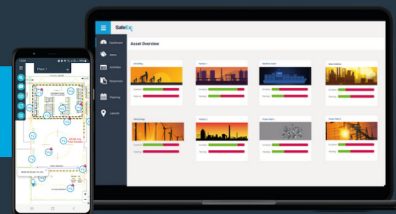
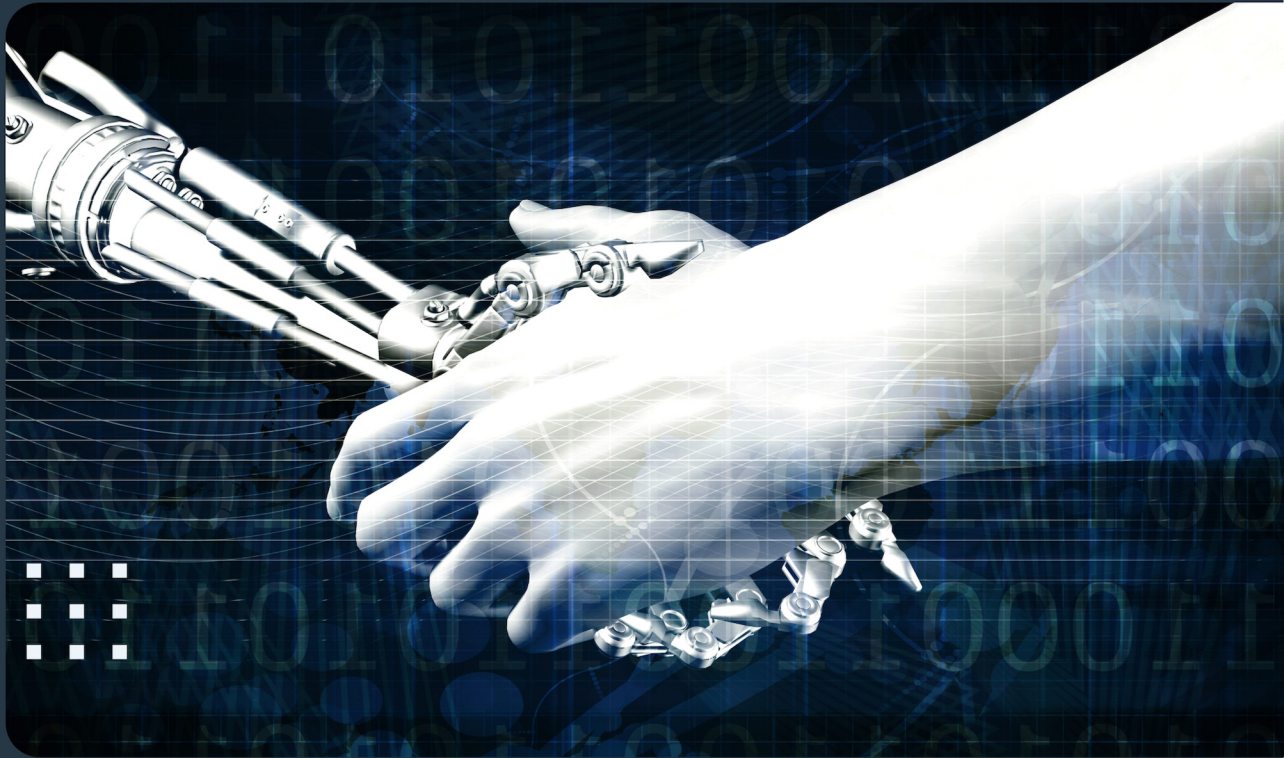




# SafeEx Cloud and Integrability

[ SafeEx Cloud REST API ]

Facilitating data transfer between  
SafeEx and third-party software



# Connecting Systems

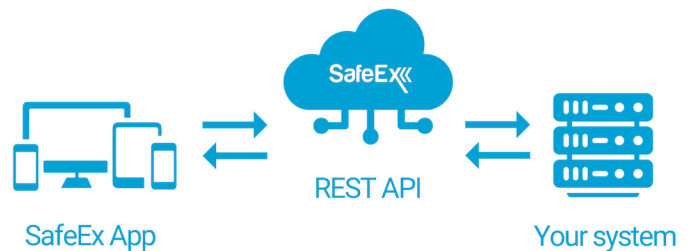
## [ SafeEx Cloud REST API ]

The SafeEx Cloud REST API facilitates connection with your existing systems and automate processes to save cost, maintain data consistency and reduce the risk of errors.

## What is an API?

A system can expose an Application Programming Interface, which enables another system to get and post data.

The SafeEx Cloud REST API conforms with the standardized REpresentational State Transfer architecture; known to and by most software developers.



## Benefits of connected systems



### Security

Data is encrypted and integrity validated, when transferred grammatically between systems.



### Automation

Changes in one system can quickly and seamlessly be updated across the entire workflow.



### Efficiency

Seamless information transfers keep your systems consistent without manual imports and exports.



### Consistent data

Consistent data across your systems ensures equally reliable information wherever it is sought.

## Integrating with SafeEx Cloud

SafeEx Cloud offers a tried and tested SaaS solution for inspection and maintenance of industrial assets in sectors such as Oil & Gas, Chemical, and Brewing.

The following pages introduce some of the options available when integrating with SafeEx Cloud\*.



\*The content in this presentation is simplified for the ease of communication - Full technical documentation is separately available.



# The SafeEx Cloud architecture



## The basic system components of SafeEx Cloud



### The Infrastructure

Commonly referred to as “the Cloud”. This is where databases, files, routing, logging and other such things live.



### Web System

Browser based management interface for assessing all the work coming in.

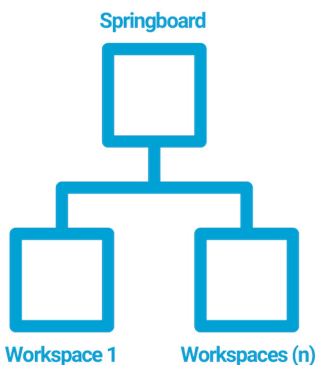


### Mobile Device Application

The application for Android-based mobile devices operates offline and syncs with the Infrastructure. It is the main tool for inspectors and technicians

## Infrastructure services

SafeEx Cloud’s infrastructure is comprised of multiple containerized services. These services are essentially individual subsystems that are orchestrated to work together, in order to deliver a secure, resilient and highly available solution.



### Springboard - a system wide service

The service responsible for authentication, user profiles, the collective overview of multiple Workspaces and more.

URI: <https://cloud.safeex.com/>

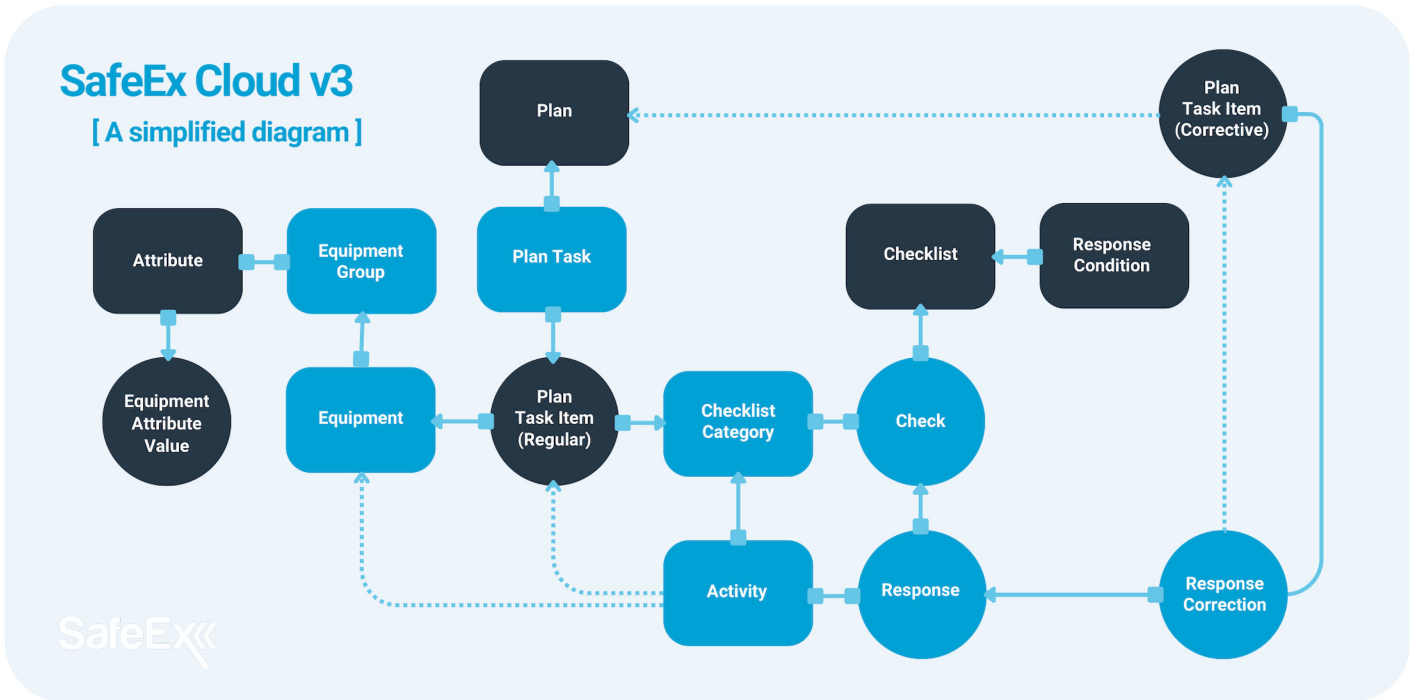
### Workspace - multiple service instances

Each Workspace service instance is responsible for the essential features of a specific Workspace\*, such as the equipment registry, inspection and maintenance results, planning and more.

URI: [https://<unique\\_workspace\\_slug>.safeex.com/](https://<unique_workspace_slug>.safeex.com/)

\*A Workspace typically represent a facility, for example an offshore installation or a factory.

# Selected Workspace data objects



## Activity

Represents the output from a Checklist performed on an Equipment item.

**Example**  
"Ex Visual Inspection" on some equipment.

## Check

Represents a specific Check of a Checklist Category and Checklist.

**Example**  
"T1.A1, Equipment, Check that Equipment is appro..."

## Checklist Category

Represents a grade or category subset Checks of a Checklist.

**Example**  
"Ex Visual Inspection" vs. "Ex Detailed Inspection"

## Equipment

Represents an Equipment item, on which Checklists can be performed.

**Example**  
A particular pressure transmitter.

## Equipment Group

Represents a group or type of Equipment items and the Attributes applicable for those Equipment items.

**Example**  
"Ex electrical motors"

## Plan Task

Represents a task requiring either performing a Checklist, or correcting a failed Response.

**Example**  
"Repair the broken cover"

## Response

Represents the outcome of a specific Check as a part of an Activity.

**Example**  
"Failed" or "Passed"

## Response Correction

Represents a correction of a failure reported as an undesirable Response Condition to a Response.

**Example**  
"Broken cover replaced"

## API endpoints

The vast majority of data models are exposed as API endpoints\*, with many of those endpoints featuring query parameters for filtering by date-time and other relevant values.

The [SafeEx Cloud REST API](#) is crafted with a framework, which facilitates expansion with more endpoints and features.

```
HTTP 200 OK
Allow: GET, HEAD, OPTIONS
Content-Type: application/json
Vary: Accept

{
  "count": 234,
  "next": "https://<THE_ACTUAL_URI>.safeex.com/rest/equipment_full?limit=50&offset=50",
  "previous": null,
  "results": [
    {
      "pk": 6379,
      "name": "9700-79-JBK0001",
      "current_scan_rfid": "E0040150598353FF",
      "current_attribute_values": {
        "9700-79-JBK0001-RFX"
```

\*An API endpoint is servicing a specific data model on a defined location (URL).

