for_completion=true'

- copy:
    src: ./config_files/254462299credentials.json
    dest: /usr/lib64/python2.7/site-packages/
      mibandbot/credentials/
      254462299credentials.json
    mode: "u+rwx,g+rwx,o+rwx"

- name: Install dependecies to launch phantomJS
  yum: name={{item}}
       state=installed
  with_items:
     - fontconfig
     - freetype
     - freetype-devel
     - fontconfig-devel
     - libstdc++

- name: Download PhantomJS
  get_url:
    url: https://bitbucket.org/ariya/phantomjs/
          downloads/
          phantomjs-1.9.8-linux-x86_64.tar.bz2
    dest: /usr/lib64/python2.7/site-packages/mibandbot
```

```
    mode: 0777

- name: Creates a directory to PhantomJS
  file:
    path: /opt/phantomjs
    state: directory
    mode: 0777

- name: Install tar
  yum: name=tar
       state=latest

- name: Uncompress tar file
  command: tar -xjvf /usr/lib64/python2.7/
    site-packages/mibandbot/
    phantomjs-1.9.8-linux-x86_64.tar.bz2
    --strip-components 1

- unarchive:
    src: /usr/lib64/python2.7/site-packages/
      mibandbot/phantomjs-1.9.8-linux-x86_64.tar.bz2
    dest: /opt/phantomjs/
    remote_src: True

- name: Creates a directory to launch PhantomJS
  file:
    path: /usr/bin/phantomjs
    state: directory
    mode: 0777

- name: Create Symlink to phantomJS
```

```
    command: ln -s /opt/phantomjs/bin/phantomjs /usr/bin/
      phantomjs

  - replace:
      path: /usr/lib64/python2.7/site-packages/
         mibandbot/bot.py
      regexp: "API_TOKEN = ''"
      replace: "API_TOKEN =
        '268690774:AAGiDxxEBbmD8Y9zUIeqj1j0-CzQ5rvlQNs'"

  - replace:
      path: /usr/lib64/python2.7/site-packages/
         mibandbot/bot.py
      regexp: "WEBHOOK_HOST = ''"
      replace: "WEBHOOK_HOST = 'mibandbot.myddns.me'"

  - replace:
      path: /usr/lib64/python2.7/site-packages/
         mibandbot/ServerHandler.py
      regexp: 'WEBHOOKURL = ""'
      replace: 'WEBHOOKURL =
         "https://mibandbot.myddns.me"'

    - name: Give permisions to credentials folder
      command: chmod 777 -R /usr/lib64/python2.7/
         site-packages/mibandbot/credentials
```