Backendless sobre Plataformas IoT

Powered by

CAMPUS MADRID

– Juan José Moreno

Sofia 2

Meetup

Información

plataformasofia2@indra.es

http://about.sofia2.com

http://twitter.com/SOFIA2_Platform

http://sofia2.com

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Índice

- Introducción
- Backendless
- Sofia2
- Herramientas de desarrollo
- Conclusiones
- Pizza time

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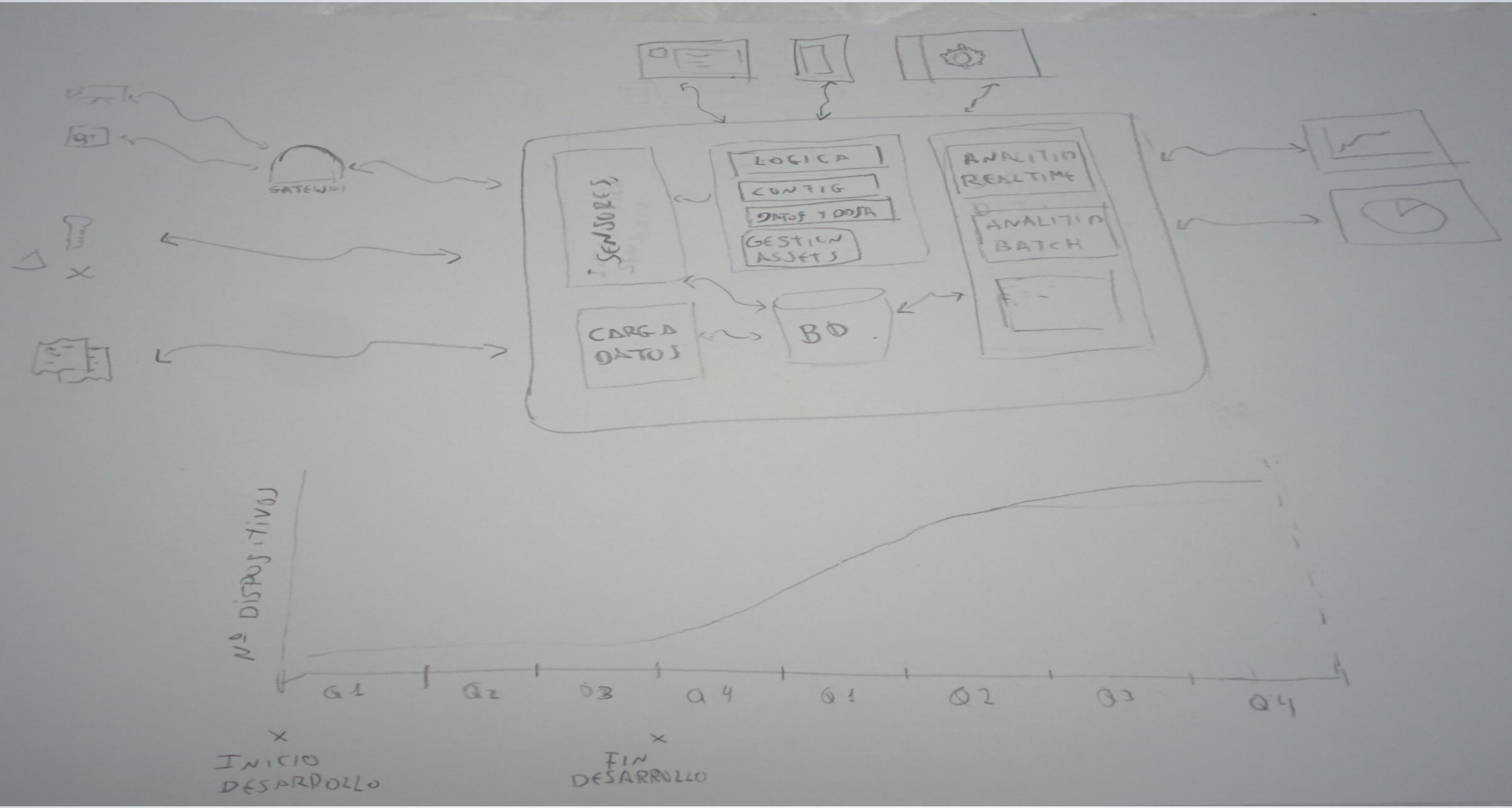
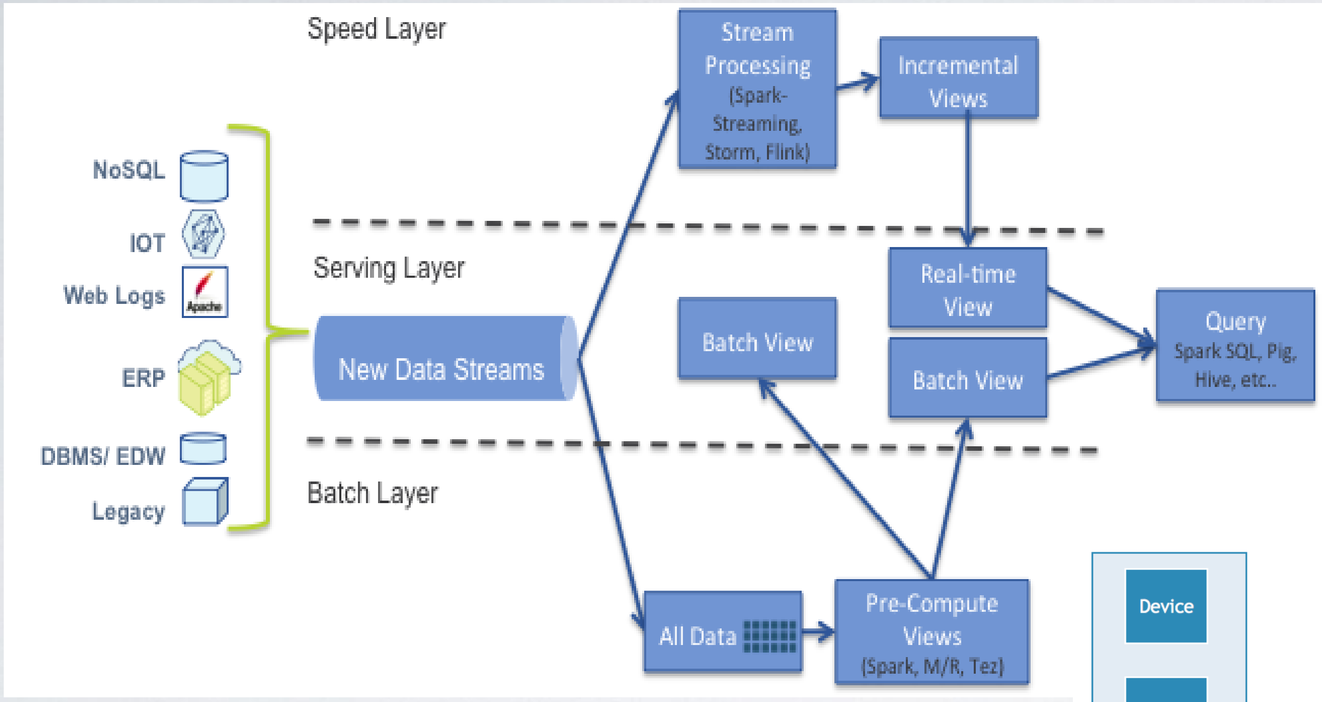
Introducción

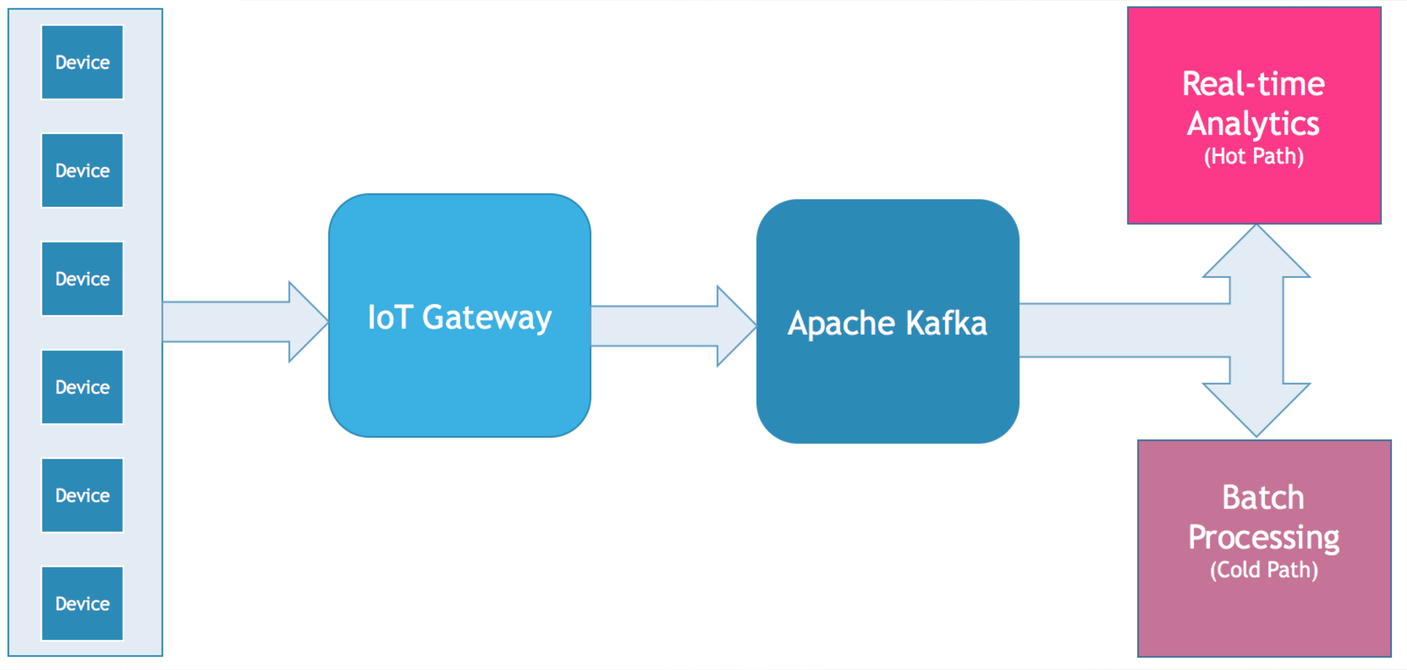
Backendless

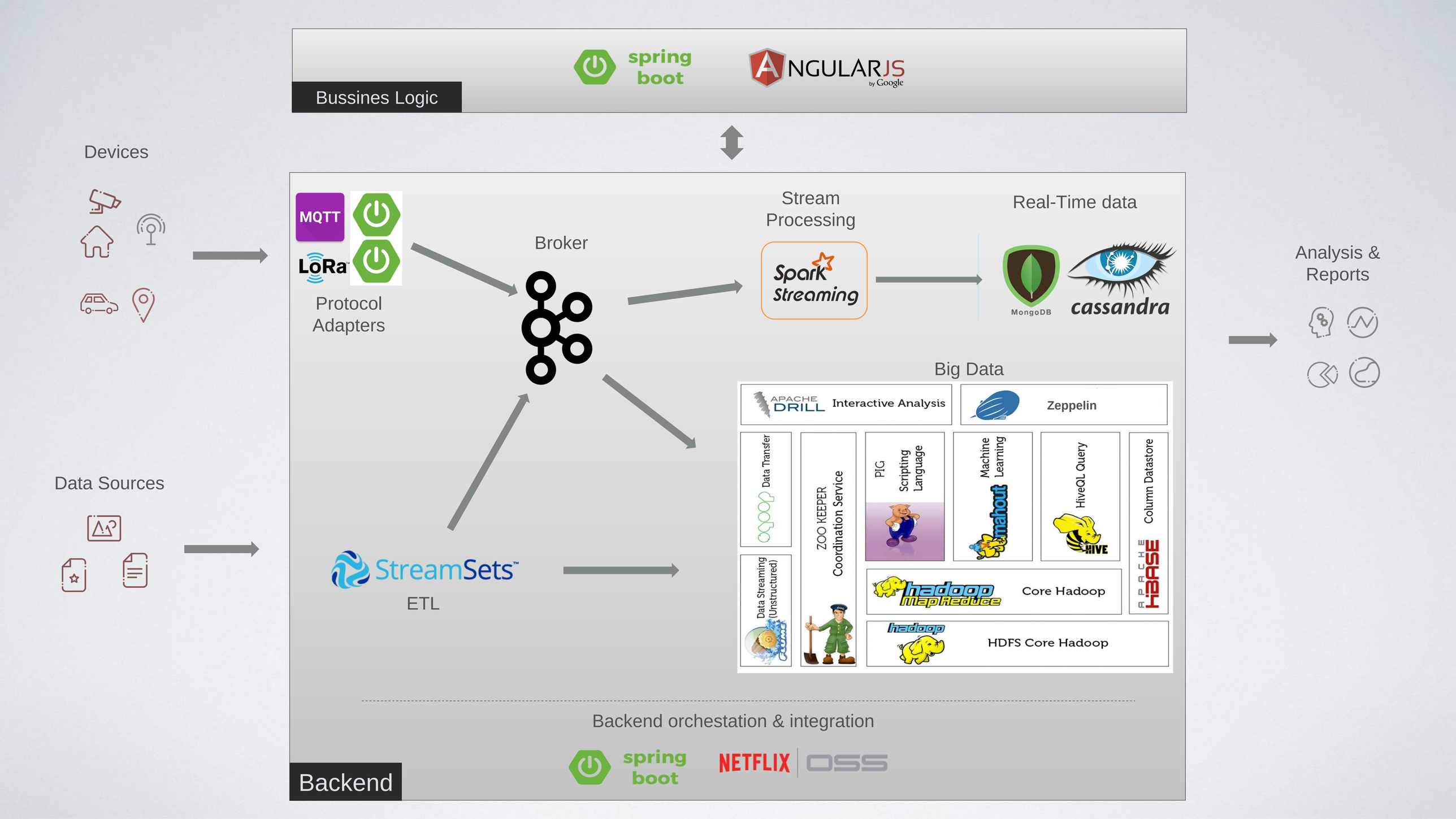

GATEWAY
SENSORES
LOGICA
CONFIG
DATOS Y DOSIS
GESTION ASSETS
CARGA DATOS
BD
ANALITICO REALTIME
ANALITICO BATCH
Nº DISPOSITIVOS
Q1
Q2
Q3
Q4
Q1
Q2
Q3
Q4
INICIO DESARROLLO
FIN DESARROLLO

Esquema Big Data



Esquema IoT




Bussines Logic
spring boot
ANGULARJS by Google
Devices
MQTT
LoRa
Protocol Adapters
Broker
Stream Processing
Spark Streaming
Real-Time data
MongoDB
cassandra
Analysis & Reports
Big Data
APACHE DRILL
Interactive Analysis
Zeppelin
Data Transfer
ZOO KEEPER
Coordination Service
PIG
Scripting Language
Machine Learning
mahout
HiveQL Query
HIVE
Column Datastore
APACHE HBASE
Data Streaming (Unstructured)
hadoop Map Reduce
Core Hadoop
hadoop
HDFS Core Hadoop
Data Sources
StreamSets
ETL
Backend orchestation & integration
spring boot
NETFLIX OSS
Backend

Tolerancia a fallos

Monitorización

Escalabilidad

Testing

Alta disponibilidad

LOPD

Alto rendimiento

Seguridad

Integracion continua

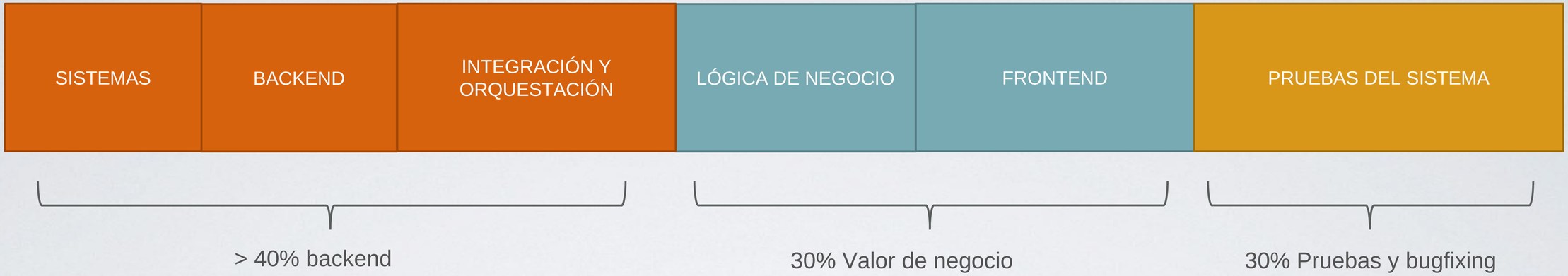
Backup

Log centralizado

Provisionamiento

Despliegue continuo

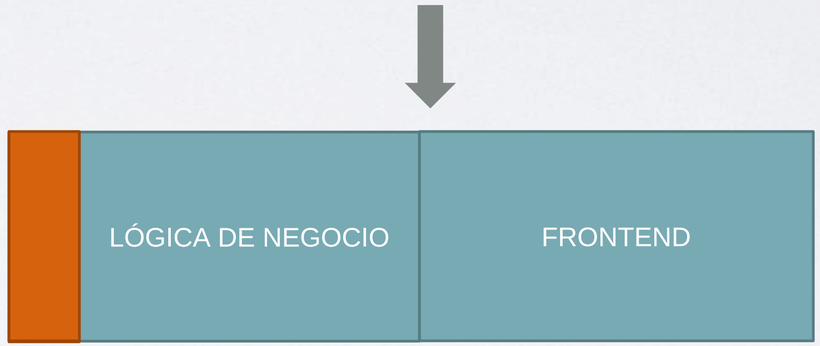
Esfuerzo Necesario

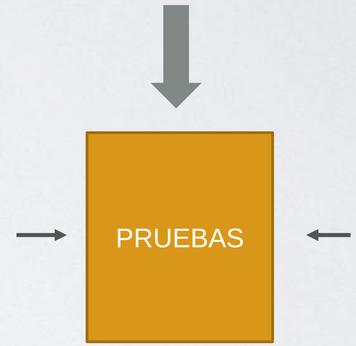


Equipo Necesario


¡¡¡¡¡¡UN GRITON DE
DOLARES!!!!!!!!!!!!
memegenerator.es

Esfuerzo Necesario





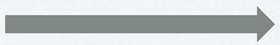
BACKENDLESS
BACKEND AS A SERVICE

MENOR ESFUERZO.
ENFOCADO EN VALOR DE NEGOCIO

REDUCCIÓN DE PRUEBAS


SHUT UP AND
TAKE MY MONEY!

Comparativa en blog de Sofia2



https://about.sofia2.com/

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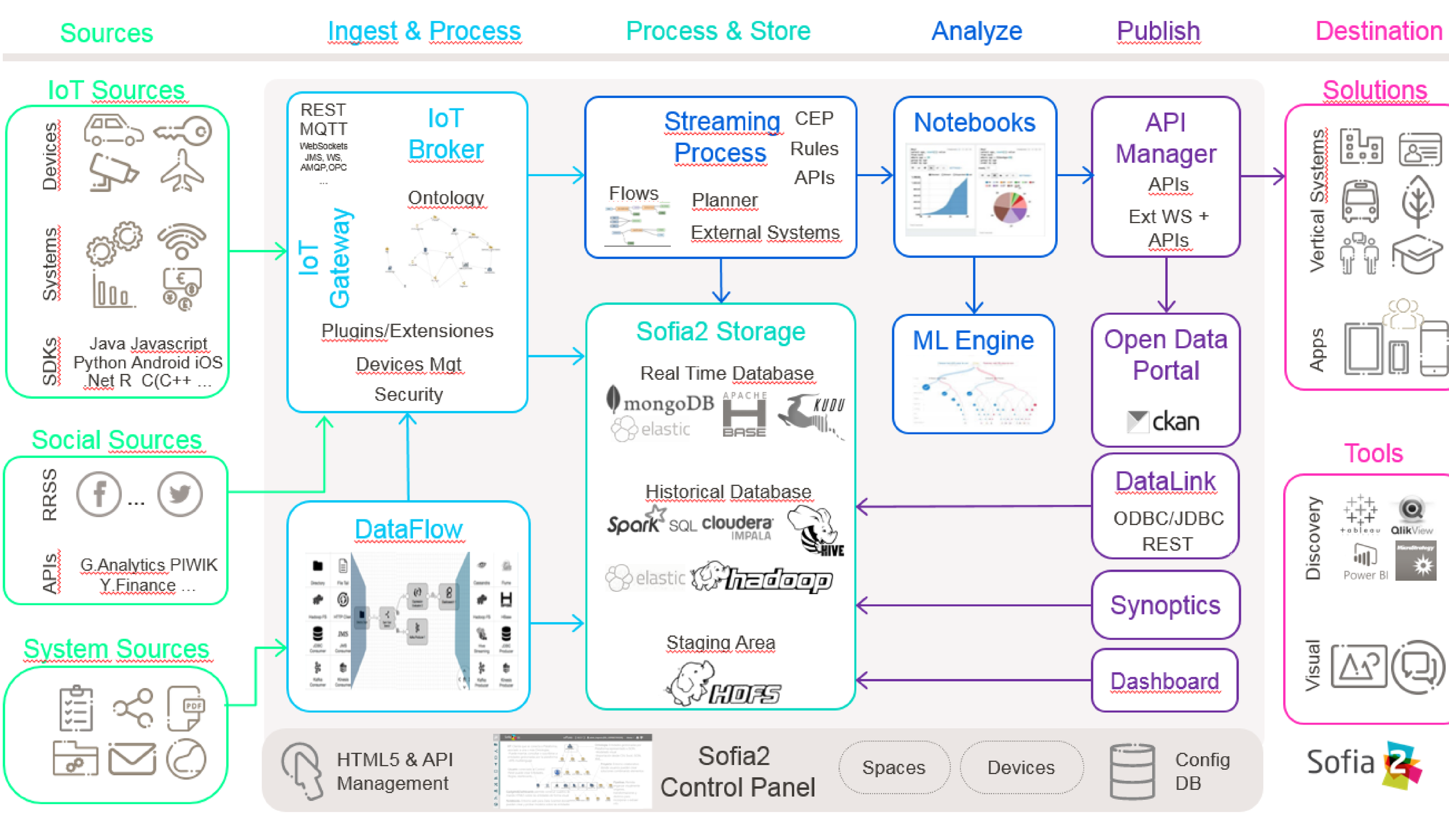
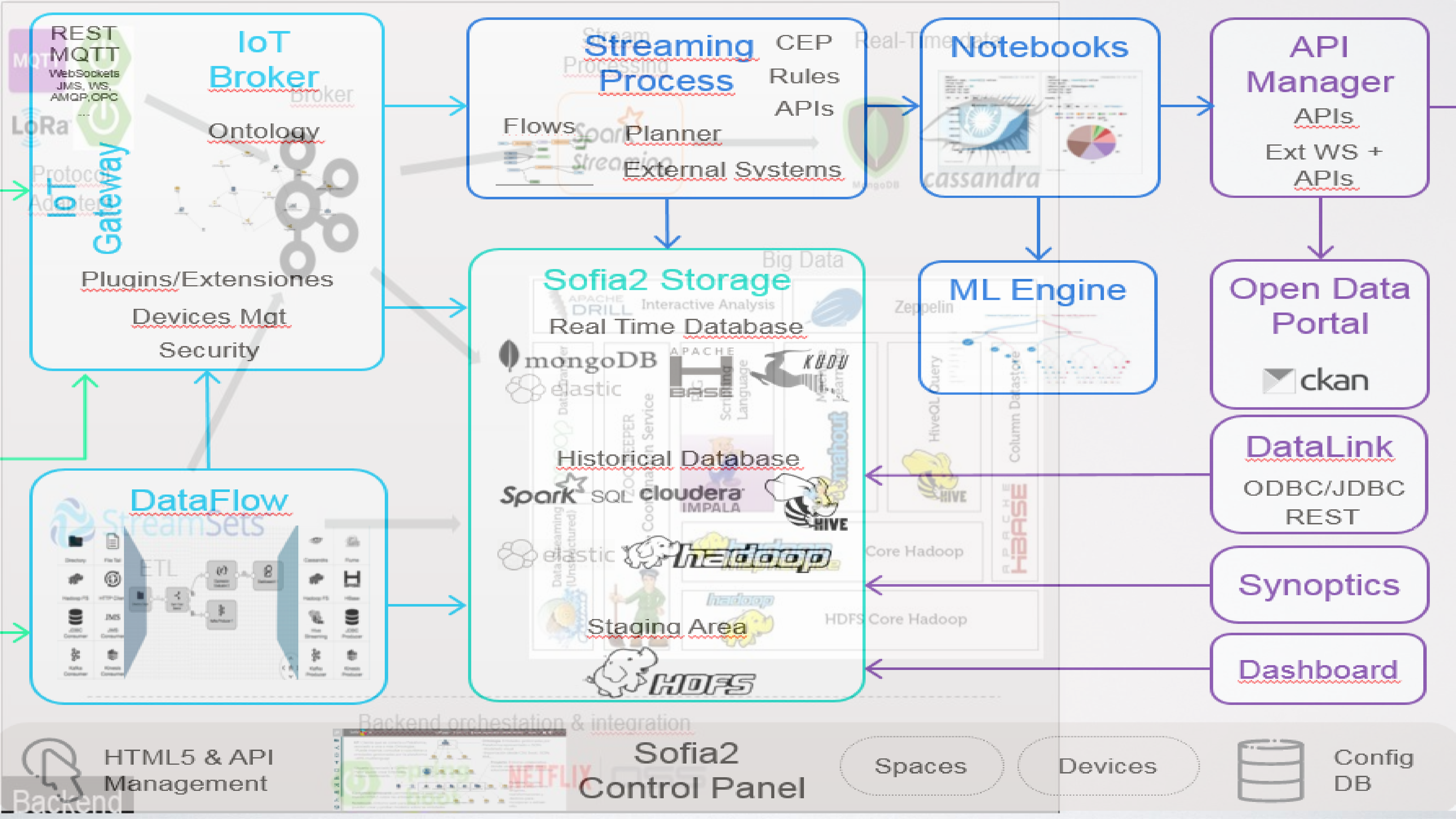

Sources
Ingest & Process
Process & Store
Analyze
Publish
Destination
IoT Sources
Devices
Systems
SDKs
Java Javascript
Python Android iOS
Net R C(C++ ...
Social Sources
RRSS
APIs
G.Analytics PIWIK
Y.Finance ...
System Sources
REST
MQTT
WebSockets
JMS, WS,
AMQP,OPC
...
IoT Broker
Ontology
IoT Gateway
Plugins/Extensiones
Devices Mgt
Security
DataFlow
Streaming Process
CEP
Rules
APIs
Flows
Planner
External Systems
Sofia2 Storage
Real Time Database
mongoDB
elastic
APACHE HBASE
KUDU
Historical Database
Spark SQL
cloudera IMPALA
HIVE
elastic
hadoop
Staging Area
HDFS
Notebooks
ML Engine
API Manager
APIs
Ext WS +
APIs
Open Data Portal
ckan
DataLink
ODBC/JDBC
REST
Synoptics
Dashboard
Solutions
Vertical Systems
Apps
Tools
Discovery
tableau
QlikView
Power BI
Visual
HTML5 & API Management
Sofia2 Control Panel
Spaces
Devices
Config DB
Sofia 2


REST
MQTT
WebSockets
JMS, WS,
AMQP,CPC
...
IoT Broker
Ontology
IoT Gateway
Plugins/Extensiones
Devices Mgt
Security
Streaming Process
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Flows
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cloudera IMPALA
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hadoop
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HDFS
ML Engine
Zeppelin
Open Data Portal
ckan
DataLink
ODBC/JDBC
REST
Synoptics
Dashboard
DataFlow
StreamSets
ETL
Backend orchestation & integration
HTML5 & API Management
Sofia2 Control Panel
Spaces
Devices
Config DB
Backend


IOT
Task4Work


Promoting iniatitives
in advanced technology
IOT
Task4Work

Herramientas de desarrollo

Recursos

GitHub https://github.com/Sofia2/

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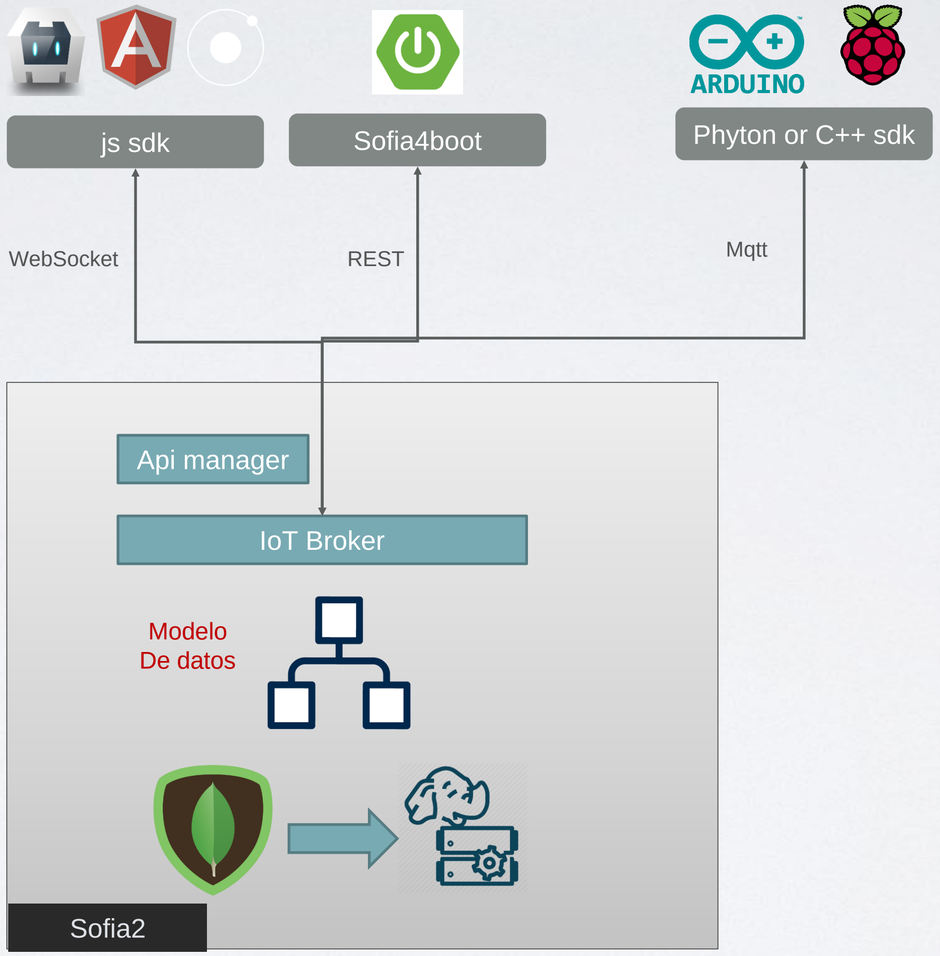
- https://sofia2.com/desarrollador.html
- https://about.sofia2.com/

Resumen

- Base de datos
- Api services
- Broker
- Procesamiento asíncrono
- Stream processing

- ETL
- Analítica
- REST de gestión
- Combos

Base de datos



Base de datos

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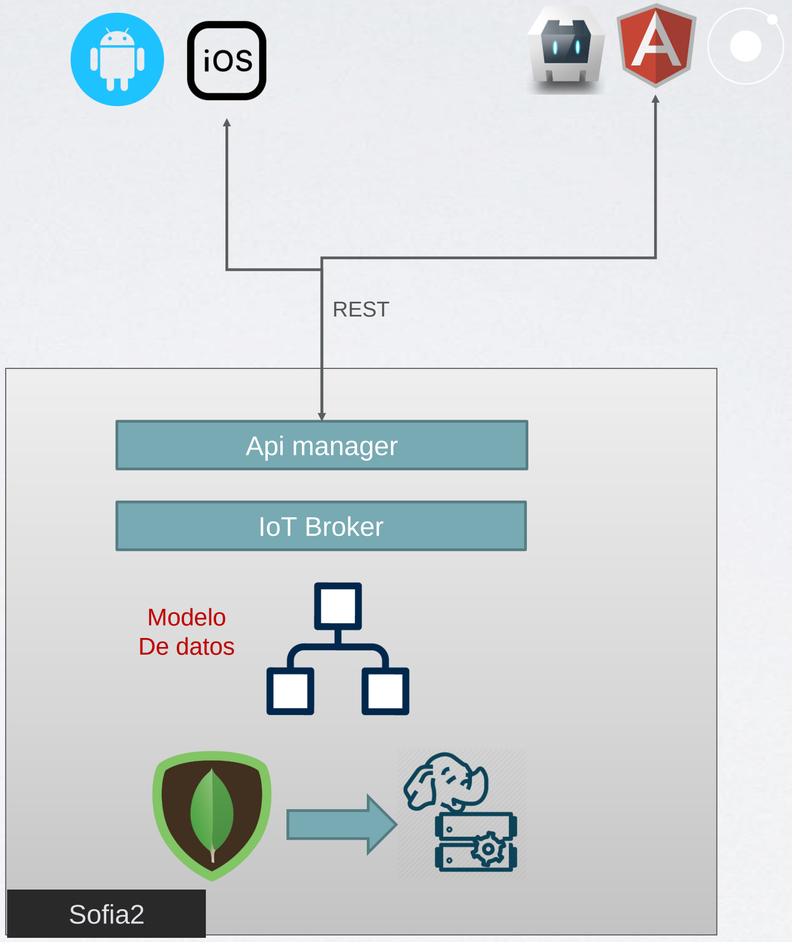
API Services



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API Services

GET

CUSTOM (query

putOfertas

\putOfertas?$idsOferta={idsOferta}
db.OBJFINANCIABLE.find({'OBJFINANCIABLE.estado':'nuevo','OBJFINANCIABLE.idOferta': { $regex: {$idsOferta}}})
Pone ofertas a estado 'pendiente_financiar'

Eliminar Editar

CUSTOM (query

getAllTest

\getAllTest
select * from OBJFINANCIABLE limit 1;
metodo para debug

Eliminar Editar

CUSTOM (query

getById

\getById?$idOferta={idOferta}
SELECT * FROM OBJFINANCIABLE WHERE OBJFINANCIABLE.idOferta = {$idOferta}
Devuelve una oferta por su id

Eliminar Editar

CUSTOM (query

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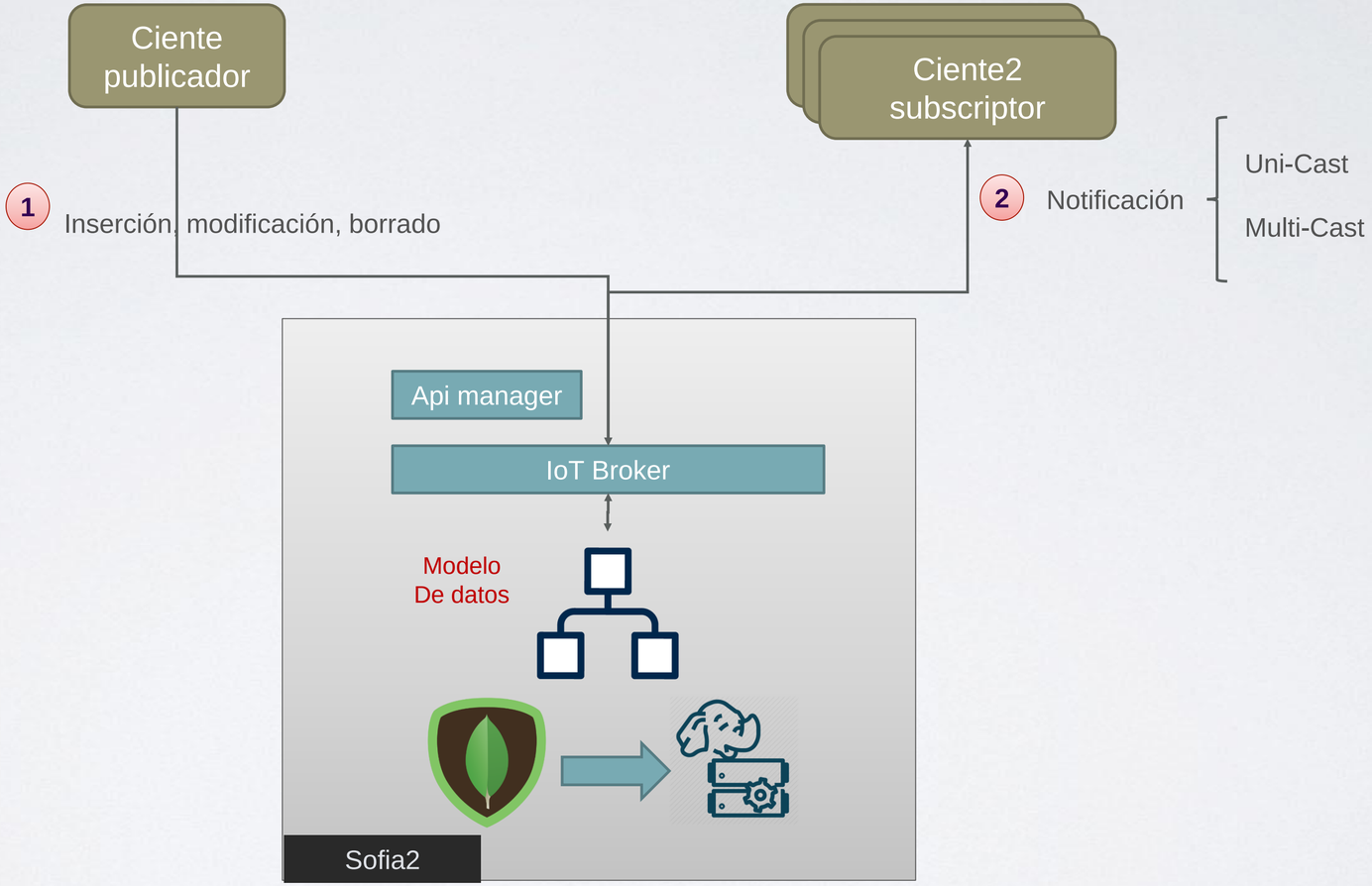
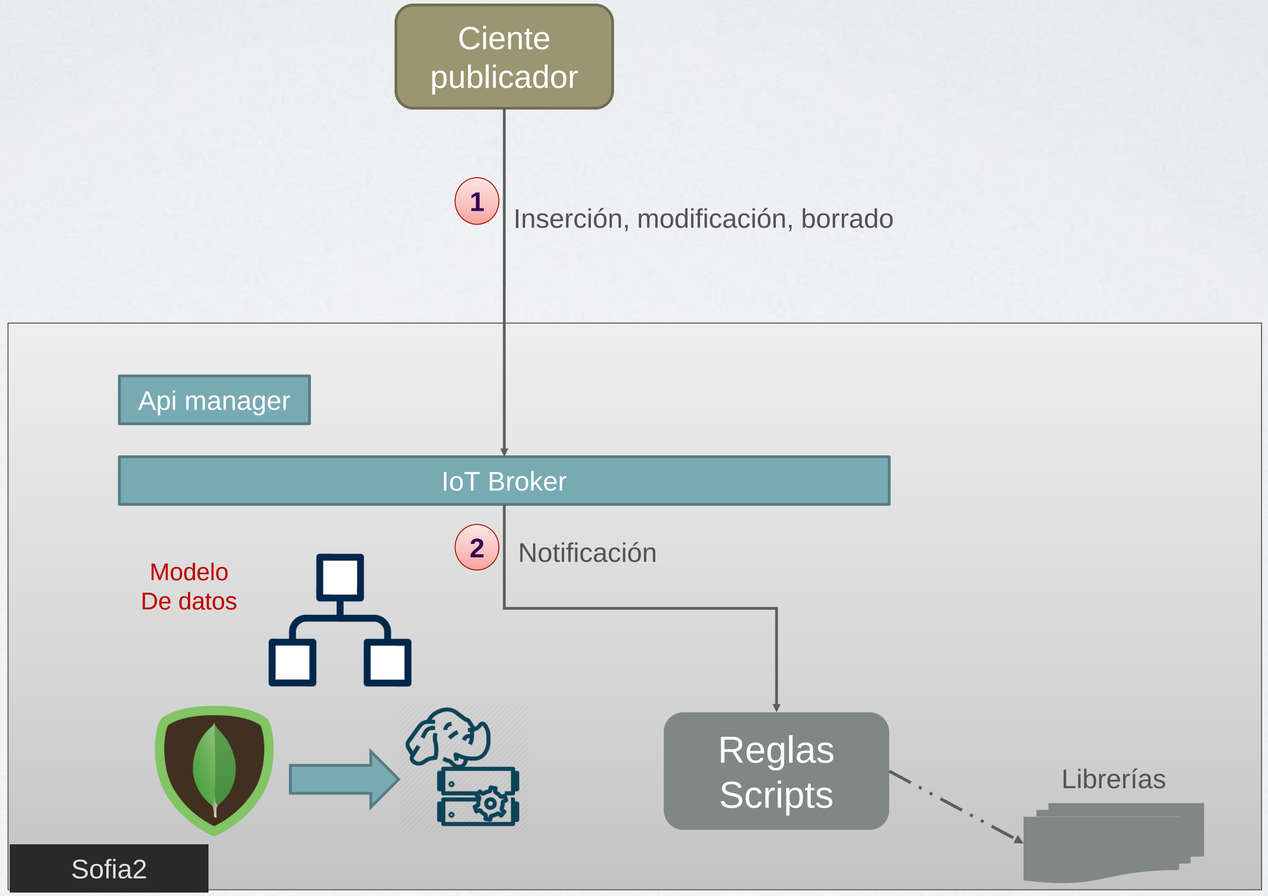
Broker y notificaciones



Broker y notificaciones

```
@Test
public void testSubscribeUnsubscribe() throws Exception{

        kp.addListener4SIBNotifications(new Listener4SIBIndicationNotifications() {

                @Override
                public void onIndication(String messageId, SSAPMessage ssapMessage) {

                        log.info(String.format(LogMessages.LOG_NOTIFICATION, messageId, ssapMessage.toJson()));

                        indicationReceived=true;

                        SSAPBodyReturnMessage indicationMessage=SSAPBodyReturnMessage.fromJsonToSSAPBodyReturnMessage(ssapMessage.g

                        assertNotSame(indicationMessage.getData(), null);
                        assertTrue(indicationMessage.isOk());
                        assertSame(indicationMessage.getError(), null);
                        log.info(String.format(LogMessages.LOG_RESPONSE_DATA, ssapMessage.toJson()));

                }
        });
```

Async Scripts



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Async Scripts

REGLAS / CONSULTAR SCRIPT

Lenguaje

Groovy

If | Then | Else | Error

```
def apisantander = new APISantanderChain();
def pedido = apisantander.conversorTextoAElemento(ontology);
def cifProveedor = pedido.PEDIDO.idProveedor;
def idComprador = pedido.PEDIDO.idComprador;

def proveedor = apisantander.getProveedor(cifProveedor);
def comprador = apisantander.getComprador(idComprador);
def importePedido = pedido.PEDIDO.importeDelPedido;
def iva = pedido.PEDIDO.porcetajeIva;
def factorCorreccion = proveedor.PROVEEDOR.factorCorreccion;
def porcentajeFactura = 0;
def limite = proveedor.PROVEEDOR.tope;
def limiteMin = proveedor.PROVEEDOR.topeMIN;
def umbral = proveedor.PROVEEDOR.umbralMaxPedido;
```

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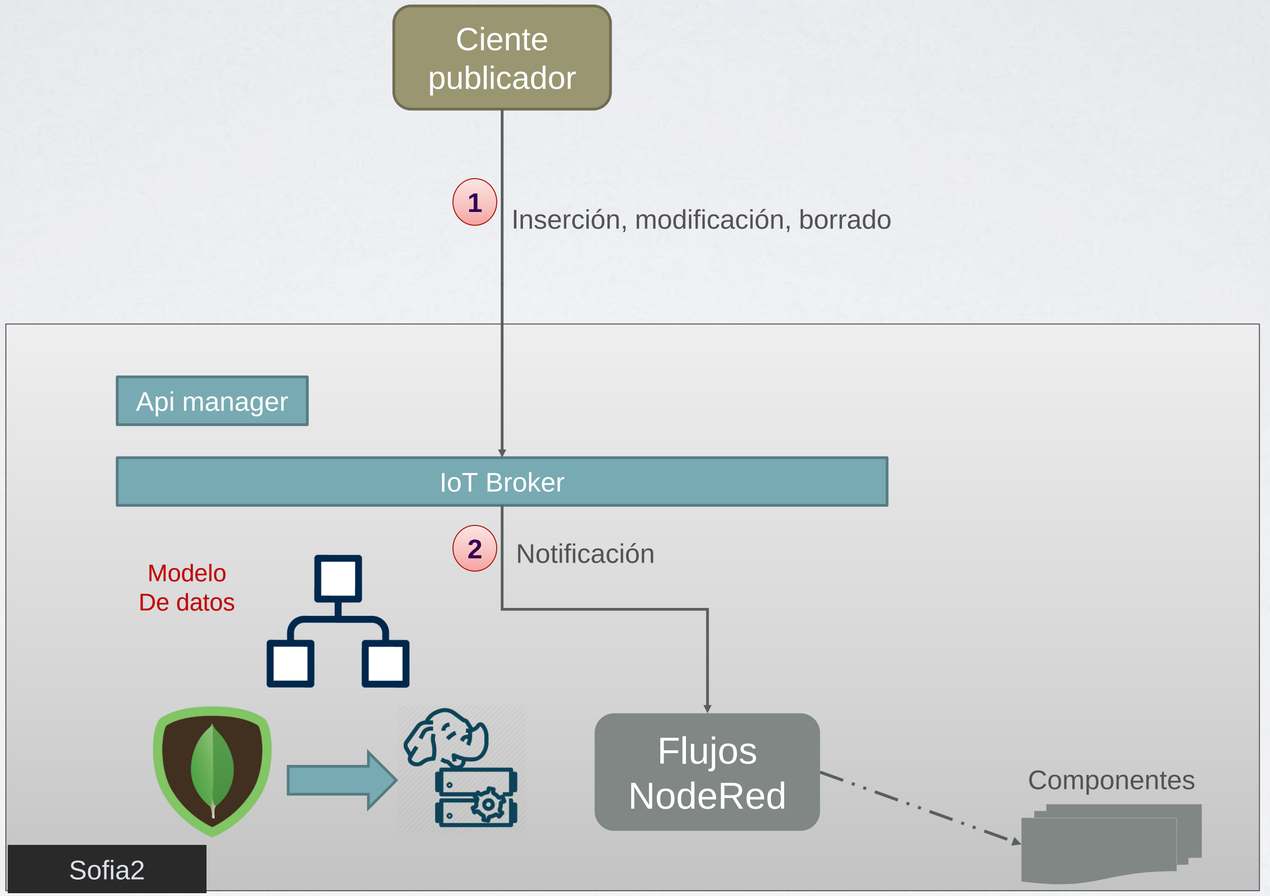
Async NodeRed



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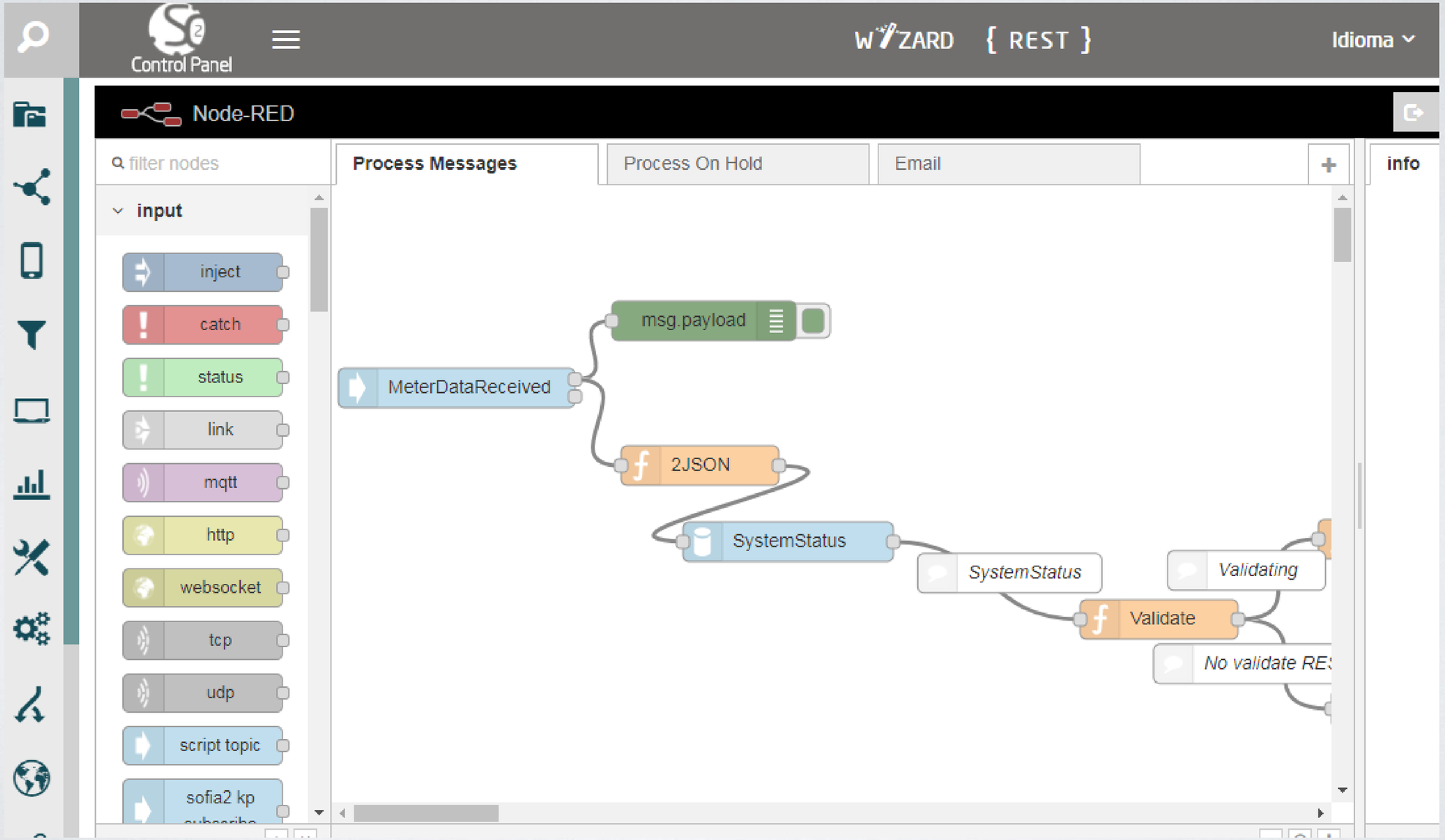
Async NodeRed



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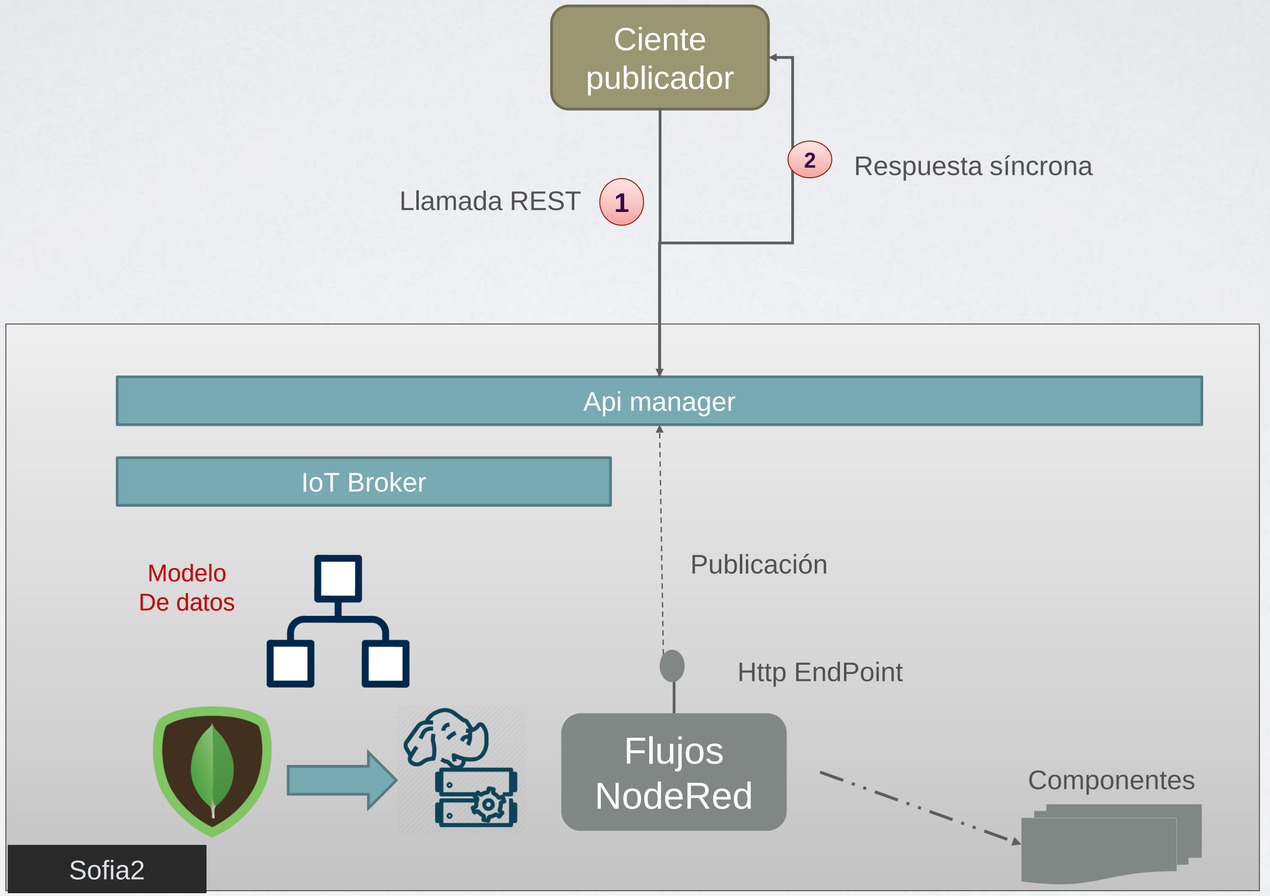
En construcción

Sync NodeRed



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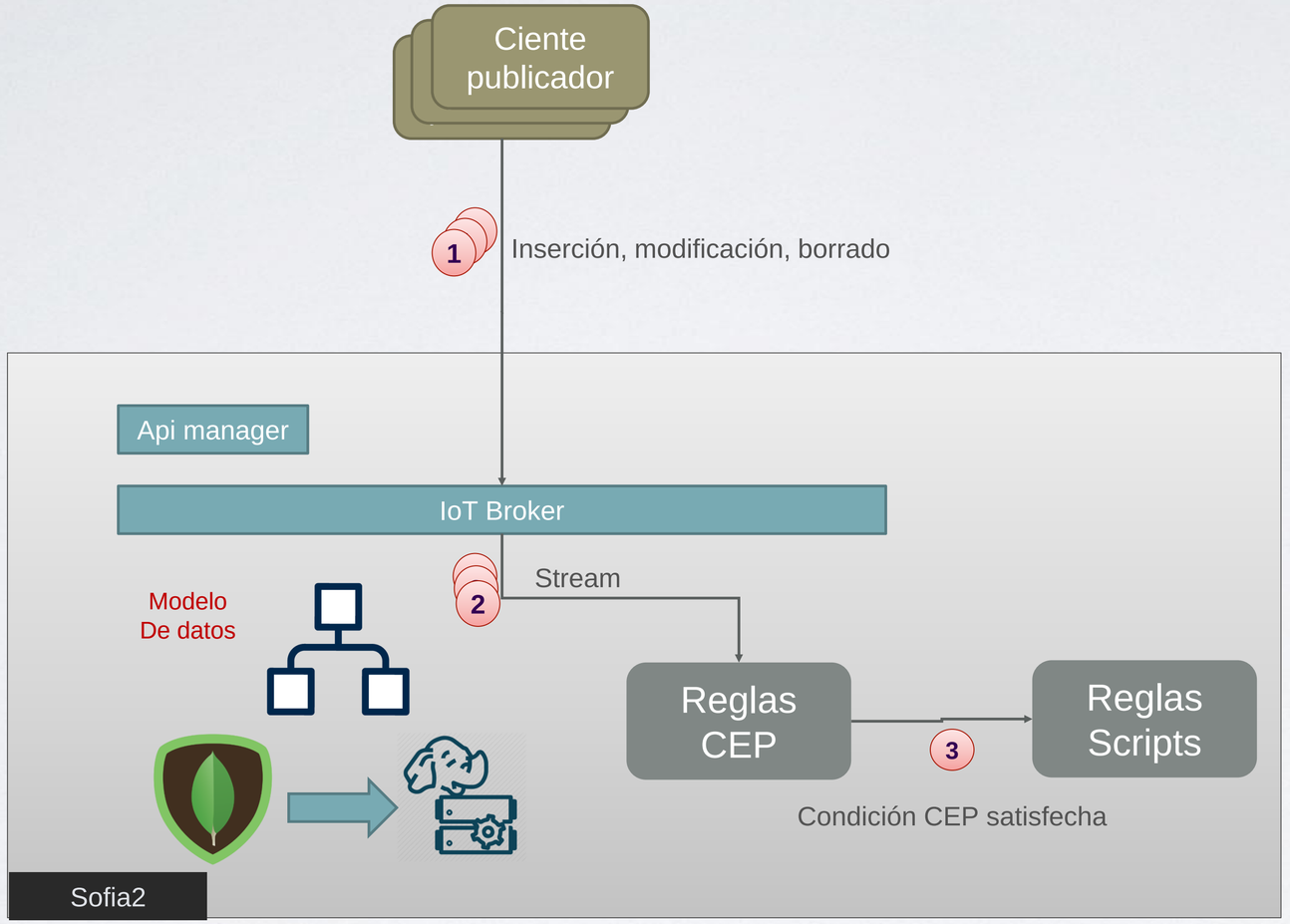
Stream processing (CEP)



- Temporales
- Acumulación
- Ausencia de eventos

Sofia 2

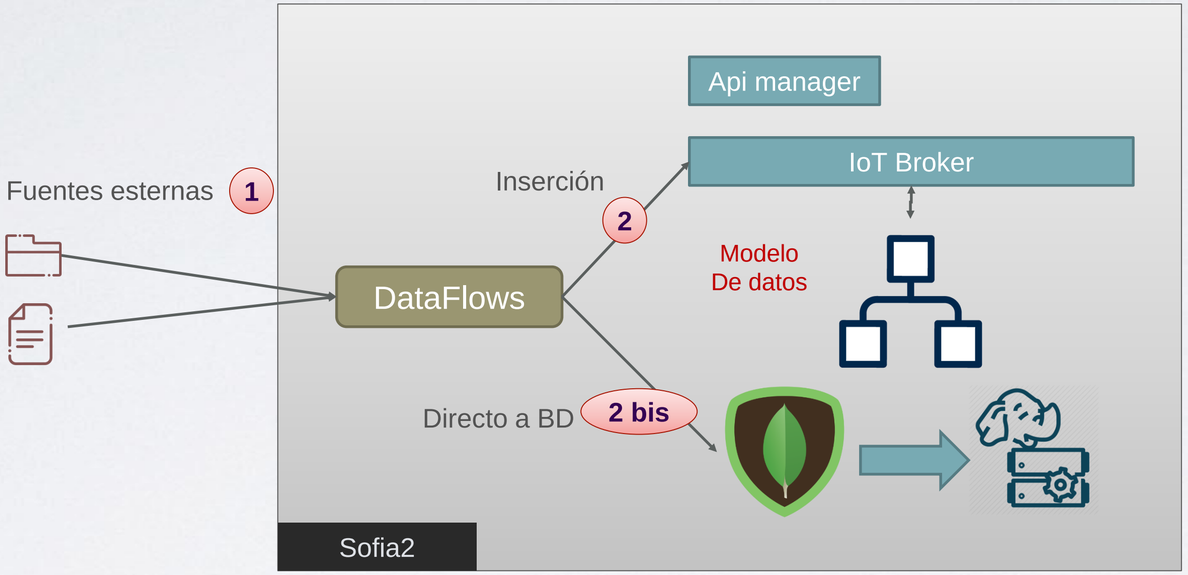
Meetup

Stream processing (CEP)

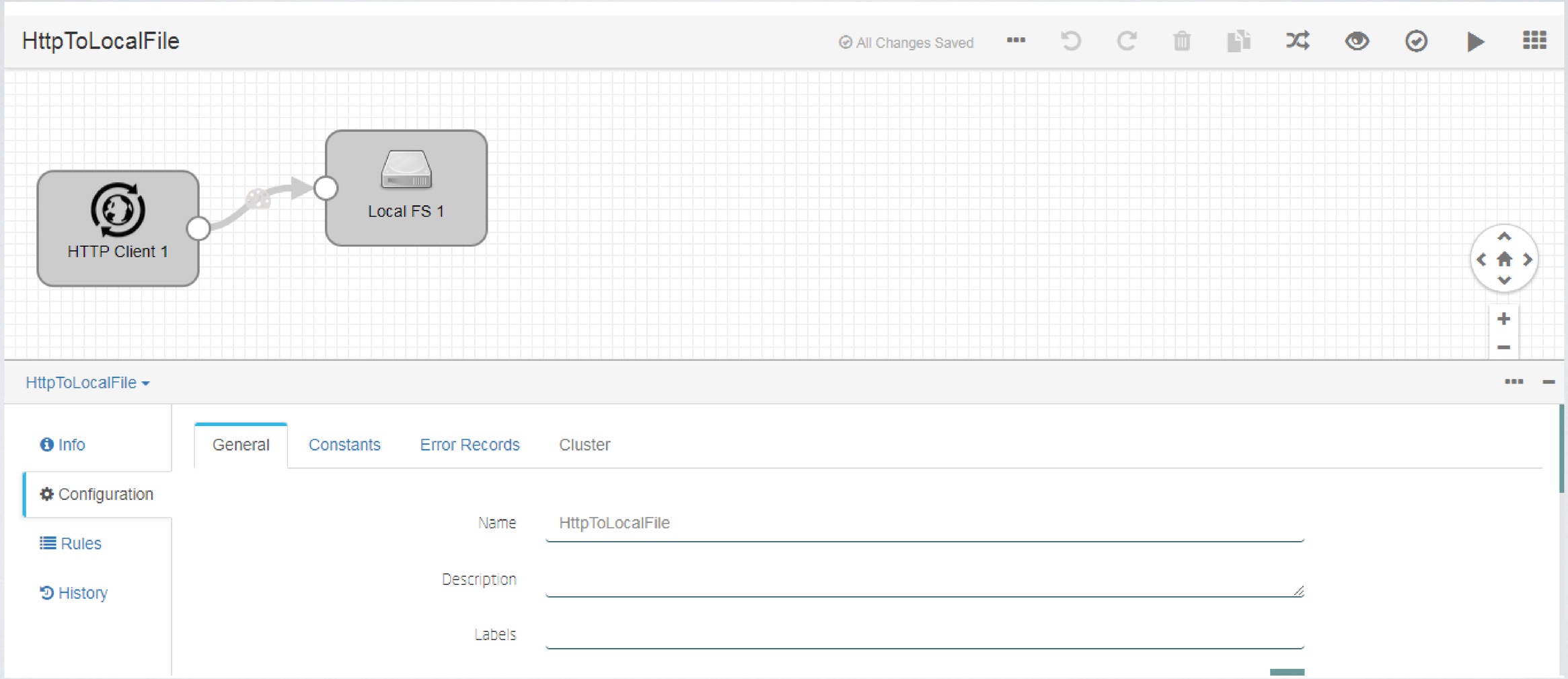
Sofia 2

Meetup

ETL


Api manager
IoT Broker
Fuentes esternas
1
Inserción
2
Modelo
De datos
DataFlows
Directo a BD
2 bis
Sofia2

ETL



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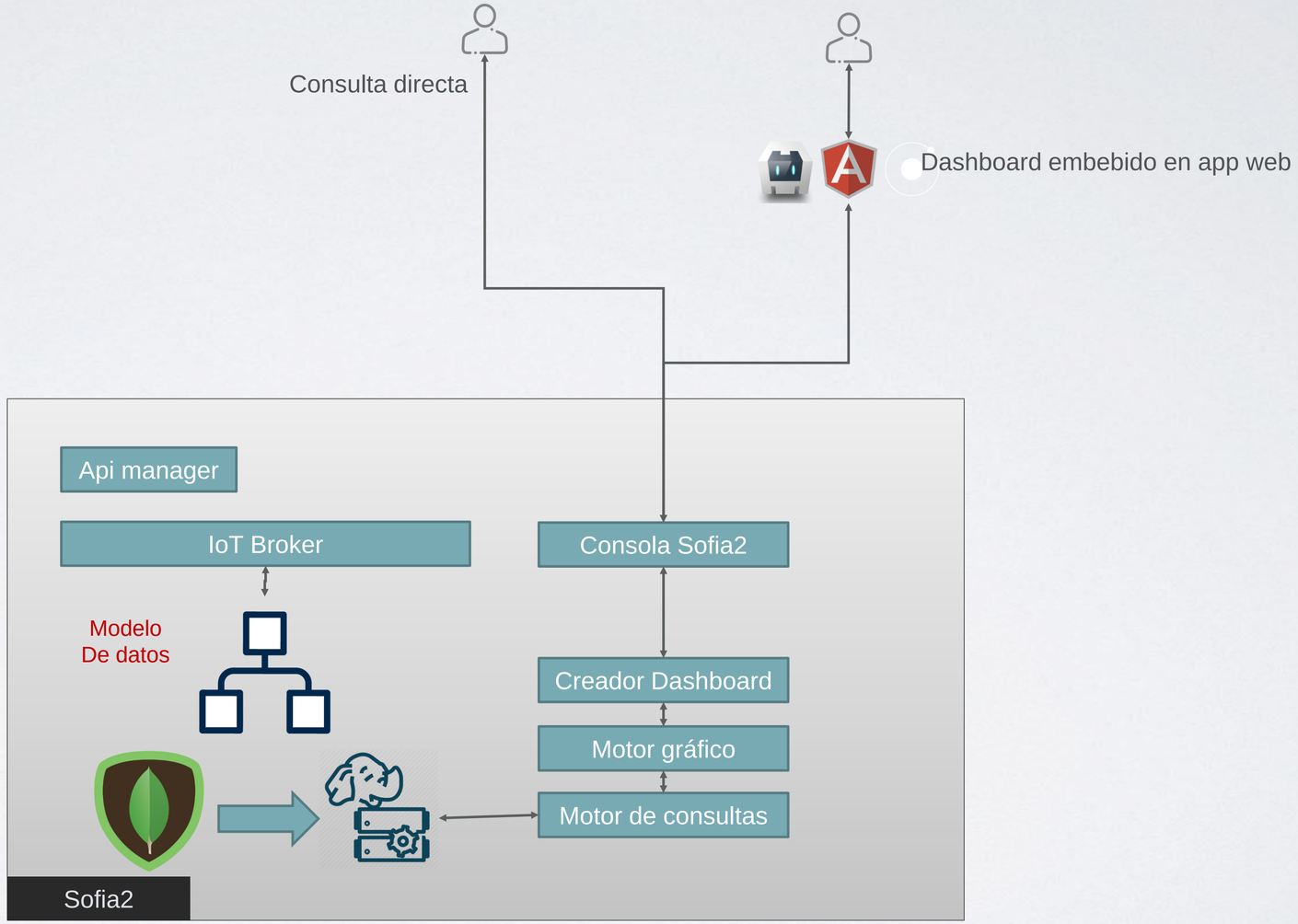
Meetup

Dashboards

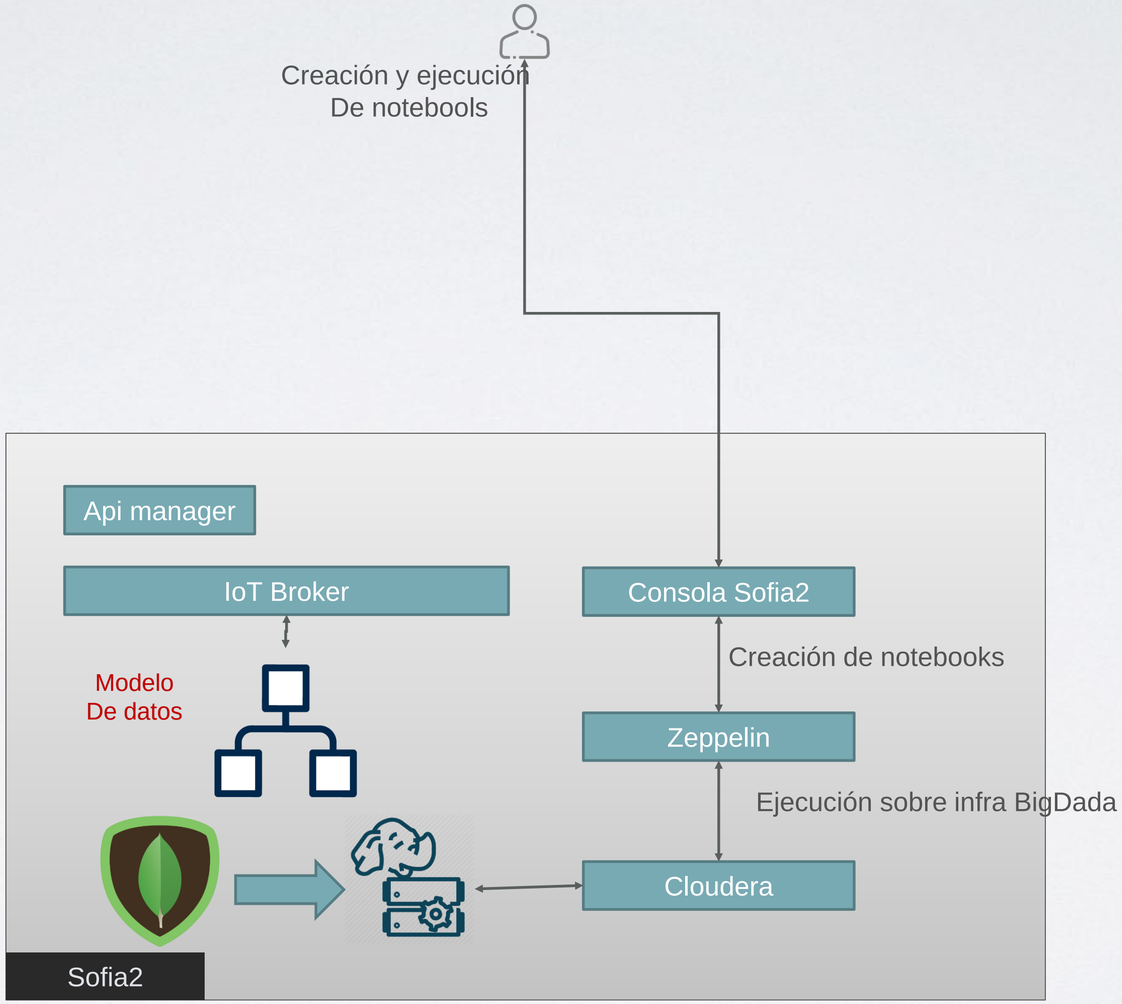

Consulta directa
Dashboard embebido en app web
Api manager
IoT Broker
Consola Sofia2
Modelo
De datos
Creador Dashboard
Motor gráfico
Motor de consultas
Sofia2

Dashboards

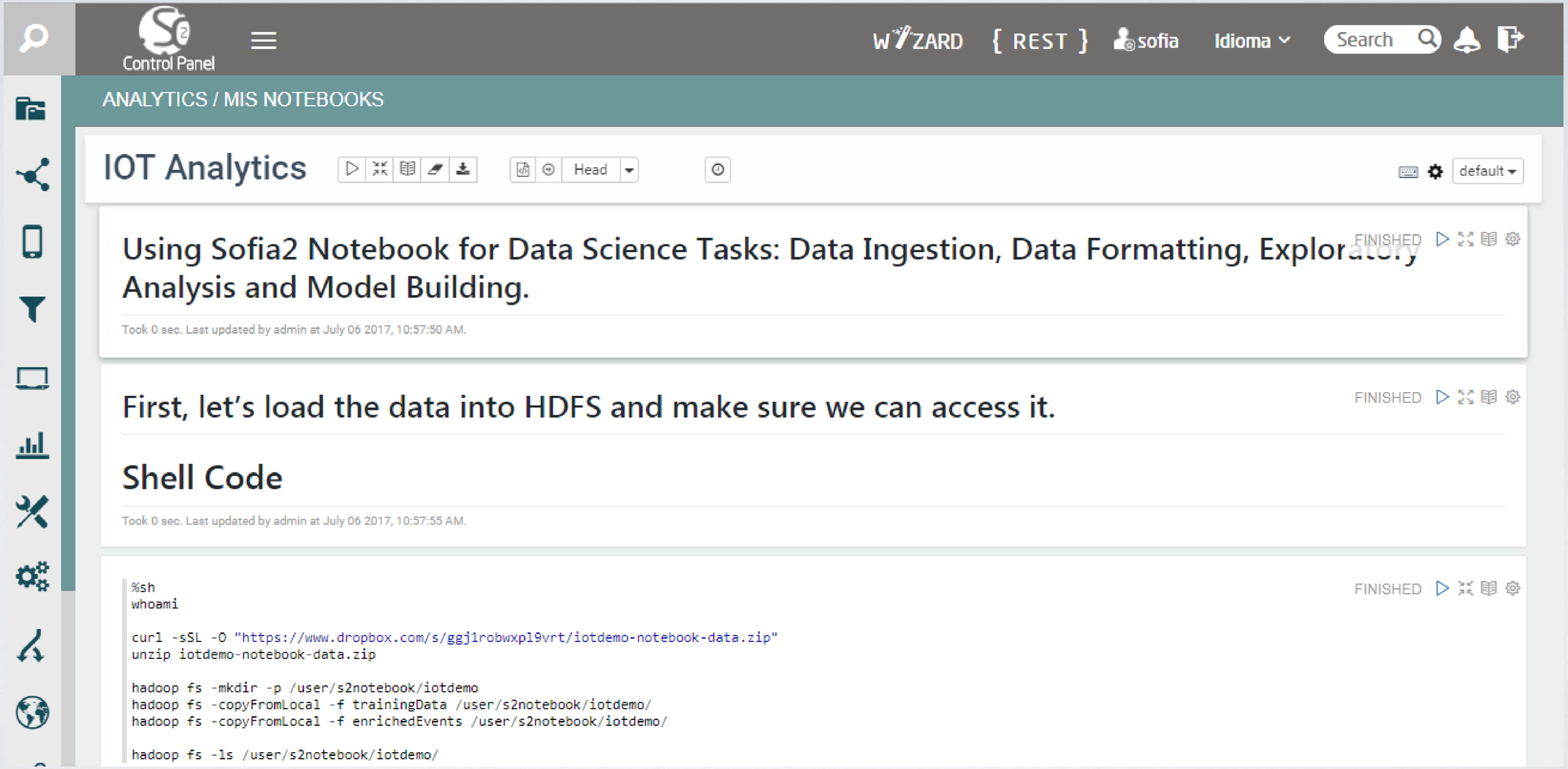
Sofia 2

Meetup

Analítica


Creación y ejecución
De notebools
Api manager
IoT Broker
Consola Sofia2
Creación de notebooks
Modelo
De datos
Zeppelin
Ejecución sobre infra BigDada
Cloudera
Sofia2

Analítica



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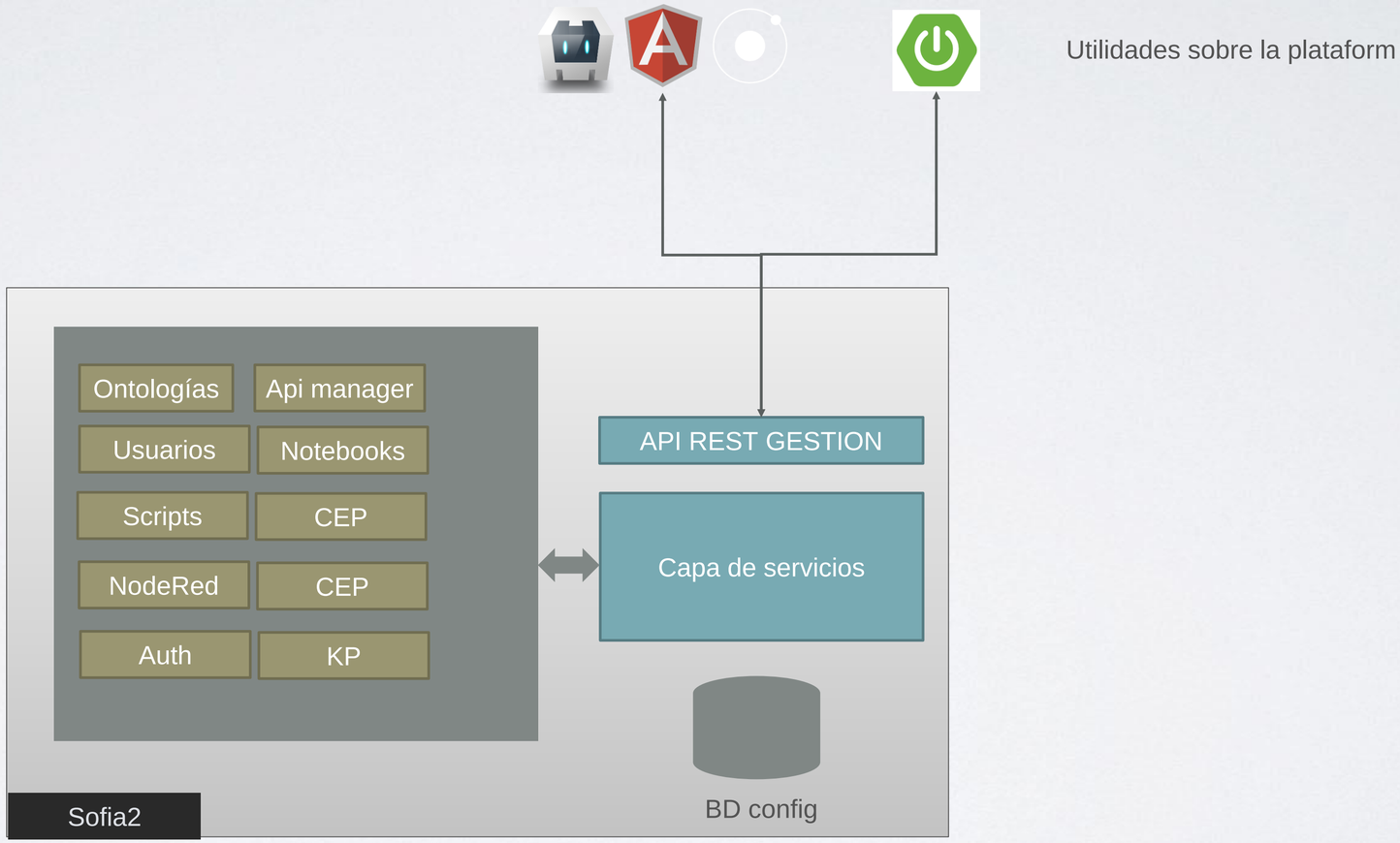
Api Rest de gestión



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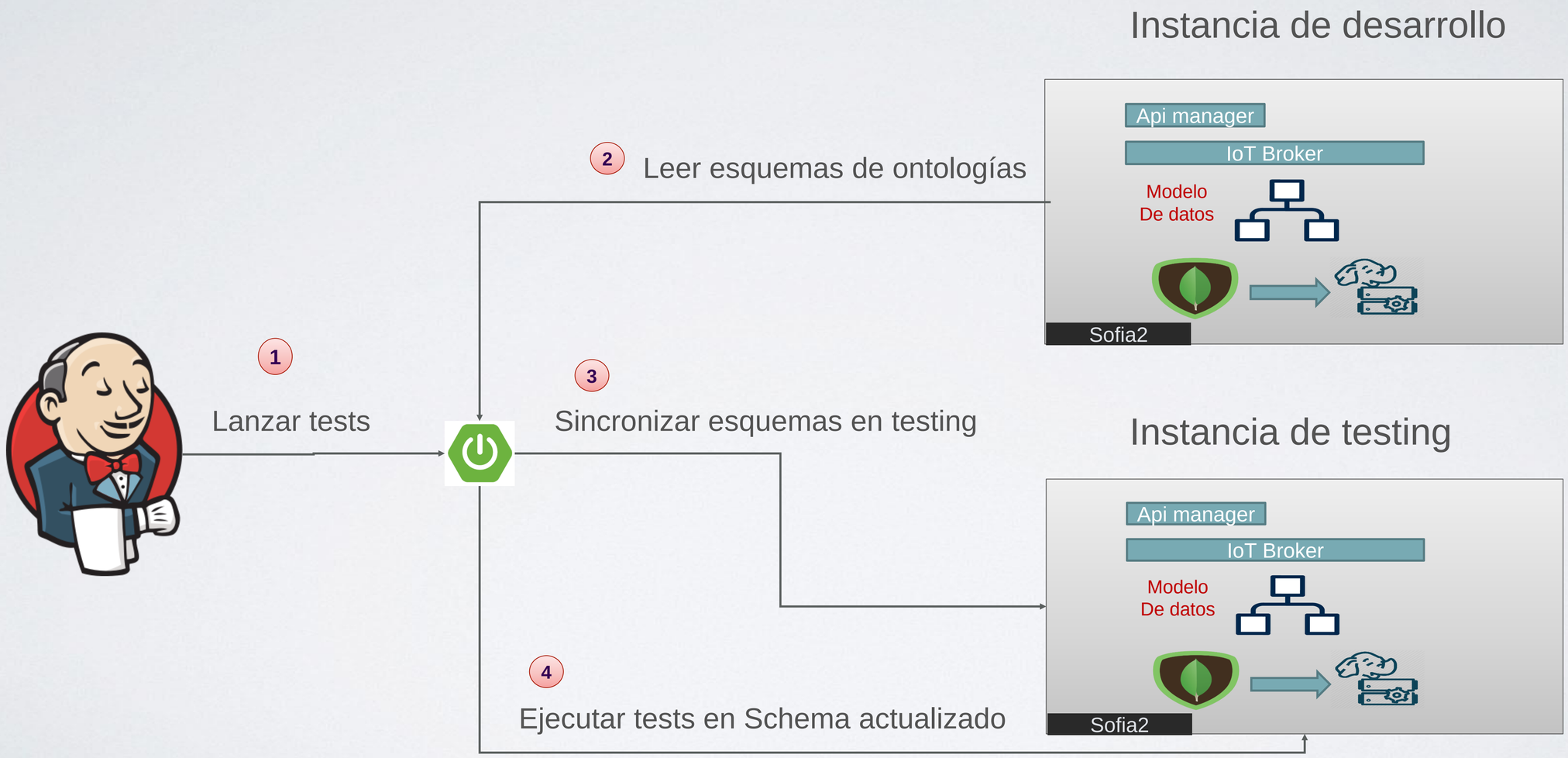
Api Rest de gestión



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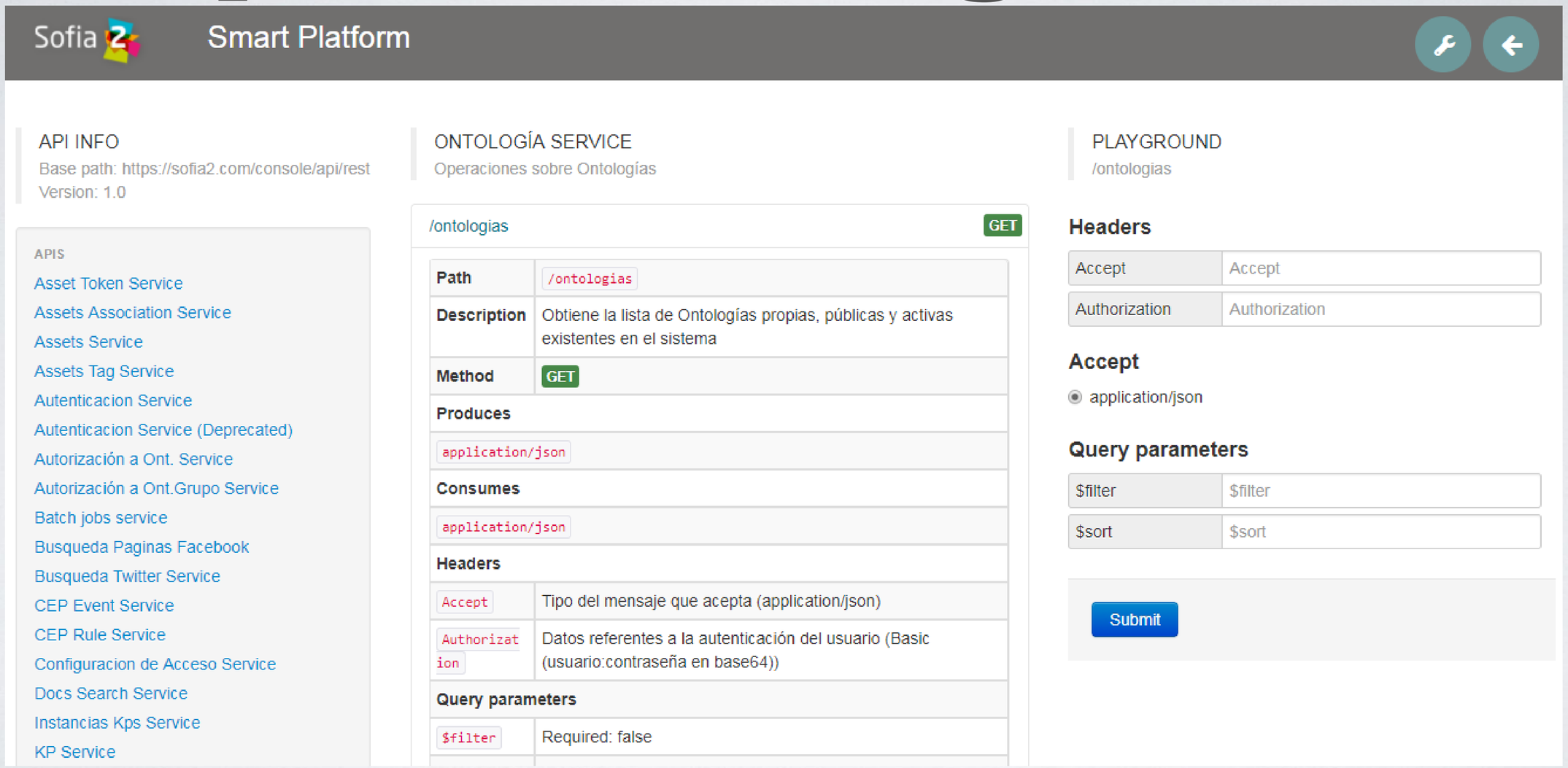
Api Rest de gestión



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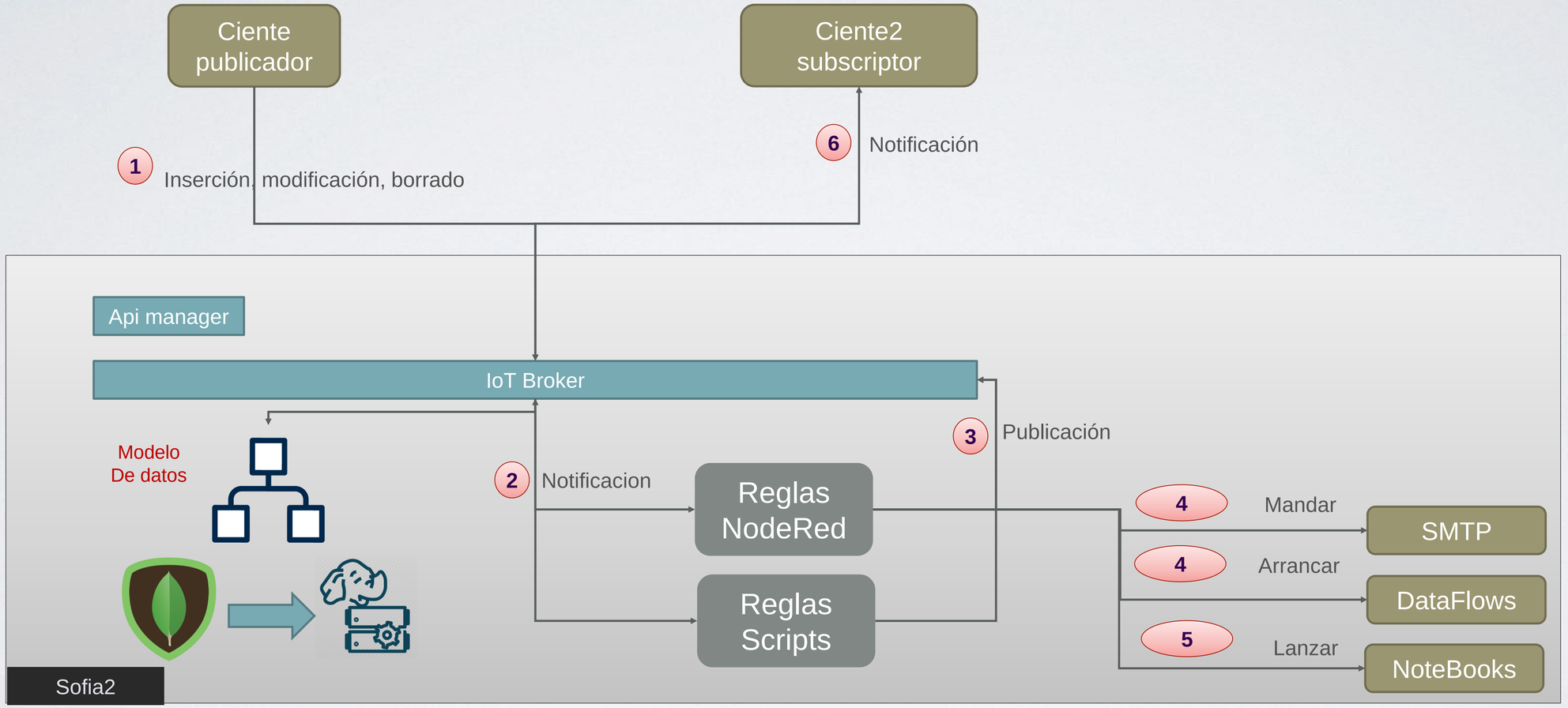
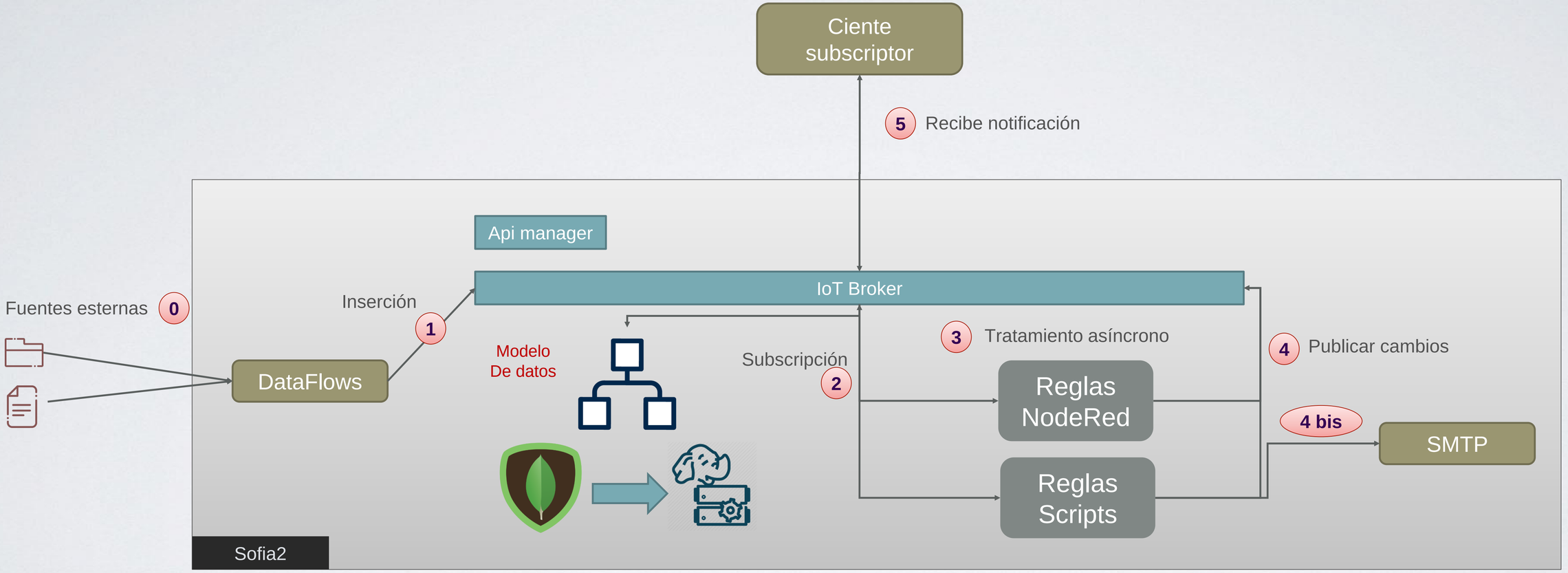
Combos

Combo 1


Ciente publicador
Ciente2 subscriptor
1
Inserción, modificación, borrado
6
Notificación
Api manager
IoT Broker
Modelo De datos
2
Notificacion
Reglas NodeRed
Reglas Scripts
3
Publicación
4
Mandar
SMTP
4
Arrancar
DataFlows
5
Lanzar
NoteBooks
Sofia2

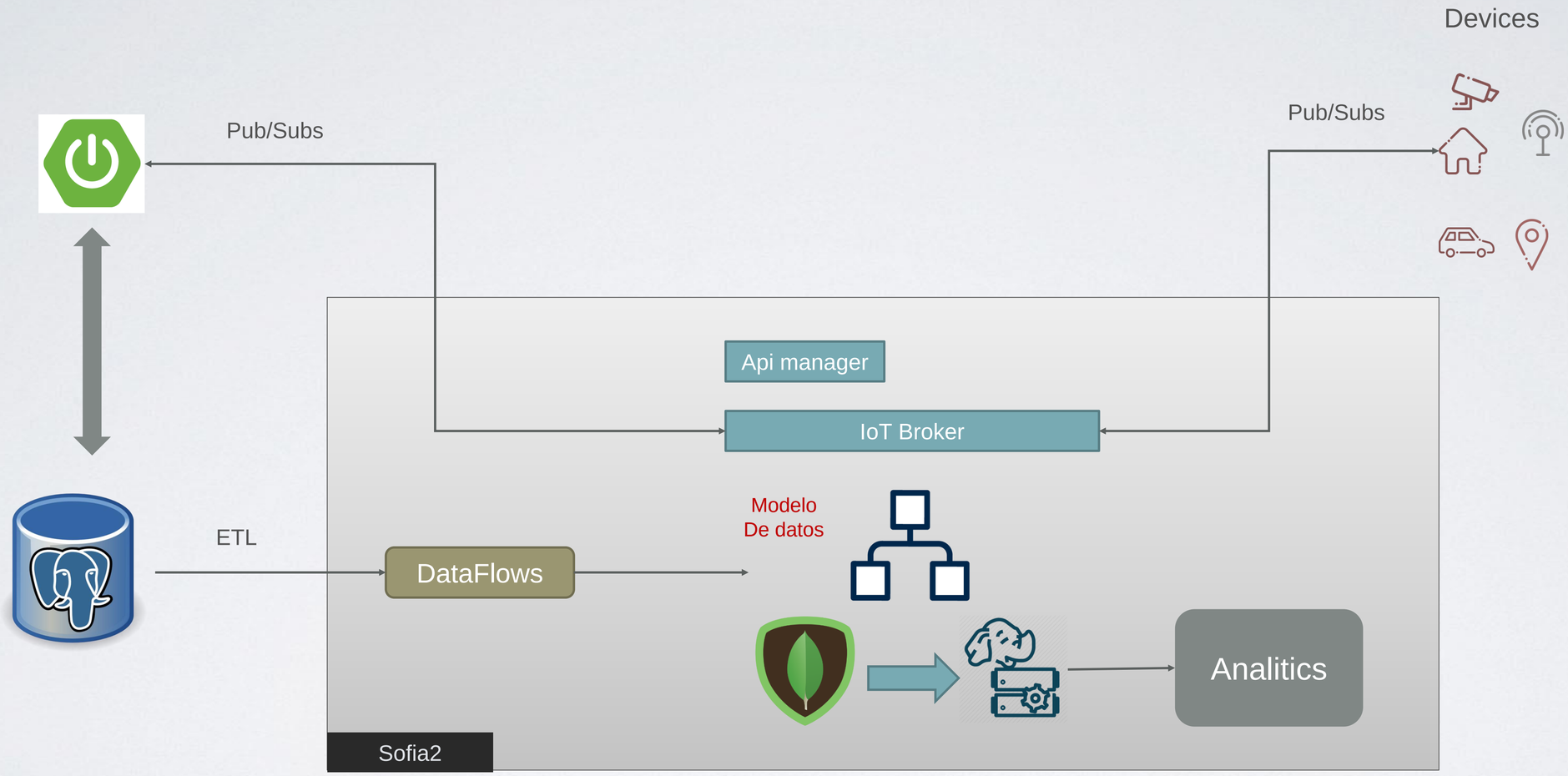
Combo 2



Sofia 2

Meetup

Combo 3



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Conclusiones

Preguntas