

# DATA SYNC SERVICES

## OVERVIEW

Data Sync Services is a cloud based solution that enables customers to securely synchronise data from their internal systems to the Signagelive Cloud so that it can be securely distributed and displayed as content on media players.

Data Sync Services solves a number of problems for our customers, primarily focusing on the the security of integrations as credentials and API keys are never distributed to players, furthermore data does not have to be publicly exposed on the internet i.e. "Publish to Web" is no longer required.

Data Sync Services is developer friendly as all integrations for a player are stitched together into a single API call meaning that your data can be integrated quicker and displayed quicker, this means that developers only need to integrate with our APIs and not concern themselves with the structure of each integration they wish to display on screen.

Data Sync Services is designed to be infinitely scalable and integrate with any solution, even ultimately on-premise data can be integrated.

## THE INTEGRATIONS THAT WILL BE BUILT ARE:



**AUTHENTICATED WEBSITES**



**GENERIC DATA TABLE AND PUSH API**



**NEWS**



**WEATHER**



**GSHEETS**



**GOOGLE CALENDAR**



**MICROSOFT TEAMS**



**O365 CALENDAR**



**O365 EXCEL**



**POWER BI**



**SHAREPOINT**



**SLACK**



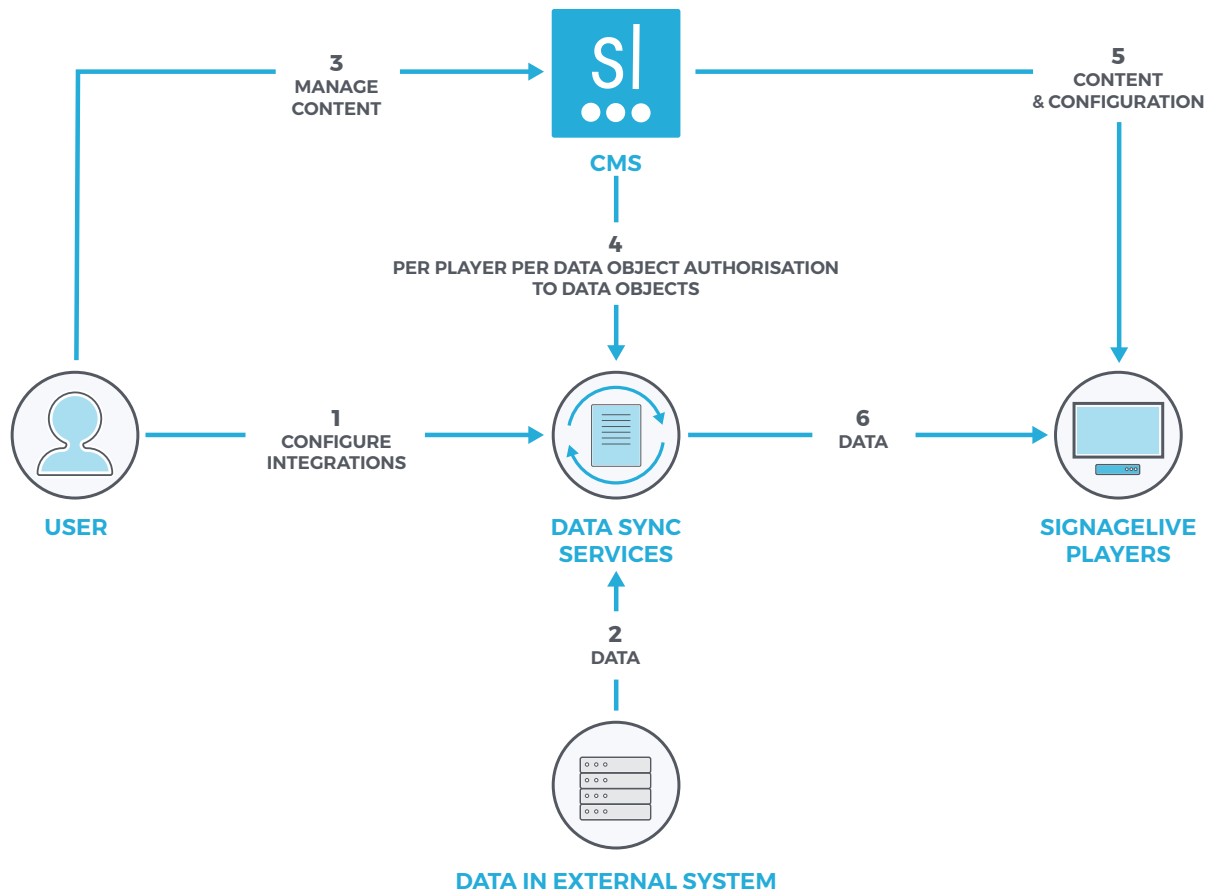
**TABLEAU**

# DATA SYNC SERVICES

## HOW DOES IT WORK?

### DATA SYNC SERVICES - SIMPLIFIED VIEW

Data Sync Services is a separate solution to the core Signagelive CMS but is tightly integrated.



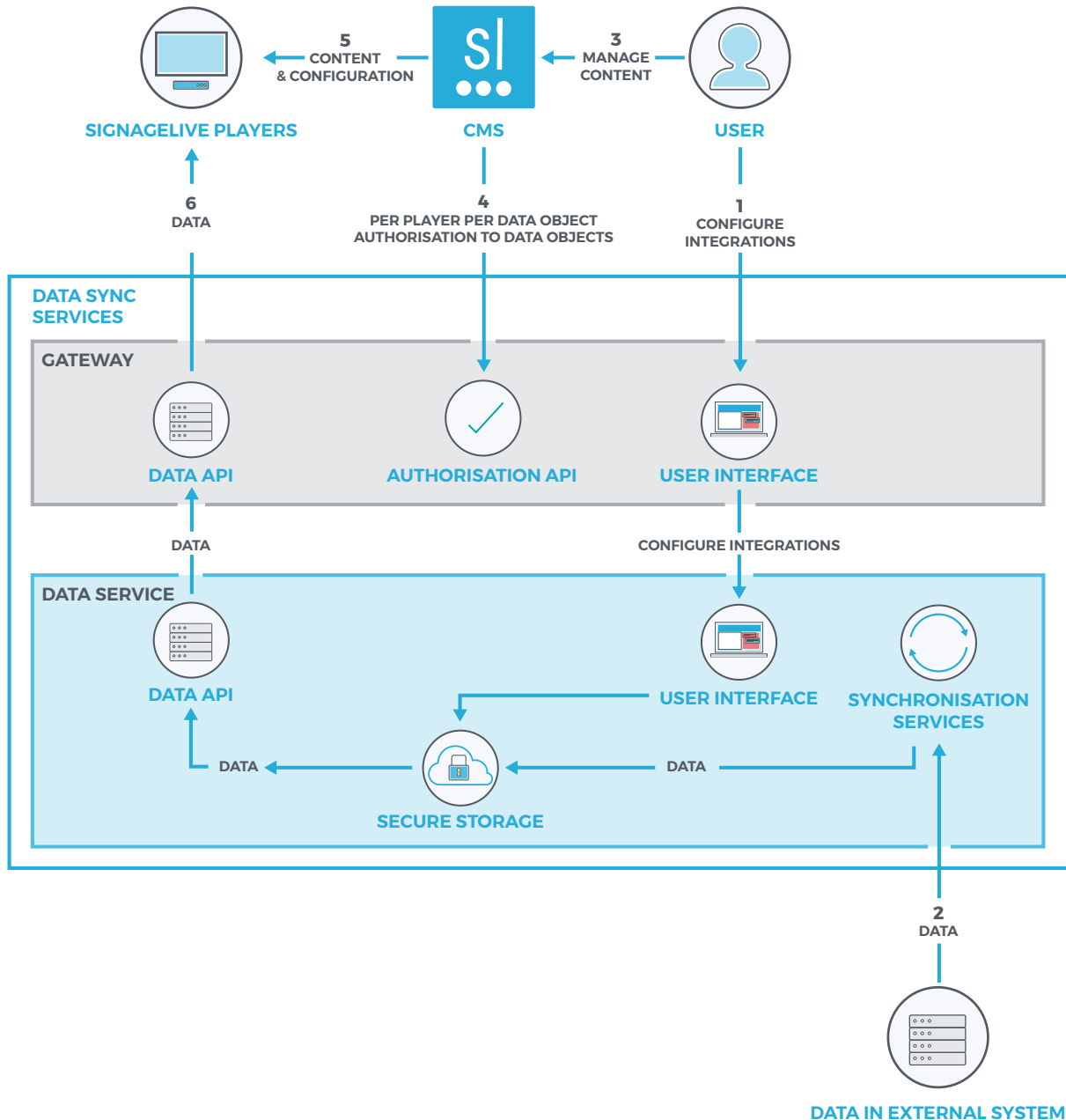
1. User configures integrations i.e. the data to synchronize and schedule
2. Data is regularly synchronised as per the schedule to the Signagelive cloud
3. User publishes content to the player including the configuration for Data Sync Services
4. Signagelive grants player access to the data
5. Content and configuration sent to the player including the configuration for Data Sync Services
6. Data securely synchronized to the player directly from Data Sync Services

# DATA SYNC SERVICES

## DATA SYNC SERVICES - DETAILED VIEW

Each Data Service operates independently of others and are presented via unified APIs and User Interfaces via the Gateway. Each Data Service can therefore take advantage of different technologies to ensure that the data is synchronized as efficiently as possible, delivering the solution in the most appropriate way.

As each Data service is independent that can independently scale meeting the demands of our customers.



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## DATA SYNC SERVICES

### BENEFITS OF DATA SYNC SERVICES

#### SECURITY

- Data is securely stored in our Cloud
- Data is only made available to Players that require access to it
- API Keys and credentials for external systems are stored on the cloud and not on the media players themselves
- Data is encrypted at rest
- Data is encrypted in transit
- No need to expose sensitive data with “Publish to Web” solutions as all integrations directly authenticate securely with the source
- Only the data that is required to be displayed on the player is transmitted to the player

#### OPTIMAL INTEGRATIONS

- Syncing once to the Cloud and distributing to many players architecture means that rate limits on 3rd party APIs are unlikely to be breached as may happen if integration is performed on the player(s).
- By integrating in the Cloud rather than on the player there are no limitations on the integration for example Cross Origin Resource Sharing is not an issue
- Supports both Push and Pull synchronisation

#### DEVELOPER FRIENDLY

- Our dynamic Data API (GraphQL) enables Widget Developers to easily request the data they require in a single request without having to have any knowledge of the 3rd party system API
- Directly integrated into our Widget SDK which will ensure data is updated and cached even when the widget is not running

#### FUTURE PROOF

- When new integrations are made available they are instantly available to all supported player types without a need to update the player
- The solution will be ultimately deployable into any data centre including on premise
- Infinitely scalable architecture

## DATA SYNC SERVICES

### AUTHENTICATED WEBSITES

Many customers have the requirement to show Dashboards and KPIs from business critical web applications as part of their digital signage content in a secure way.

Examples of these based on customer feedback are (but not limited to):



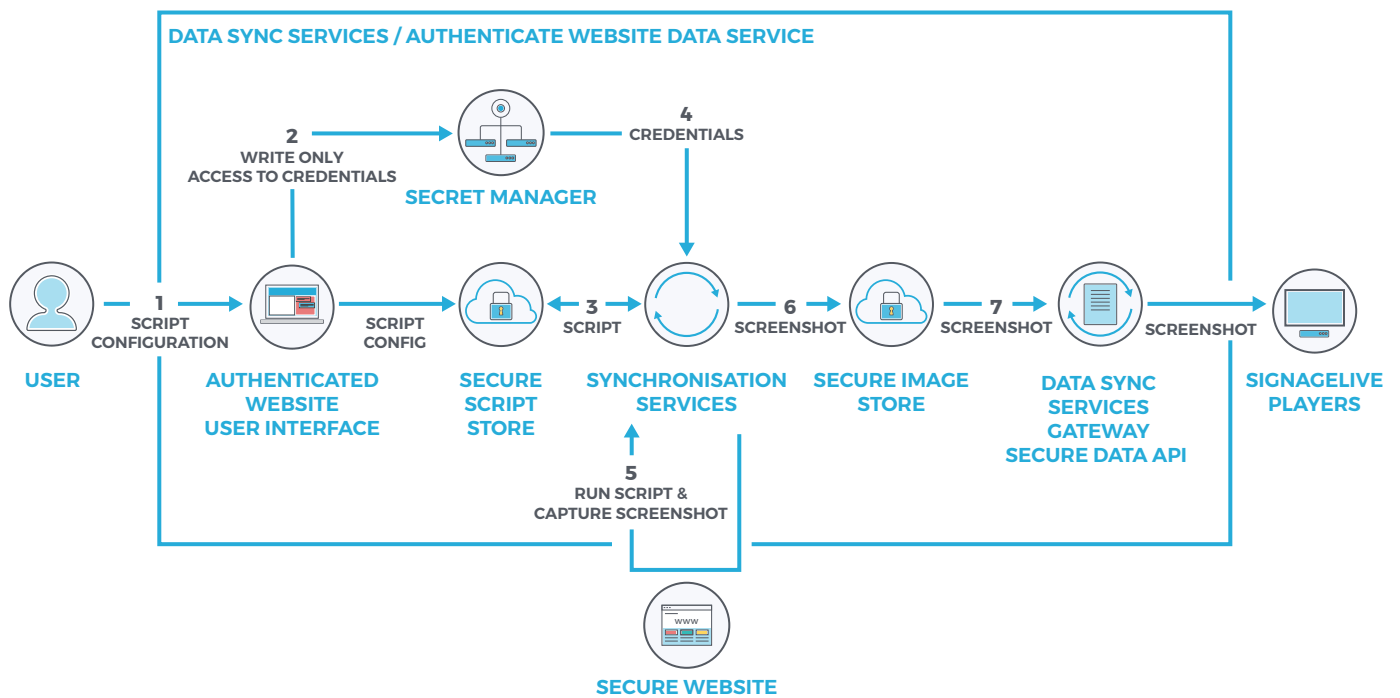
The majority, if not all of these solutions are web based and therefore display HTML5 Dashboards, the challenge is that many of these solutions are password protected and do not have a way for systems such as Signagelive to easily authenticate and display the protected data.

Some systems work around this by enabling sharing of a Dashboard via a public url however this is not secure as whilst the urls are difficult to guess as they include long random strings it is theoretically still possible, therefore many companies do not permit this. It's worth noting that some solutions to limit access to the Dashboards enable IP addresses to be whitelisted but not all. Furthermore many pages cannot be embedded into HTML5 based media players such as ours, typically this is achieved via X-FRAME-OPTIONS headers and / or by setting the Content Security Policy (CSP) frame-ancestors policy.

Authenticated Websites solves this problem by capturing screenshots securely in the cloud and distributing them to the media players.

# DATA SYNC SERVICES

## AUTHENTICATED WEBSITES DATA SERVICE



1. Setup the script to navigate the website and capture the screenshot
2. Store credentials securely using a Secret Manager (note this is a write only interface)
3. Synchronisation services loads the script according the schedule defined by the user
4. Credentials are read by synchronisation services. The Secret Manager is configured so that ONLY synchronisation services can read the credentials
5. Run Script to navigate website and capture screenshot
6. Store screenshot in secure storage
7. Screenshot served via our secure Data API

## ADVANTAGES

- Works on all players the output is an image, can work with any system and is instantly available to all players without a player update
- Does not require a live internet connection to load the last known data API Keys and credentials for external systems are stored on the cloud and not on the media players themselves
- Always backwards compatible even if the website introduces new technology into their User Interface we can just update the browser in the Cloud (we use Chrome), therefore even on older media players modern web based solutions can be easily used