Client Application Development Guide for TV Business Analytics

Version 3.5

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1 Introduction

1.1 Why Analytics?

Like any business, effective Pay TV Operators continually evaluate their operations to maximize revenue and reduce costs. Which contents to purchase and how to market them are only two of the many business decisions that Operators must make on an ongoing basis.

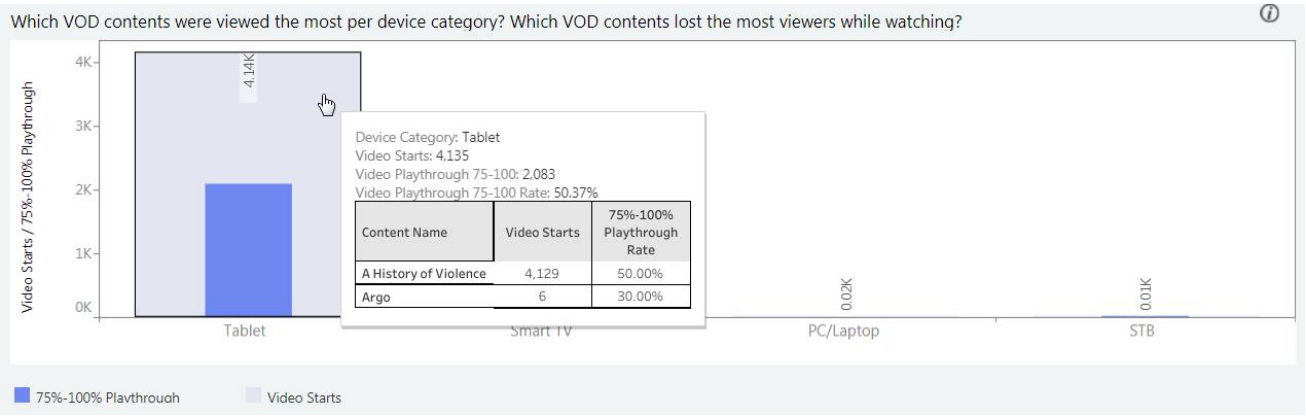
The TV Business Analytics Platform enables Operators to make such decisions effectively. The TV Business Analytics Platform presents of a series of dashboards providing actionable intelligence based on which Operators can make sound, evidence-based decisions.

Most of the intelligence presented in the TV Business Analytics Platform's charts and KPIs is based on data collected on customer actions, such as ordering products, watching videos, and clicking through the catalog.

1.2 The Role of the Client Applications

The client applications play a central role in the collection of accurate data on which the Analytics charts and KPI's are based. The phrase "garbage in, garbage out" certainly applies in this situation. All relevant customer actions in the apps must be registered to provide the data used by the TV Business Analytics Platform.

For example, the chart below is designed to give the Operator an understanding of how engaged customers are by the content offered in general, and how viewing patterns differ per device category. The TV Business Analytics Platform relies on the apps to register all video start and stop events to be able to create this chart.



1.3 In this Guide

This guide includes the following chapters:

Topic	Contents
2 Event Registration	Provides details of all events that must be registered. Failure to follow these guidelines when developing a client application effectively renders the charts and KPIs presented in the TV Business Analytics Platform meaningless.
3 Additional Guidelines	Provides additional guidelines that are not related to specific events.
4 Implementation Instructions	Provides instructions on how to implement the required functionality in the client applications using the front-end API.

2 Event Registration

The following events must be registered to ensure that the apps provide the raw data required by the TV Business Analytics Platform.

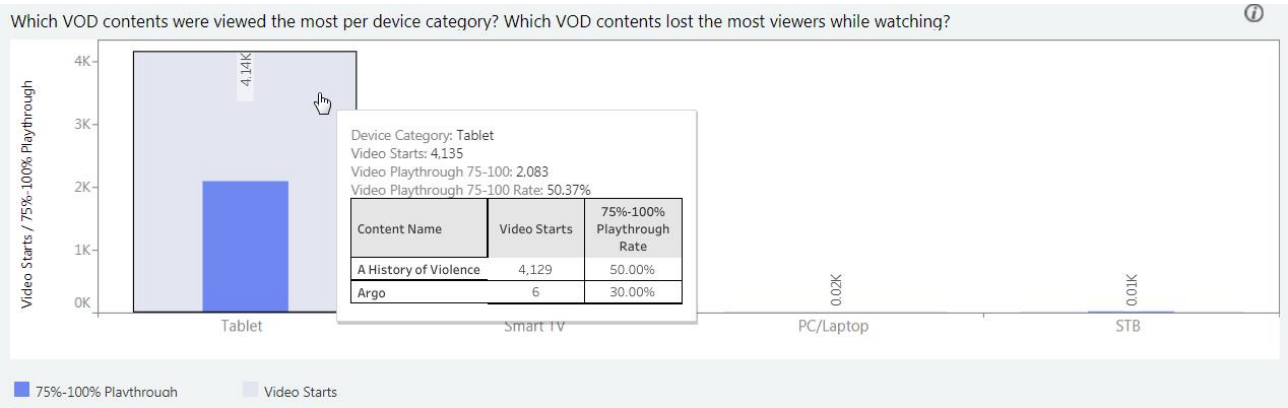
- 2.1 Logging In
- 2.2 Ordering a Video
- 2.3 Ordering a VOD Package
- 2.4 Watching Videos
- 2.5 Click Events
- 2.6 Searching Content
- 2.7 Viewing a Channel/Program using Live Stream or Time-shift

2.1 Logging In

2.1.1 Usage in Analytics

In order for the TV Business Analytics Platform to perform per device type analysis, the device being used must be indicated on log-in.

For example, the chart below shows the total video starts per device category in the selected time period.



2.1.2 Implementation

Users log in using the *Login* action in the RiGHTv Front-end API.

2.1.2.1 Parameters Used

One of the following parameters must be sent to identify the device being used:

Parameter	Description
mac_address	The MAC address as defined in the Terminals tab of the household in RiGHTv.
serial_ number	The serial number as defined in the Terminals tab of the household in RiGHTv.
smart_card_ id	The smart card ID as defined in the Terminals tab of the household in RiGHTv.

2.1.2.2 For More Information

For detailed implementation instructions, see:

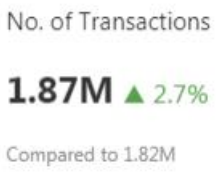
- 4.1 Log into RiGHTv Account.

2.2 Ordering a Video

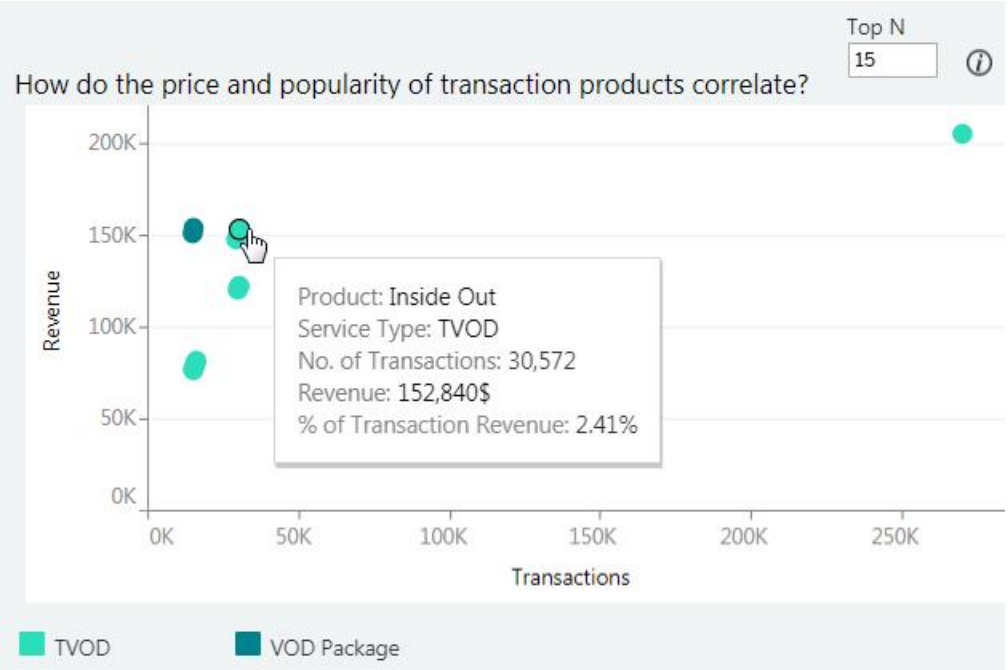
2.2.1 Usage in Analytics

Data on events in which customers place orders for videos is used in the construction of many of the charts and KPIs in the TV Business Analytics Platform.

For example, the KPI below shows the number of transactions (orders) registered during a selected time period, compared to the number of transactions in the previous period.



Similarly, the chart below plots the number of orders placed for the most popular movies against the revenue generated by each movie.



2.2.2 Implementation

Movies are ordered using the *OrderVideo* action in the RiGHTv Front-end API.

2.2.2.1 Event Trigger

Order data is collected whenever a movie is ordered. This includes situations in which:

- The customer orders a video through a TVOD offer, meaning that the video is ordered on its own, for either rent or buy.

  OrderVideo should be called only once per ordered movie, and should be called after the user has selected a purchase method and finalized the purchase.

- The customer plays a video offered through an SVOD service to which the customer is already subscribed.

  OrderVideo should be called only once per movie in the SVOD service. It is called only when the user plays the movie for the first time. First check if a ticket for the movie exists, using *GetVideoTicketList*. Only call *OrderVideo* if no ticket for the video is found in the response.

2.2.2.2 Parameters Used

The following parameters sent with *OrderVideo* are used by the TV Business Analytics Platform:

- household_external_id
- model_external_id
- video_id
- external_video_id

- video_card_ticket_id
- pricing_id
- subscription
- discounted_option_id

2.2.2.3 For More Information

For detailed implementation instructions, see:

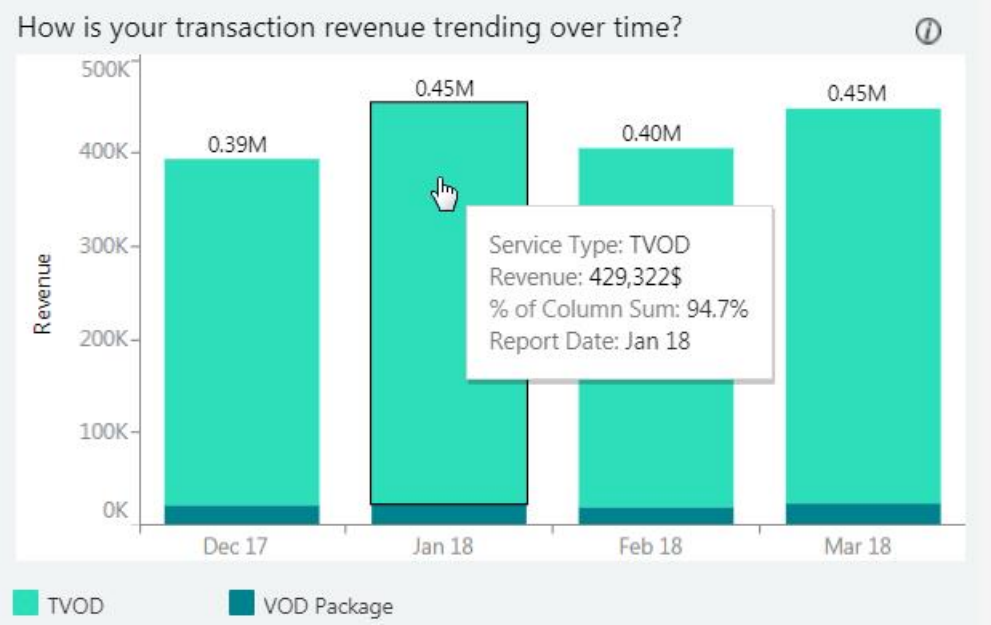
- 4.2 Ordering TVOD Content
- 4.3 Opening a Ticket for an SVOD Movie
- 4.4 Check SVOD Video Tickets

2.3 Ordering a VOD Package

2.3.1 Usage in Analytics

Data on events in which customers order VOD packages is used in the construction of a number of charts and KPIs in the TV Business Analytics Platform.

For example, the chart below compares the revenues generated by orders for TVOD and VOD Package products.



2.3.2 Implementation

VOD Packages are ordered using the *OrderVideoPackage* action in the RiGHTv Front-end API.

2.3.2.1 Event Trigger

Order data is collected whenever a VOD Package is ordered.

2.3.2.2 Parameters Used

The following parameters sent with *OrderVideoPackage* are used by the TV Business Analytics Platform:

- household_external_id
- model_external_id
- package_id
- package_external_id

2.3.2.3 For More Information

For detailed implementation instructions, see:

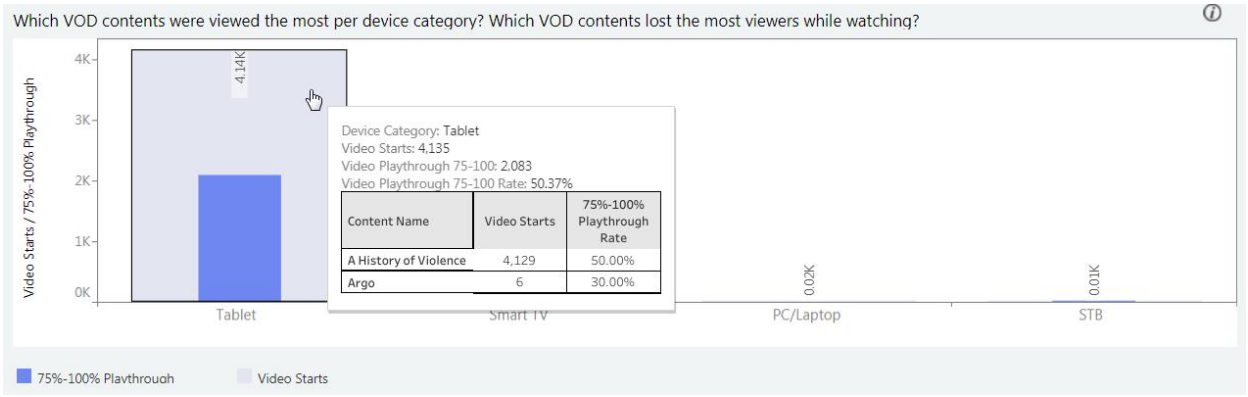
- 4.5 Ordering a VOD Movie Package.

2.4 Watching Videos

2.4.1 Usage in Analytics

Various charts and KPIs in the TV Business Analytics Platform are designed to provide the Operator with an understanding of customers' content preferences and viewing habits.

The TV Business Analytics Platform chart below is designed to provide the Operator with an understanding of how engaged customers are by the content offered in general, and how viewing patterns differ per device category.



2.4.2 Implementation

The *GetVideoPlayingInfo* action is used to obtain the information required to play a video, while the *MarkPosition* action is used to note the position at which viewing was stopped.

2.4.2.1 Event Trigger

Customer viewing data is collected by monitoring the API calls sent when:

- A movie is played (when the action *GetVideoPlayingInfo* is called).

> **Note**
>
> *GetVideoPlayingInfo* must be sent without using caching.

- The position in a movie being watched is recorded (when the action *MarkPosition* is called).

  The *MarkPosition* call is used by the TV Business Analytics Platform as an indication that the user has ended the current viewing session.

  MarkPosition must thus only be called when:
  - The user closes the video player
  - The stream is stopped.
  - The end of the movie has been reached, even if the user did not stop the content.

  MarkPosition must not be called when:
  - The content is paused.

When sending *MarkPosition*, the current position in the video must be specified. Use *GetVideoPlayingInfo* to obtain that information.

> **Note**
>
> *MarkPosition* must be sent without using caching.

2.4.2.2 Parameters and Optional Headers Used

The following parameters sent with *GetVideoPlayingInfo* are used by the TV Business Analytics Platform:

- household_external_id
- video_id
- video_external_id
- model_external_id
- position

The following parameters sent with *MarkPosition* are used by the TV Business Analytics Platform:

- household_external_id
- video_id
- video_external_id
- position

2.4.2.2.1 Optional Headers

To support the creation of the Offline VOD Detailed Viewing Report the following headers must be sent with both the *GetVideoPlayingInfo* and *MarkPosition* APIs.

One of the following headers, according to the device type, must be sent in both *GetVideoPlayingInfo* and *MarkPosition* APIs:

- Device-Mac-Address
- Device-Serial-Number

2.4.2.3 For More Information

For detailed implementation instructions, see:

- 4.6 Mark Last Position
- 4.7 Get Movie Playback URL

2.5 Click Events

2.5.1 Usage in Analytics

A user's decision to order a content item can be attributed to prior exposure to promotions or recommendations for that content. Users may also reach the content on their own from other locations, such as through the catalog or search results.

Knowing the effectiveness of various order conversion sources can help Operators understand the value of those sources and improve their use of those sources in future.

The TV Business Analytics Platform does not only consider the last event that occurred prior to the order when attributing the order to conversion sources, but rather examines all recent events that likely contributed to the decision to order.

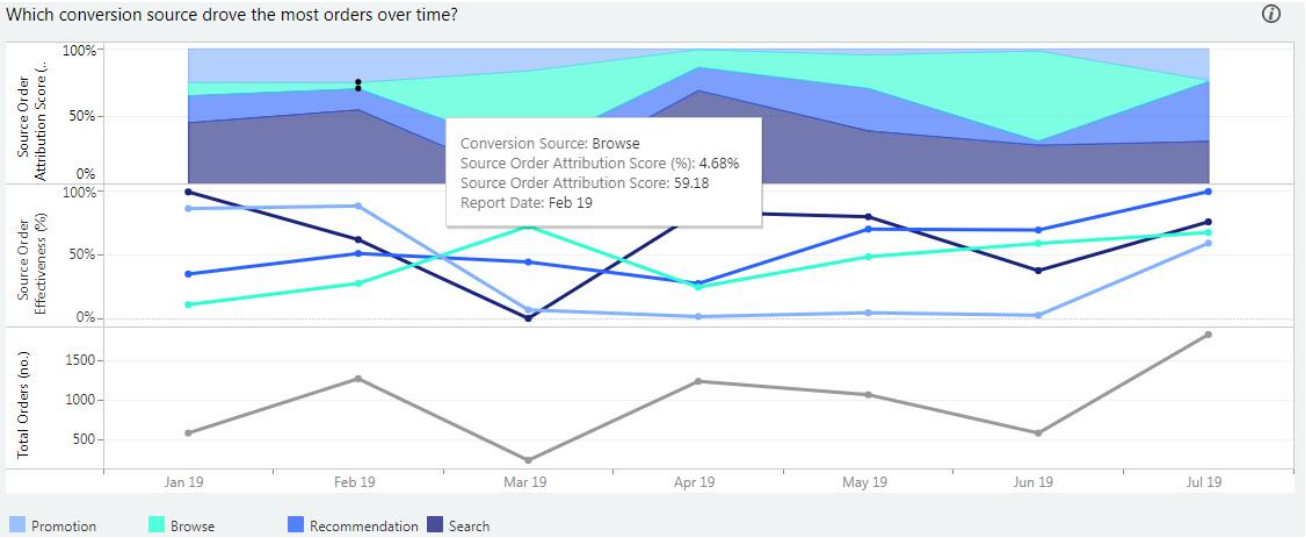
> **Note**
>
> The TV Business Analytics Platform does not currently analyze clicks performed by anonymous users.

The TV Business Analytics Platform provides multiple charts that display the relative effectiveness of each conversion source, for example:

- 2.5.1.1 Chart: Which Conversion Source Drove the Most Orders Over Time?
- 2.5.1.2 Chart: Which Conversion Source Had the Biggest Impact in Generating Orders per Service?

2.5.1.1 Chart: Which Conversion Source Drove the Most Orders Over Time?

This chart indicates the number of orders generated by different conversion sources over time, as well as the relative effectiveness of different conversion order sources.

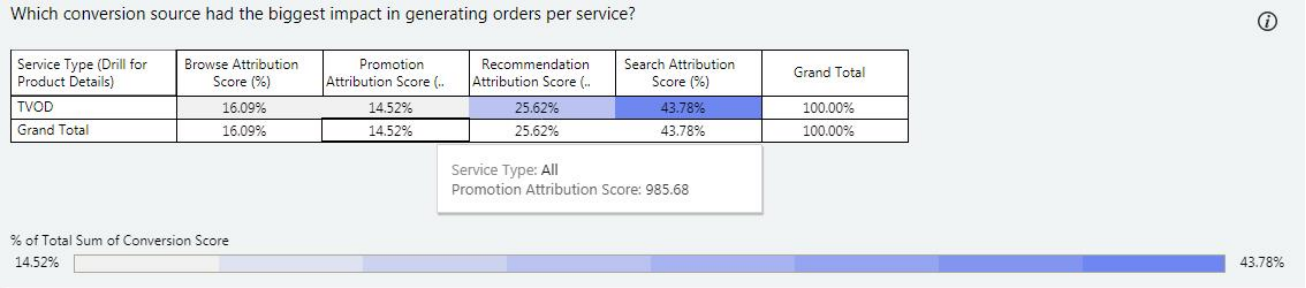


The chart is designed to help Operators answer the following questions:

- What is the most effective conversion source for generating orders?
- Did the relative effectiveness of conversion sources change over time?

2.5.1.2 Chart: Which Conversion Source Had the Biggest Impact in Generating Orders per Service?

This chart is designed to indicate the effectiveness of each conversion source in generating orders of various business models (SVOD, TVOD, VOD Card, and VOD Package). A darker block indicates that a relatively higher number of orders for the particular business model was attributable to the particular conversion source.



The chart is designed to help Operators answer the following questions:

- For each business model, which conversion source was the most successful in generating orders?
- Which conversion source was the most successful in general?

2.5.2 Implementation

The two attribution charts described above are based on data collected each time a logged-in user clicks a content item within the app.

2.5.2.1 Event Trigger

Whenever the user clicks a content item anywhere in the app, that click must be registered. Examples include clicking content items in:

- The catalog
- A recommendations list
- A promotions list
- A list of episodes displayed on a TV Show season screen
- A banner or marketing campaign

The following information is collected for each click:

- The ID of the logged-in user
- The ID of the content item that was clicked

  Note

  If the content item clicked was a TV Show series, a dedicated parameter must be submitted, as explained in the detailed implementation instructions referred to at the end of this section.
- The context of the click, i.e. whether the user clicked in a recommendations list, a promotions list, the catalog, or from a banner or marketing campaign.
- If the click was on a recommended content item, the engine or blend used to generate the recommendation must be submitted
- The time
- The device type used
- The name of the screen in the application in which the click occurred

Clicks on all types of content items must be registered, including:

- Movies
- TV Show episodes
- TV Show series
- TV Show seasons
- Live programs

Note

Clicking a result from a list of search results is handled differently, see 2.6 Searching Content.

2.5.2.2 For More Information

For detailed implementation instructions, see:

- 4.8 Register Click Event

2.6 Searching Content

Analyzing users' search terms provides the Operator with valuable insight into what contents users are interested in purchasing and into which cast members are of most interest.

Note

In the context of the TV Business Analytics Platform, cast members include actors and directors.

By further analyzing the results of those searches the Operator can identify which searched content is currently provided and which content is currently missing from the offering. Similarly, they can identify popular cast members and gauge how those cast members are covered by the current content offering.

This section provides guidelines for ensuring that the Operator's applications correctly provide the required data needed for search analysis.

Note

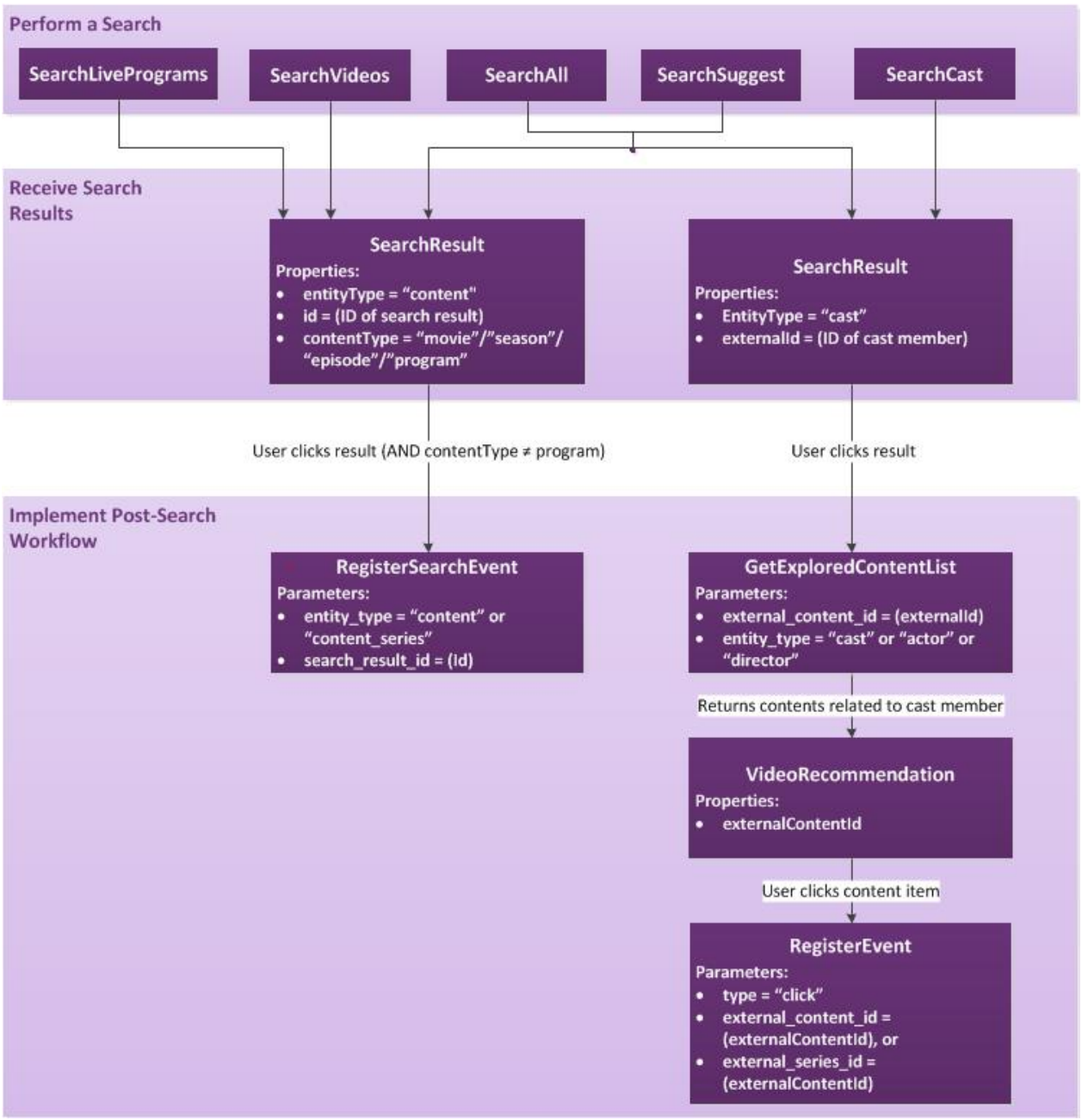
The TV Business Analytics Platform does not currently analyze searches performed for live programs (using *SearchLivePrograms*).

Note

The TV Business Analytics Platform does not currently analyze searches performed by anonymous users.

2.6.1 Search Workflow Overview

The graphic below summarizes the workflow to be implemented to support the TV Business Analytics Platform. An explanation is provided below. Only those parameters and properties essential for the TV Business Analytics Platform are shown.



2.6.2 Search Workflow Actions and Entities

This section details the action calls to be sent and the entities that are received during each phase of the search workflow.

> **Note**
>
> Throughout this section, only those parameters and properties relevant to the requirements of the TV Business Analytics Platform are listed. For a full description of each, consult the API documentation.

The search workflow includes the following steps:

- 2.6.2.1 Perform a Search
- 2.6.2.2 Receive Search Results
- 2.6.2.3 Implement Post-Search Workflow

2.6.2.1 Perform a Search

Searching is implemented using the following action calls:

Action Call	API Set	Returns
SearchLivePrograms	COMPASS Search RT API	Programs
SearchVideos		Contents
SearchAll		Contents & Cast
SearchSuggest		Contents & Cast
SearchCast		Cast

All of the action calls listed above share the same mandatory parameter:

Parameter	Description
text	The text to be searched for.

Note

The Operator may choose to use any combination of the action calls above to implement search functionality. The TV Business Analytics Platform will treat multiple searches performed by the same account for the identical search term as a single search (to avoid double-counting per account), regardless of which action calls were used to search for that search term.

2.6.2.2 Receive Search Results

All of the search action calls listed above return the *SearchResult* entity.

The properties of interest for supporting the TV Business Analytics Platform are listed below:

Entity	SearchResult
Description	A single search result.
API Set	COMPASS Search RT API

Property	**Description**
id	The ID of the search result.
entityType	The type of the returned entity, either "content" or "cast".
externalId	The external ID of the entity.
contentType	The type of content, either "movie", "season", "episode", or "program".

2.6.2.3 Implement Post-Search Workflow

Following the steps outlined here is necessary for the TV Business Analytics Platform to determine if the user was satisfied with the search results or not.

If no search result is clicked after a search, no further action is required - the TV Business Analytics Platform automatically registers the search as having produced irrelevant results only. If no results are returned, the TV Business Analytics Platform will automatically register the search as giving no results.

> **Note**
>
> In this version, the TV Business Analytics Platform does not analyze searches performed for live content. However, where the client application allows the user to search for live and VOD content simultaneously, sending two search calls (SearchLivePrograms and SearchVideos) using the same text entered, and results are only found for live content, the VOD search will nevertheless be treated as having generated irrelevant results, as opposed to zero results.

The workflow depends on the type of search result clicked, which is reflected by the *entityType* property of the *SearchResult* entity (see 2.6.2.2 Receive Search Results).

Workflows are presented below for:

- 2.6.2.3.1 Content Search Result
- 2.6.2.3.2 Cast Search Result

2.6.2.3.1 Content Search Result

If the user clicks a search result representing a content item, the *RegisterSearchEvent* action call must be sent, as described below.

Note

If the contentType of the result is program, indicating a live result, registering the search event is not required for the TV Business Analytics Platform, as searches for live content are not analyzed in this version. However, registering the search result is anyway recommended as the search engine uses those registered events to improve future searches.

Note

If the user clicks a search result that is a TV Show series or season, that click should be registered as explained here. However, if an episode within that season is clicked later, that event should not be registered as a search event. Instead, a regular click event should be registered, see 2.5 Click Events.

Action	RegisterSearchEvent
Description	Registers that the user clicked a search result.
API Set	COMPASS Search RT API

Parameter	Description
entity_type	The type of entity represented by the search result clicked. Set to "content_series" when the entity represents a TV Show series, or to "content" for any other content type.
search_result_id	The ID of the search result clicked. The value is obtained from searchResult:id.

2.6.2.3.2 Cast Search Result

If the user clicks a search result representing a cast member, the application must then display a list of contents related to that cast member using the *GetExploredContentList* action call, which returns the list of contents in a *VideoRecommendation* entity.

If the user then clicks on one of the contents shown, that click event should be reported using the *RegisterEvent* action call. If the user does not click any of the contents shown, no further action is necessary - the search will be then be rated as having produced irrelevant results only.

The two action calls and entity listed above are described below (in the order they are used):

Action	GetExploredContentList
Description	Returns a list of content items in which the specified cast member was involved.
API Set	COMPASS RT API

Parameter	Description
entity_type	The type of entity represented by the search result clicked. Must be set to "cast", "actor", or "director". **Note** To explore content by both actor and director, send only one call for "cast". Do not send separate calls for both "actor" and "director".
external_entity_id	The ID of the cast member. The value is obtained from searchResult:externalId.

Entity	VideoRecommendation
Description	A single content item returned by GetExploredContentList.
API Set	COMPASS RT API

Property	Description
externalContentId	The external ID of the content.

Action	RegisterEvent
Description	Registers a usage event.
API Set	COMPASS RT API
Fore More Information	See 2.5 Click Events

Parameter	Description
type	The type of the event registered. Must be set to "click".
external_content_id	The ID of the content item clicked (if the content item clicked is not a series). The value is obtained from VideoRecommendation:externalContentId.
external_series_id	The ID of the content item clicked if the content item clicked is a series. The value is obtained from VideoRecommendation:externalContentId.

Note

Only one of external_content_id and external_series_id may be returned.

For detailed implementation instructions, see:

- 4.10 Perform a General Search
- 4.11 Performing a Video Search

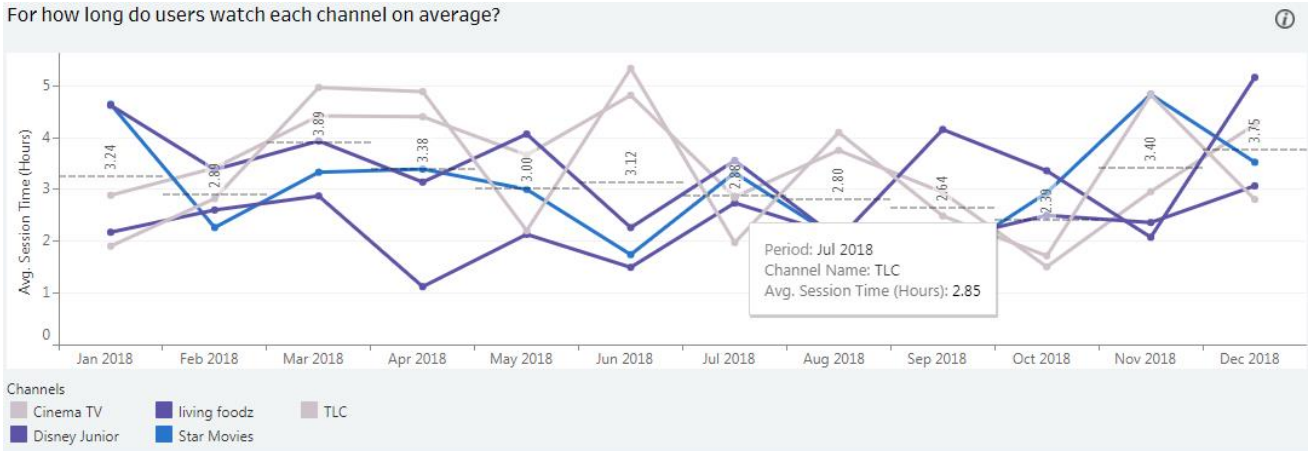
2.7 Viewing a Channel/Program using Live Stream or Time-shift

2.7.1 Usage in Analytics

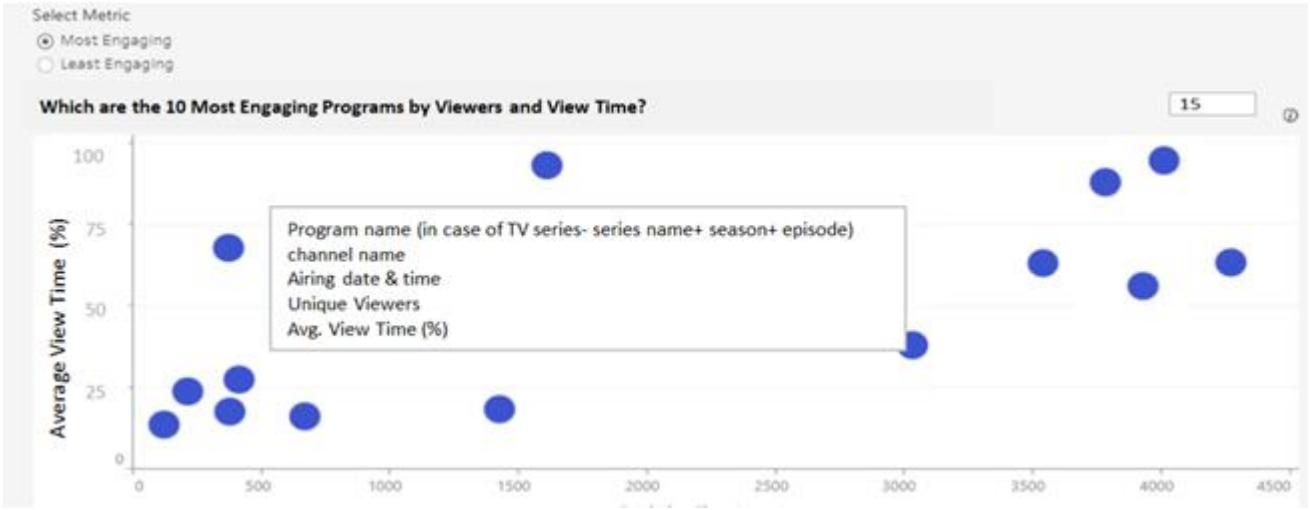
2.7.1.1 Live Stream

In order for the TV Business Analytics Platform to perform live audience measurement, the client applications must report each time that the user started or stopped watching a channel using a live stream.

For example, the chart below identifies the top 5 highest (or lowest) performing channels by average session time. It also tracks how average viewing session time for each channel has changed over time.



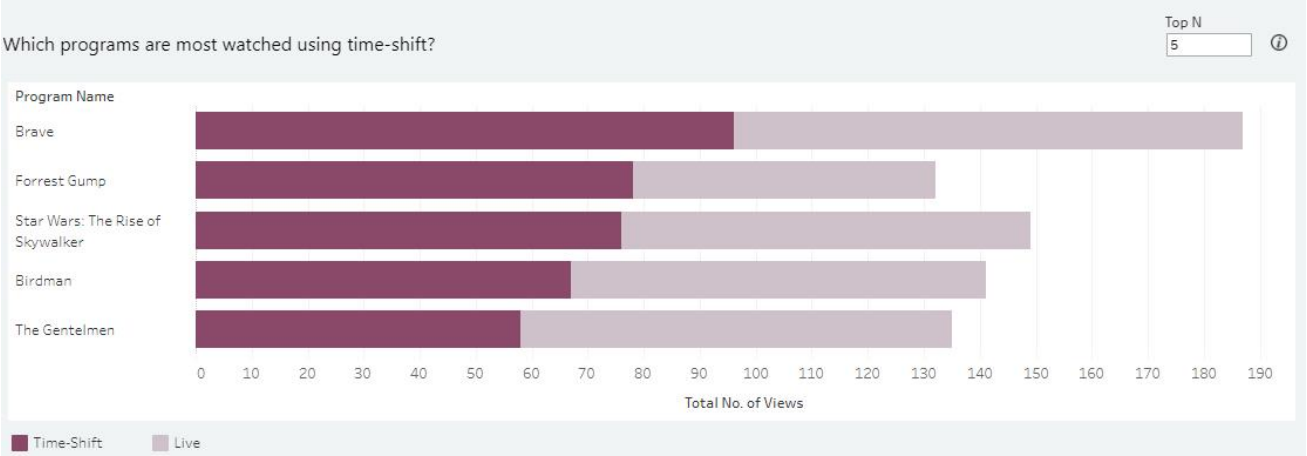
For a live Program Viewing example, the following chart identifies the top 15 most engaging programs by viewers and average viewed time.



2.7.1.2 Time-shift

In order for the TV Business Analytics Platform to perform time-shift audience measurement, the client applications must report each time that the user started or stopped watching a channel using time-shift.

For example, the chart below displays the five programs that have the most number of viewers (who viewed more than 25% of the program):



2.7.2 Implementation

The client application reports channel viewing actions through the Data Collection Agent (DCA).

The DCA SDK enables the client application developer to log various customer actions with minimal development and without the requirement of integrating complex data processing logic. See the *DCA SDK Developer's Guide* for more information.

2.7.2.1 Parameters Used

The following event types are used to calculate the Channel or Program live and time-shift viewing dashboards: LIVE, STARTOVER and CATCHUP.

The events for type LIVE are:

- LIVE_PLAY
- LIVE_STOP
- LIVE_PAUSE
- LIVE_RESUME
- LIVE_SEEK

The events for type STARTOVER are:

- STARTOVER_PLAY
- STARTOVER_STOP
- STARTOVER_PAUSE
- STARTOVER_RESUME
- STARTOVER_SEEK

The events for type CATCHUP are:

- CATCHUP_PLAY
- CATCHUP_STOP
- CATCHUP_PAUSE
- CATCHUP_RESUME
- CATCHUP_SEEK

For detailed implementation instructions, see:

- The *DCA SDK Developer's Guide*

3 Additional Guidelines

This topic provides additional guidelines that must be followed during app development, that are not related to specific events.

3.1 TV Show Implementation

The apps must make use of the new TV Shows model for implementing VOD TV shows. Using the previous Series-Season model prevents the collection of the data on which TV show analytics is based.

See the Client Applications Development Guide for more information.

3.2 Use of *GetExploredContentList*

The action *GetExploredContentList* in the COMPASS RT API returns a list of video recommendations according to a given meta-data entity ID such as a cast member ID.

This action forms part of the recommended process for performing cast searches (see 2.6 Searching Content).

GetExploredContentList, when *type* is set to cast, should not be used elsewhere in the application as doing so affects the accuracy of analytics performed on user cast searches.

4 Implementation Instructions

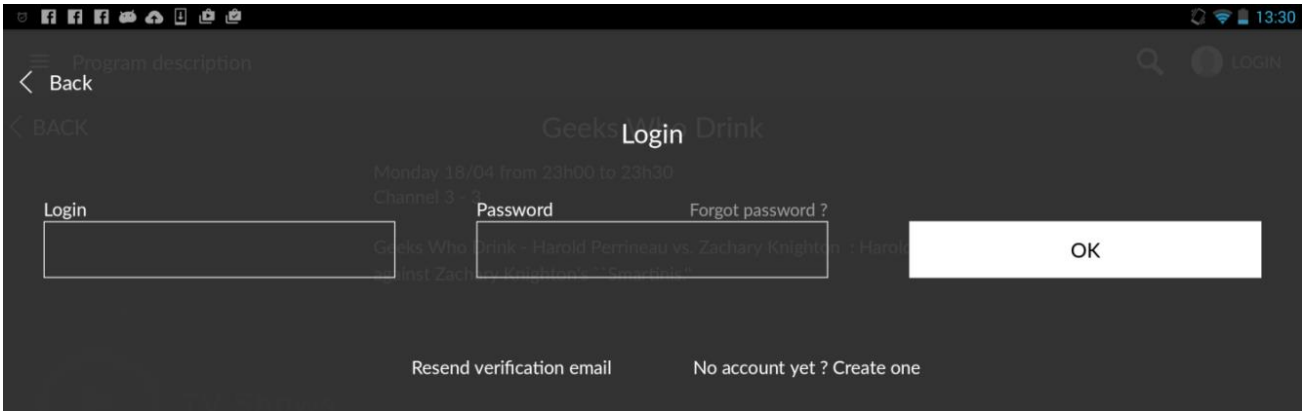
This chapter provides detailed instructions for implementing various functions within client applications. Only those functions that are relevant for the TV Business Analytics Platform are present here. A more complete set of implementation instructions can be found in the Client Applications Development Guide.

- 4.1 Log into RiGHTv Account
- 4.2 Ordering TVOD Content
- 4.3 Opening a Ticket for an SVOD Movie
- 4.4 Check SVOD Video Tickets
- 4.5 Ordering a VOD Movie Package
- 4.6 Mark Last Position
- 4.7 Get Movie Playback URL
- 2.5 Click Events
- 4.9 Register a Banner Click Event
- 4.10 Perform a General Search
- 4.11 Performing a Video Search
- 4.12 Adding Auto-suggestion to Search
- 4.13 Register Search Event

4.1 Log into RiGHTv Account

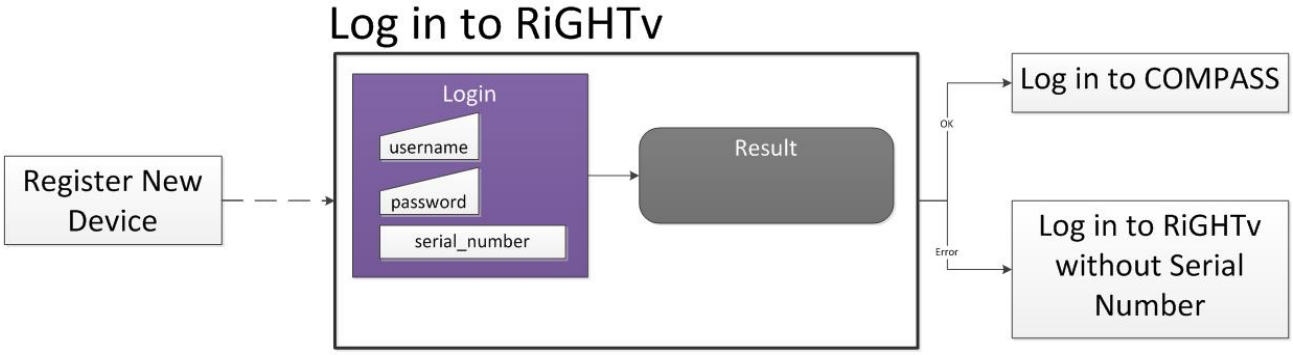
4.1.1 Overview

Users log into the app (and thus into RiGHTv) by entering their account name and password.



Note on Analytics: Although it is possible to log in without sending device identifying information, that information is required for the TV Business Analytics Platform.

4.1.2 Requests and Responses



Request: Login (from RiGHTv Front-end API)

To log into the RiGHTv account, the following parameters must be provided:

HTTP Method: POST	
Parameter	**Description**
username	The account username, which is the email address supplied when creating the account
password	The account password.
serial_number	The ID of the device being used, as set in the console.

Response: Result (from RiGHTv Front-end API)

Indicates whether the action succeeded or not. The entity includes the following attributes:

Property	Description
status	Indicates whether the request resulted in a `SUCCESS` or `FAILURE`.
message	A short message from the server

4.1.3 Example

```
POST /RTEFacade/Login HTTP/1.1
Host: https://<operator>.tvaas.com
username=1&password=1&serial_ number=4BFA9FAE-2753-4938-B342-D30394D7C773&client=json
```

This request logs into the RiGHTv account for *username* `1`, with *password* `1` and device *serial_number* `4BFA9FAE-2753-4938-B342-D30394D7C773`.

The returned response for a successful log-in is shown below.

The response shown below indicates a problem with the username/password combination.

The response shown below indicates a problem with the username/password combination.

4.2 Ordering TVOD Content

4.2.1 Overview

To buy the right to view content, a user has to purchase an offer that includes the content they want.

This tutorial explains how to order TVOD movies.

The client application is responsible for verifying the user's purchase PIN before submitting an ordering request.

The back end handles the transaction through the credit card payment system on its own, without client application involvement.

Only logged-in users can make purchases. If an anonymous user presses a Purchase/Subscribe button, the log-in screen should be displayed.

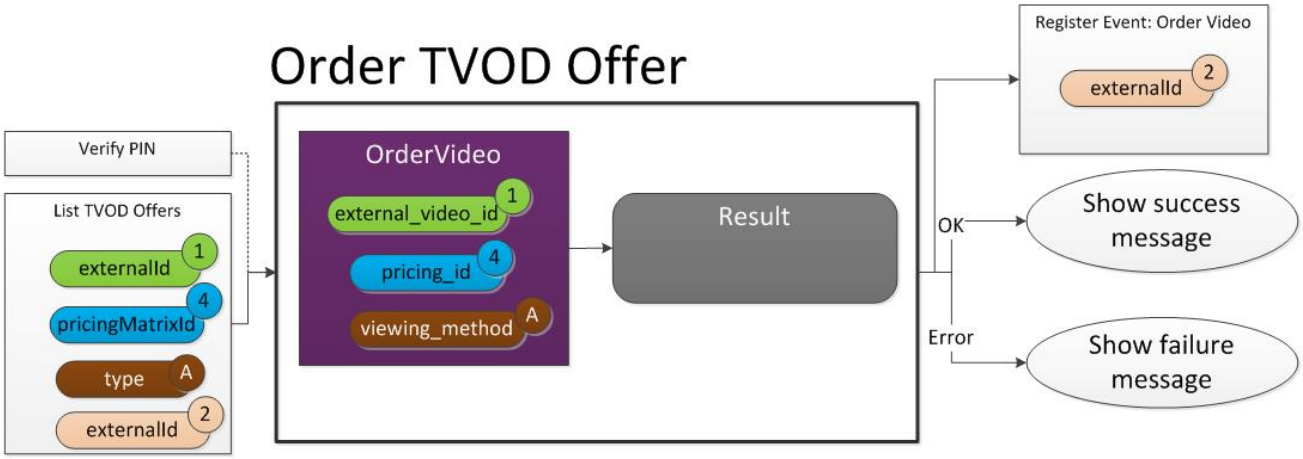
The ordering process is illustrated below.

1. The user selects a movie or movie package to order.
2. The application requests the user to enter their purchase PIN, and then verifies that against the PIN stored in the Service Delivery Platform database.

3. Once the PIN is successfully verified, the client application sends the order to the Service Delivery Platform.

Note on Analytics: The Analytics Platform extracts data sent when ordering TVOD content for use in many of its charts and KPIs.

4.2.2 Requests and Responses



Request: OrderVideo (from RiGHTv Front-end API)

This request orders the specified video for the account. Significant parameters include:

Parameter	Description
external_video_id	The external ID of the VOD content in the catalog.
pricing_id	The *ID of the pricing matrix of the offer selected.*
viewing_method	The viewing method that matches the pricing option.
For In-App Purchasing Only:	
store_id	The ID of the app store through which the video is purchased.
purchase_reference	The reference to a purchase made for the specified video at the app store. Use the POST method to pass this parameter. (Mandatory if store_id is specified)
store_product_ reference	The reference assigned to the video purchased at a particular app store. Relevant for the Google App store only.

Response: Result (from RiGHTv Front-end API)

Indicates whether the action succeeded or not. The entity includes the following attributes:

Property	Description
status	Indicates whether the request resulted in a SUCCESS or FAILURE.
message	A short message from the server

Note

For additional guidelines relevant for ordering VOD offers for download, see Ordering Content for Download.

4.2.3 Example

https://<operator>.tvaas.com/RTEFacade/OrderVideo?external_video_id=Cinderella&pricing_id=4025&viewing_method=streaming&client=json

This request orders the movie `Cinderella` with the pricing ID `4025` and the viewing method `streaming`.

The response below indicates successful ordering of the video.

```
{
  "metadata": {
    "request": "OrderVideo",
    "timestamp": 1460277106544
  },
  "response": {
    "message": "Order VOD operation finished successfully",
    "status": "SUCCESS"
  }
}
```

4.3 Opening a Ticket for an SVOD Movie

4.3.1 Overview

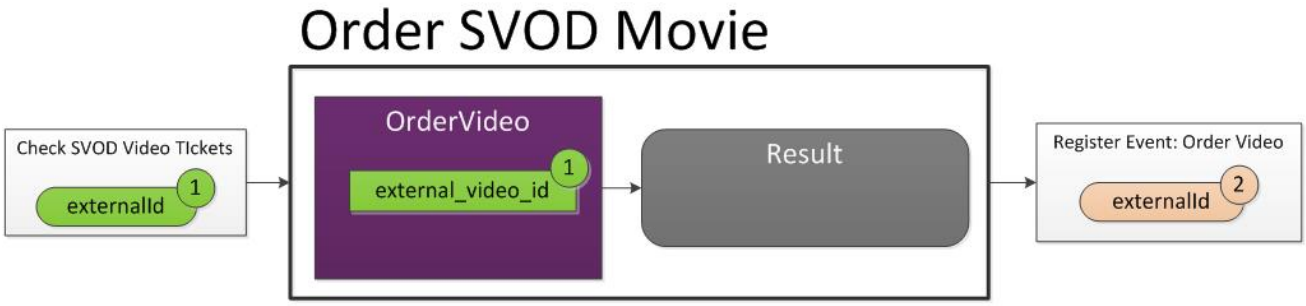
Once an account has been subscribed to an SVOD service, the client application has to order each video from the service before it can be viewed.

The video can be ordered, for example, when the user attempts to play the movie.

Note for Analytics: For data collection purposes (for use in the Analytics Platform, see Apps and Analytics), it is important that each SVOD video be ordered only once. If a ticket for the video already exists, the video should not be ordered again (see 4.4 Check SVOD Video Tickets).

Note: The procedure shown here applies whether the customer subscribed to the SVOD service directly, or through a Service Plan.

4.3.2 Requests and Responses



Request: OrderVideo (from RiGHTv Front-end API)

This request orders the specified video.

Parameter	Description
external_video_id	The external ID of the VOD content in the catalog.
viewing_method	Set to `streaming`.
subscription	Set to `true`, to indicate that the video is part of one of the account's subscriptions.

Response: Result (from RiGHTv Front-end API)

Indicates whether the action succeeded or not. The entity includes the following attributes:

Property	Description
status	Indicates whether the request resulted in a SUCCESS or FAILURE.
message	A short message from the server

Note

For additional guidelines relevant for ordering VOD offers for download, see Ordering Content for Download.

4.3.3 Example

This request orders the SVOD movie Avatar and the viewing method `streaming`.

https://<operator>.tvaas.com/RTEFacade/OrderVideo?external_video_id=Avatar&subscription=true&viewing_method=streaming&client=json

The response below indicates successful ordering of the video.

```
{
  "metadata": {
    "request": "OrderVideo",
    "timestamp": 1459921188495
  },
  "response": {
    "message": "Order VOD operation finished successfully",
    "status": "SUCCESS"
  }
}
```


4.4 Check SVOD Video Tickets

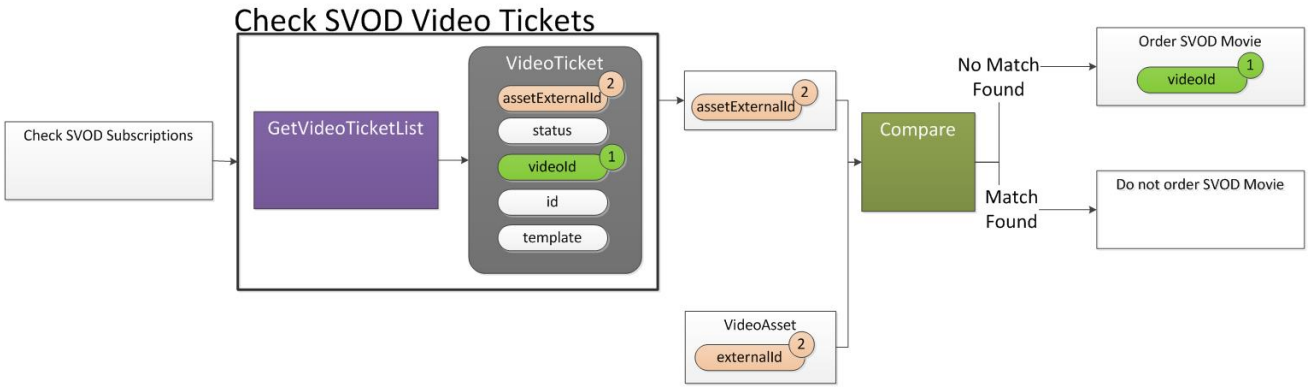
4.4.1 Overview

Once an SVOD subscription has been ordered, a ticket for each individual video included in the service must be ordered individually before the video can be played. Because the videos in the SVOD service can change from time to time, each video should be ordered when the customer first attempts to play the video. (See 4.3 Opening a Ticket for an SVOD Movie for instructions on how to order SVOD movies.)

Because the action used to order videos, *OrderVideo*, is monitored for data collection for the Analytics Platform, it is important that *OrderVideo* be called only once per SVOD movie.

The application should check whether a ticket for the video has already been opened. If a ticket has been opened, the video should not be ordered again.

4.4.2 Requests and Responses



GetVideoTicketList should be called to get a list of all a customer's active tickets. The list of assets for which tickets exist should be compared to the asset that the customer wants to view. If a match is found, that movie should not be ordered again, but if no match is found, the movie should be ordered.

Request: GetVideoTicketList (from RiGHTv Front-end API)

Returns a list of the account's video tickets. No parameters are required.

Request: VideoTicket (from RiGHTv Front-end API)

This entity lists movies and movie packages purchased by the account. It includes the following properties.

Property	Description
template	Indicates the template (business model) through which the video was purchased. Displays **svod service** if purchased through an SVOD Service.
assetExternalId	The external ID of the asset in the Content Library.
status	Indicates if **active** or **expired**.
videoId	The external ID of the movie page in the VOD Catalog.
id	The ID of the ticket opened for the movie.

Check the external ID of the movie to be played against the values of *assetExternalId* in the listed SVOD movie tickets.

If a match is found, a ticket already exists and the video must not be ordered again.

4.4.3 Example

```
https://<operator>.tvaas.com/RTEFacade/GetVideoTicketList?client=json
```

This call requests all video tickets opened for the logged-in account.

The sample response below shows that the account has an active ticket to movie The Avengers, ordered through an SVOD service.

```
"template": "svod_service",
"advisories": "",
"prLevel": 0,
"allowedEstDownloadingDevices": "",
"videoId": 6502,
"type": "subscription",
"assetExternalId": "The Avengers",
"responseElementType": "VideoTicket",
"attachment": {},
"downloadPeriod": "",
"deliveryMode": "streaming",
"assetId": 412063,
"id": 875052,
"windowEnd": 1482830113941,
"videoPackageName": "",
"rentalPeriodUnit": 3,
"allowedViews": "",
"windowStart": 1482822913941,
"videoPackageExternalId": "",
"rentalPeriod": 2,
"prName": "NR",
"videoExternalId": "The Avengers",
"downloadWindowEnd": "",
"downloadWindowStart": "",
"downloadPeriodUnit": 0,
"name": "subtitles_program_2",
"currentEstDownloadingDevices": "",
"status": "active"
```


4.5 Ordering a VOD Movie Package

4.5.1 Overview

To buy the right to view content, a user has to purchase an offer that includes the content they want.

This tutorial explains how to order VOD movie packages.

The client application is responsible for verifying the user's purchase PIN before submitting an ordering request.

The back end handles the transaction through the credit card payment system on its own, without client application involvement.

Only logged-in users can make purchases. If an anonymous user presses a Purchase/Subscribe button, the log-in screen should be displayed.

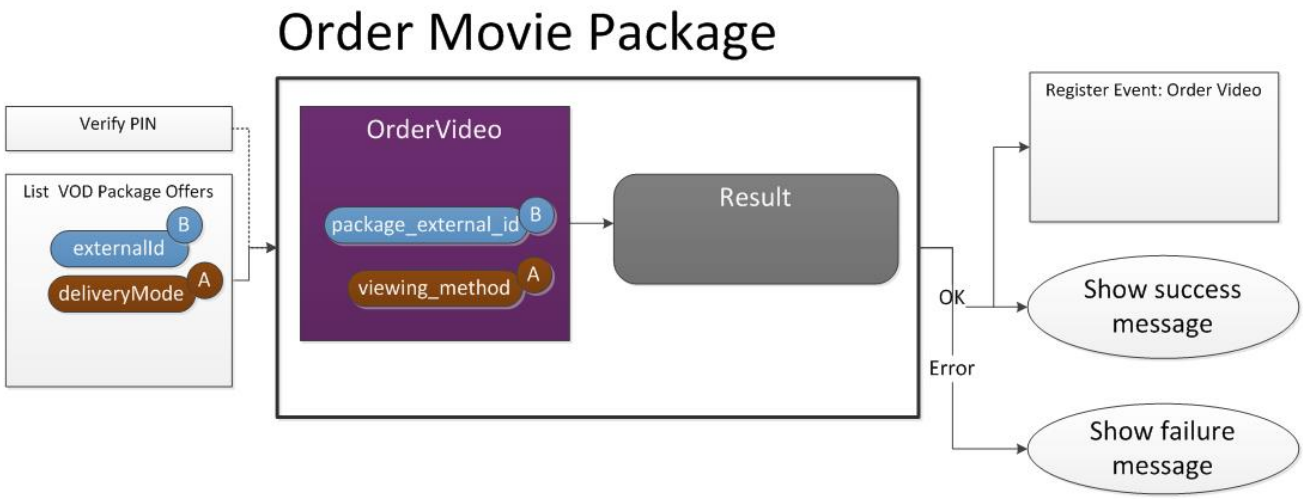
The ordering process is illustrated below.

1. The user selects a movie package to order.
2. The application requests the user to enter their purchase PIN, and then verifies that against the PIN stored in the Service Delivery Platform database.
3. Once the PIN is successfully verified, the client application sends the order to the Service Delivery Platform.

Note on Analytics: The Analytics Platform extracts data sent when ordering VOD Movie Packages for use in many of its charts and KPIs.

> **Note**
>
> After ordering a VOD Movie Package, the ticket for each movie in the package must be activated. See Activate VOD Package Movie Ticket.

4.5.2 Requests and Responses



Request: OrderVideoPackage (from RiGHTv Front-end API)

This request orders the specified VOD Movie Package.

Parameter	Description
package_external_ id	The external ID of the VOD movie package in the catalog.
viewing_method	Either `streaming`, `download` or `converged`.
For In-App Purchasing Only:	
store_id	The ID of the app store through which the movie package is purchased.

Parameter	Description
purchase_reference	The reference to a purchase made for the specified movie package at the app store. Use the POST method to pass this parameter. (Mandatory if store_id is specified)
store_product_ reference	The reference assigned to the movie package purchased at a particular app store. Relevant for the Google App store only.

Response: Result (from RiGHTv Front-end API)

Indicates whether the action succeeded or not. The entity includes the following attributes:

Property	Description
status	Indicates whether the request resulted in a SUCCESS or FAILURE.
message	A short message from the server

Note

For additional guidelines relevant for ordering VOD offers for download, see Ordering Content for Download.

4.5.3 Example

https://<operator>.tvaas.com/RTEFacade/OrderVideoPackage?package_external_id=Favorites&viewing_method=streaming&client=json

This request orders the VOD package with external id=`Favorite` and the viewing method `streaming`.

The response below indicates successful ordering of the video.


```
{
  "metadata": {
    "request": "OrderVideoPackage",
    "timestamp": 1460280196673
  },
  "response": {
    "message": "Order-vod-package operation finished successfully",
    "status": "SUCCESS"
  }
}
```

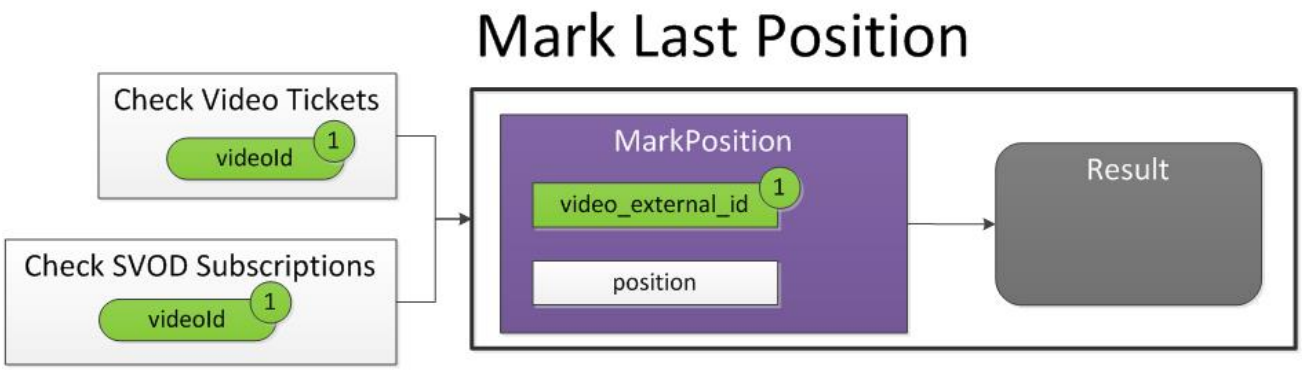
4.6 Mark Last Position

4.6.1 Overview

If a user stops playing a movie before it ends, the play position can be recorded to allow the user to continue viewing from the same point in the movie at another time.

Note on Analytics: For data collection purposes, marking the stopped position is used as an indication that the user has ended the viewing session. The stopped position must thus only be marked when the user closes the player, or automatically when the video stream stops. The last position must also be marked once the content has been played to the end. *MarkPosition* must be sent without caching.

4.6.2 Requests and Responses



Request: MarkPosition (from RiGHTv Front-end API)

This request stores (in the back end) the position where playback was paused. The following parameters are required:

Parameter	Description
video_external_id	The external ID of the VOD content in the catalog.
position	The position in milliseconds from the start of the movie

Response: Result (from RiGHTv Front-end API)

Indicates whether the action succeeded or not. The entity includes the following attributes:

Property	Description
status	Indicating whether the request was a `SUCCESS` or `FAILURE`.
message	A short message from the server.

4.6.3 Example

https://<operator>.tvaas.com/RTEFacade/MarkPosition?video_external_id=Argo&position=25000&client=json

This request marks the position at 25000 milliseconds from the start of the movie Argo.

The response below shows that the position was successfully marked.

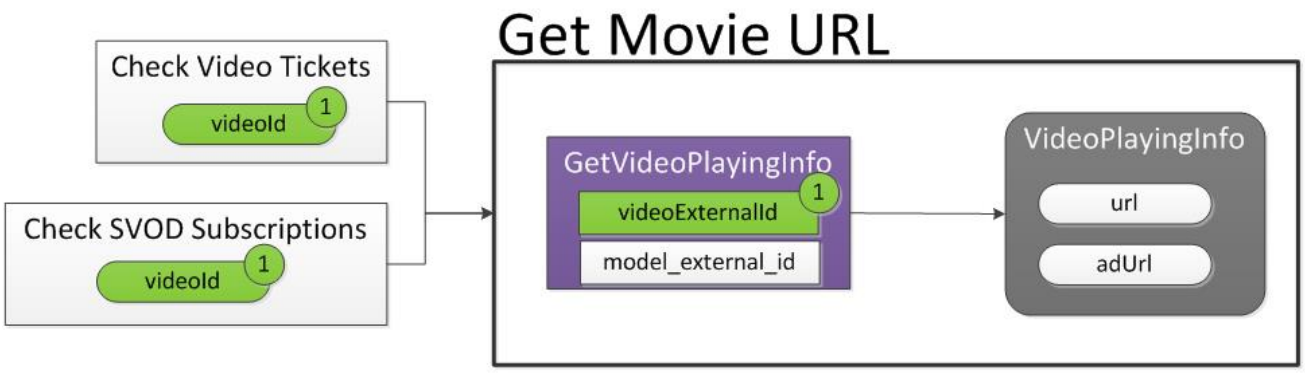

```
{
  "metadata": {
    "request": "MarkPosition",
    "timestamp": 1458460661348
  },
  "response": {
    "message": "Mark-Position operation finished successfully",
    "status": "SUCCESS"
  }
}
```


4.7 Get Movie Playback URL

4.7.1 Overview

When the user presses a Play button to watch a movie, the playback URL must be retrieved.

4.7.2 Requests and Responses



If the rights to play movie were purchased through an SVOD offer, a ticket for the individual movie must be opened. It is suggested that the ticket be opened when the user first attempts to view the movie. See 4.3 Opening a Ticket for an SVOD Movie.

Note on Analytics: The Analytics Platform extracts data sent when requesting a playback URL for use in many of its charts and KPIs.

Request: GetVideoPlayingInfo (from RiGHTv Front-end API)

Gets the playback URL for the specified movie. Significant parameters include:

Parameter	Description
video_external_id	The external ID of the movie page in the VOD Catalog.
resume	Set to `true` or `false`, specifies whether to resume the movie from its last played position or not.
device_model_ id	The type of device on which the device is to be played.

Response: VideoPlayingInfo (from RiGHTv Front-end API)

This entity provides various properties about the specified video file. For getting the playback URL, the significant property is:

Property	Description
url	The playback URL of the video. See separate documentation for instructions on operating the player.

4.7.3 Example

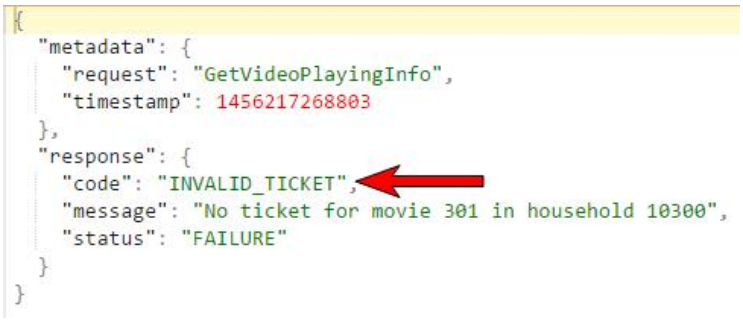
https://<operator>.tvaas.com/RTEFacade/GetVideoPlayingInfo?video_external_id=Argo&resume=true&model_external_id=IPad&client=json

This request gets the playback URL for the movie `Argo`, to be played on an `IPad`.

Sample response for a successful call is shown below. Note the URL displayed.


```
{
  "metadata": {
    "request": "GetVideoPlayingInfo",
    "timestamp": 1456233125093
  },
  "response": {
    "responseElementType": "VideoPlayingInfo",
    "identifier": "",
    "protocol": "http",
    "filename": "Argo.mpg_EtsHlsClrS3",
    "port": "0",
    "ip": "",
    "id": 301,
    "position": 0,
    "url": "http://d3cz5x0y15zny5.cloudfront.net
      /dotscreen/HLS/Argo/MAINArgo.m3u8",
    "token": ""
  }
}
```


Sample response for an unsuccessful call is shown below. The output indicates failure, and informs that the account does not have a ticket for this movie.



4.8 Register Click Event

4.8.1 Overview

The suggestion algorithm can be continually improved by informing the system whenever the user clicks on a content item, whether it be from a catalog screen, a list of promotions, a list of recommendations, a banner or marketing campaign, etc.

Clicking a result from a list of search results is handled differently, see 4.13 Register Search Event.

Note for Analytics: The Analytics Platform uses the data sent when registering clicks for constructing many of the charts and KPIs. In particular, this information is used when attributing eventual orders to order sources such as search, recommendations, promotions, etc.

4.8.2 Requests and Responses

Request: RegisterEvent (from COMPASS RT API)

This call registers a click event. The following parameters must be provided:

Parameter	Description
type	The type of event, must be set to click.
external_content_id	If a movie, TV Show season, or episode was clicked, specify its ID using this parameter. **Note** If the user did not click on a content item before it was watched, a click event must be sent. If the watched item was an episode, the click event must be sent for the season and episode.
external_series_id	If a TV Show series was clicked, specify its ID using this parameter. **Note** Only one of external_content_id and external_series_id can be specified.
recommended	Set to true if the video was clicked from a list of recommendations or promotions. Otherwise set to false.
The following are only relevant if recommended is set to true:	
engine	The recommendation engine that generated the recommendation, such as most_popular, user_rating or promotions.
blend	The blend used when creating the recommendations list.
device_model	The model ID of the device on which the click occurred.
text	The name of the screen on which the click occurred.

Note

When registering a click event on a banner or marketing campaign, use the parameter values provided in 4.9 Register a Banner Click Event.

Response: Result (from COMPASS RT API)

Indicates whether the action was successful or not, and returns an error message if not.

Property	Description
status	Indicates success or failure.

4.8.3 Example

https://<operator>-atp.tvaas.com/compass/RegisterEvent?type=click&recommended=true&engine=most_popular&device_model=PC&text=Home&client=json&external_content_id=309

This registers a click event for the content with ID 309.

4.8.4 Related Tutorials

To	Refer To Tutorial
Register a click event on a banner or marketing campaign	4.9 Register a Banner Click Event

4.9 Register a Banner Click Event

4.9.1 Overview

The Analytics Platform uses the data sent when registering clicks for constructing many of the charts and KPIs. In particular, this information is used when attributing eventual orders to order sources such as search, recommendations, promotions, banners or marketing campaigns, etc.

This section provides the parameter values to be used when registering a click on a banner or marketing campaign.

For general information on registering click events, see 4.8 Register Click Event.

4.9.2 RegisterEvent Parameter Values

When using the *RegisterEvent* call to register that the user clicked on a banner or marketing campaign, use the values listed below for the relevant parameters.

The required values for these parameters are common for all banner types:

Banner Type	RegisterEvent Parameters	
	type	recommended
All types	click	false

The required values for these parameters depend on the banner type:

Banner Type	RegisterEvent Parameters			
	external_ content_id	external_ program_id	external_series_ id	engine
Content or episode	<external_ content_id>			content_ banner
Series			<external_ series_id>	series_ banner
Season	<external_ season_id>			season_ banner
Program		<external_ program_id>		program_ banner
VOD Category	<external_vod_ category_id>			vod_ category_ banner
Channel	<external_ channel_id>			channel_ banner

Banner Type	RegisterEvent Parameters			
	external_ content_id	external_ program_id	external_series_ id	engine
Product – SVOD	<external_ product_id>			svod_banner
Product – VOD Package				vod_ package_ banner
Product - VOD card				vod_card_ banner
Product - Catchup				catchup_ banner
Product - Channel Package				channel_ package_ banner
Product - NPVR				npvr_banner
Product - Startover				startover_ banner

For example, to register a click on a banner or marketing campaign for a:

- Series, set *type* to *click*, *recommended* to *false*, *external_series_id* to the *external_series_id* of the series, and *engine* to *series_banner*.
- Season, set *type* to *click*, *recommended* to *false*, *external_content_id* to the *external_season_id* of the season, and *engine* to *season_banner*.

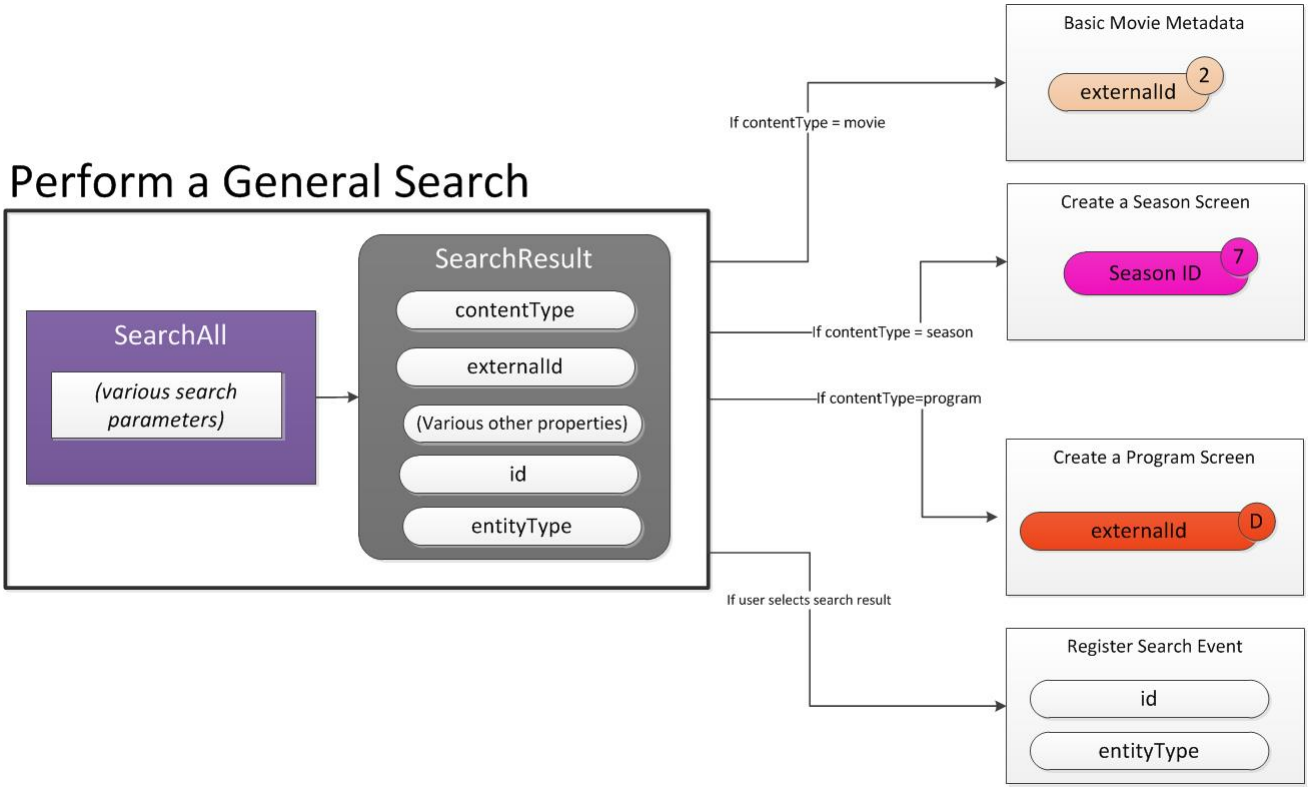
4.10 Perform a General Search

4.10.1 Overview

A general search searches across all videos and live programs. The search returns any content whose name or title includes the search term.

> **Note**
>
> Recommended practice is to instead perform separate searches for VOD movies, VOD TV shows, and live programs.

4.10.2 Requests and Responses



Request: SearchAll (from COMPASS Search RT API)

Searches across all content types, searching within the name and title. All available parameters are listed below.

Parameter	Description
text	The search string entered. Can include multiple terms separated by white space. This is the only mandatory parameter.
language_code	Specifies the language in which to search. If not specified, will use the customer's default language if specified or the primary language defined within the system.
max_results	The maximum number of search results to return. The default value is 20.
image_name	The name of the image type to return. Typically `HorizontalImage` or `VerticalImage`. If not specified, the search results will not include images.

Parameter	Description
fuzzy	Turns fuzzy search on (`true`) and off (`false`). If set to `false` (default), search results include only results that include the search term as entered. If set to `true`, search results also include results that include words similar to the search term, for example, alternative or corrected spellings.
group_entities	Groups results by type together if set to `true`. Results will be grouped in the following order: Video movies, Video series (episodes & seasons), Live programs. If set to `false` (default), results are not grouped by type.
series_content_type	Lists the type of contents to be returned in the search results, and can only be used if *group_entities* is set to `true`. List the content types to be returned separated by commas. Valid values include `series`, `episode`.
from	The index number of the first result to display. Useful for displaying search results over a number of screens.
count	The number of results to return, starting from the *from* index.
availability_type	The availability type of live content to be found. Valid values are: “all”, “live”. Default value: “live”.

For more information, see the COMPASS Search RT API Developers Guide.

Response: SearchResult (from COMPASS Search RT API)

This entity presents the search results. This entity is returned by all searching actions. All of the properties are listed below.

Parameter	Description
id	The ID of the search result.
entityType	The type of returned entity, e.g. `content`.
contentType	The type of content (relevant in case entityType is `content`). For VOD contents possible values are `movie`, `season`, `episode`. For live programs the only possible value is `program`. **Note** If a result representing a season is clicked (i.e. *contentType* = *season*), open the relevant Season Page, using the *externalId* parameter.
externalId	The external id of the entity.
name	The name of the entity. **Note** For a result representing a season (i.e. *contentType* = *season*), the name displayed should be constructed as follows: *seriesName* Season: *contentSeq* For example: Weeds: Season 7
imageUrl	The URL of the image of the entity (whose name was given in the 'image_name' parameter).
year	The year of the content (relevant in case entityType is 'content').
rating	The average user rating of the content (relevant in case entityType is 'content').
ratersCount	The number of raters for the content (relevant in case entityType is 'content').

Parameter	Description
externalRating	The external rating of the content (relevant in case entityType is 'content').
prLevel	The level of the Parental Rating for the content (relevant in case entityType is 'content'). Returned as a number from 0 (low) to 999 (high).
genres	The array of genres associated with the content (relevant in case entityType is 'content'). This array includes only one property, *name*, the name of the genre.
contentSeq	The sequential number for the content item in the season (relevant in case contentType is 'episode' or 'program').
seasonName	The name of the season (relevant in case contentType is 'episode' or 'program').
seriesName	The name of the series (relevant in case contentType is 'episode', 'season' or 'program').
sourceChannelId	The external ID of the live channel in which the content was originally broadcast (relevant for VOD content).
broadcastStartTime	The start time of a live program broadcast (relevant in case contentType is 'program').
broadcastEndTime	The end time of a live program broadcast (relevant in case contentType is 'program').
channelName	The name of the channel in which a live program is broadcasted (relevant in case contentType is 'program').
channelNumber	The number of the channel in which a live program is broadcast (relevant in case contentType is 'program').

Parameter	Description
availabilities	The array of availabilities associated with the content (relevant in case entityType is 'content'). This array includes only one property: *externalId*: the ID of the video (for VOD content) or program (for Live content).

For more information, see the COMPASS Search RT API Developers Guide.

4.10.3 Example

```
https://<operator>.tvaas.com/search/compass/SearchAll?text=Glee&client=json
```

This request gets a list of all contents whose name or title includes the search term `Glee`.

The response extract below shows one element in the search response.

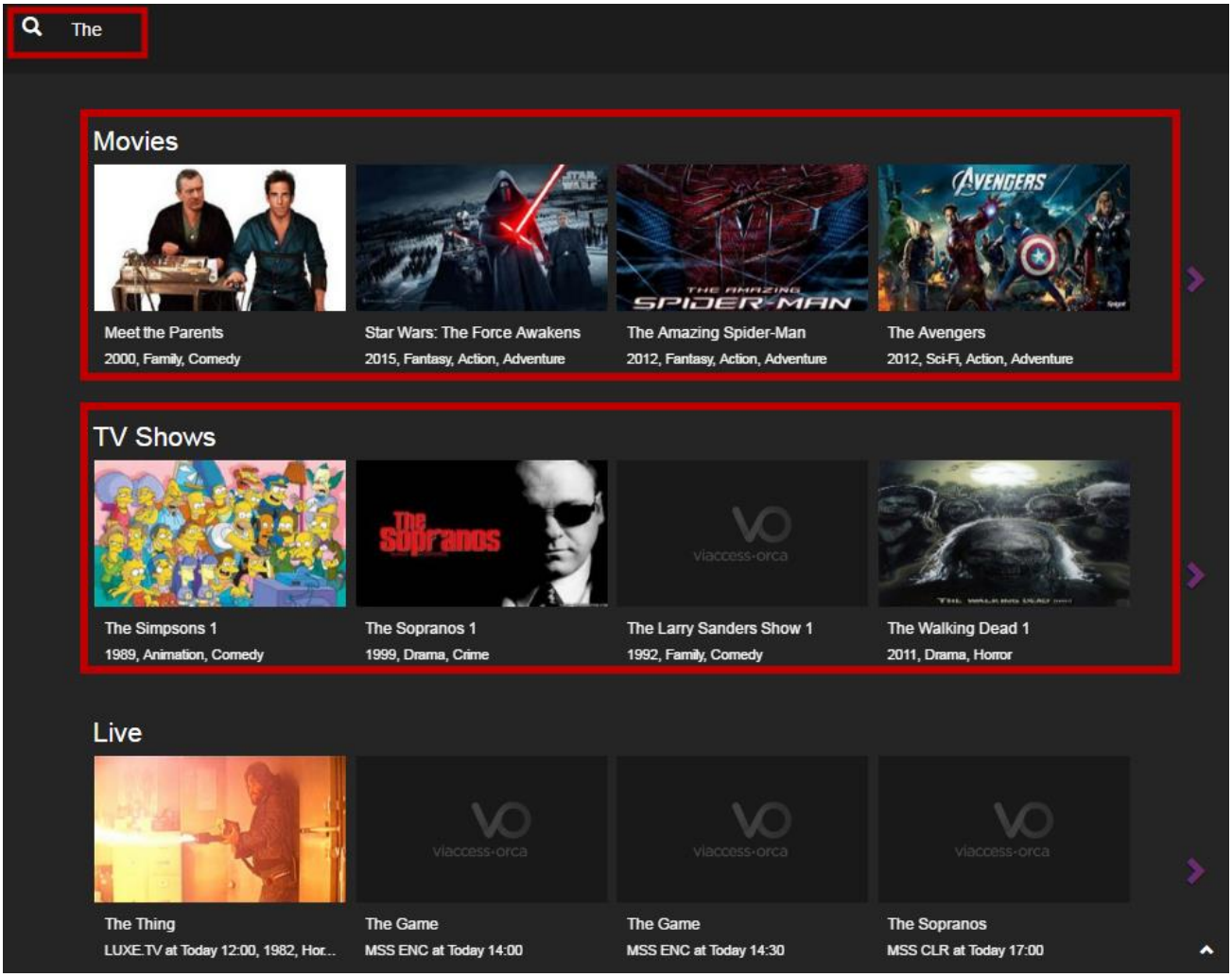

```
{
  "contentSeq": "1",
  "prLevel": "0",
  "year": "2010",
  "entityType": "content",
  "seriesName": "Glee S2",
  "externalRating": "8.3",
  "availabilities": [
    {
      "externalId": "Glee S2 Ep1"
    }
  ],
  "externalId": "Glee S2 Ep1",
  "genres": [
    {
      "name": "Drama"
    },
    {
      "name": "Comedy"
    },
    {
      "name": "Music"
    }
  ],
  "seasonName": "2",
  "name": "Glee S2 Ep1",
  "id": "22323",
  "contentType": "episode",
  "isCatchup": 0
},
```

4.11 Performing a Video Search

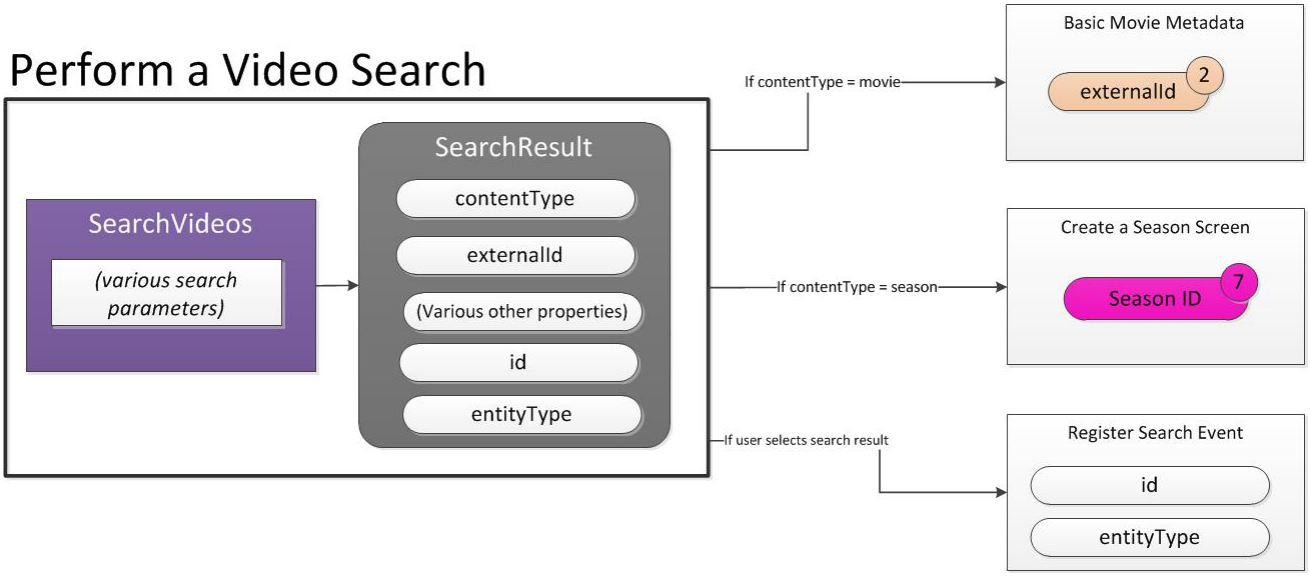
4.11.1 Overview

A video search searches for the entered search string within the names of all videos (movies and TV Shows). Separate video searches should be performed for movies and for TV shows. Results should be separated by type.

Note for Analytics: The Analytics Platform extracts data sent when searching for videos for use in many of its charts and KPIs.



4.11.2 Requests and Responses



Request: SearchVideos (from COMPASS Search RT API)

The following parameters can be specified.

Property	Description
text	The search text, searched for in movie and series names.
language_code	Specifies the language in which to search. If not specified, will use the customer's default language if specified or the primary language defined within the system.
max_results	The maximum number of search results to return. The default value is 20.
image_name	The name of the image type to return. Typically `HorizontalImage` or `VerticalImage`. If not specified, the search results will not include images.
fuzzy	Turns fuzzy search on (`true`) and off (`false`). If set to `false` (default), search results include only results that include the search term as entered. If set to `true`, search results also include results that include words similar to the search term, for example, alternative or corrected spellings.

Property	Description
genres	A comma-delimited list of genres, identified by their external IDs. Only videos that match at least one of the genres listed will be included in the search results.
services	*A* comma-delimited list of service external IDs identified by their external IDs. Only videos that match at least one of the services listed will be included in the search results.
device_models	A comma-delimited list of device models, identified by their device model external IDs. Only videos that are licensed to be viewed on at least one of the models listed will be included in the search results. If specified, overrides the *delivery_mode* parameter.
source_channel_ids	A comma-delimited list of source channels, identified by their channel external IDs. Only programs originally broadcast on at least one of the channels listed will be included in the search results.
delivery_mode	A comma-delimited list of delivery modes, with possible values `download` and `streaming`. Only videos that can be delivered by at least one of the listed modes will be included in the search results. This parameter is overridden if the *device_models* parameter is specified.
quality	A comma-delimited list of video qualities, such as `HD, SD` and `3D`. Only videos that can be delivered by at least one of the listed qualities will be included in the search results.
content_type	A comma-delimited list of content types to be included in the search results. Valid values include `movie, season` and `episode`.
max_pr_level	The maximum level of the parental rating allowed in the returned content items, as a number from 0 (low) to 999 (high).
order_by	Defines whether to sort the list by `name, year and relevance` (default).
from	The index number of the first result to display. Useful for displaying search results over a number of screens.

Property	Description
count	The number of results to return, starting from the *from* index.

For more information, see the COMPASS Search RT API Developers Guide.

Response: SearchResult (from COMPASS Search RT API)

This entity presents the search results. All of the properties are listed below.

Parameter	Description
id	The ID of the search result.
entityType	The type of returned entity, e.g. `content`.
contentType	The type of content (relevant in case entityType is `content`). For VOD contents possible values are `movie`, `season`, `episode`. For live programs the only possible value is `program`.
externalId	The external id of the entity.
name	The name of the entity.
imageUrl	The URL of the image of the entity (whose name was given in the 'image_name' parameter).
year	The year of the content (relevant in case entityType is 'content').
rating	The average user rating of the content (relevant in case entityType is 'content').
ratersCount	The number of raters for the content (relevant in case entityType is 'content').
externalRating	The external rating of the content (relevant in case entityType is 'content').
prLevel	The level of the Parental Rating for the content (relevant in case entityType is 'content'). Returned as a number from 0 (low) to 999 (high).

Parameter	Description
genres	The array of genres associated with the content (relevant in case entityType is 'content'). This array includes only one property, *name*, the name of the genre.
contentSeq	The sequential number for the content item in the season (relevant in case contentType is 'episode' or 'program').
seasonName	The name of the season (relevant in case contentType is 'episode' or 'program').
seriesName	The name of the series (relevant in case contentType is 'episode', 'season' or 'program').
sourceChannelId	The external ID of the live channel in which the content was originally broadcast (relevant for VOD content).
broadcastStartTime	The start time of a live program broadcast (relevant in case contentType is 'program').
broadcastEndTime	The end time of a live program broadcast (relevant in case contentType is 'program').
channelName	The name of the channel in which a live program is broadcasted (relevant in case contentType is 'program').
channelNumber	The number of the channel in which a live program is broadcast (relevant in case contentType is 'program').
availabilities	The array of availabilities associated with the content (relevant in case entityType is 'content'). This array includes only one property: *externalId*: the ID of the video (for VOD content) or program (for Live content).

4.11.3 Example

https://<operator>.tvaas.com/search/compass/SearchVideos?image_name=HorizontalImage&language_code=en&content_type=movie&text=the&order_by=name&client=json

This request gets all movie videos that include the search term `the` in their English titles. The search results will be returned with horizontal images and will be ordered by name.

https://<operator>.tvaas.com/search/compass/SearchVideos?image_name=HorizontalImage&language_code=en&content_type=season&text=the&order_by=name&client=json

This request gets all TV Shows that include the search term `the` in their English titles. The search results will be returned with horizontal images and will be ordered by name.

A sample response is shown below.


```
{
  "contentSeq": "1",
  "ratersCount": "15",
  "prLevel": "0",
  "year": "1989",
  "entityType": "content",
  "seriesName": "The Simpsons",
  "availabilities": [
    {
      "externalId": "1~!The Simpsons~!2"
    }
  ],
  "rating": "3.26",
  "externalId": "1~!The Simpsons",
  "genres": [
    {
      "name": "Animation"
    },
    {
      "name": "Comedy"
    }
  ],
  "imageUrl": "/attachments/TheSimpsons_OutHorizontalImage.jpg",
  "name": "1",
  "id": "22290",
  "contentType": "season"
},
```


4.12 Adding Auto-suggestion to Search

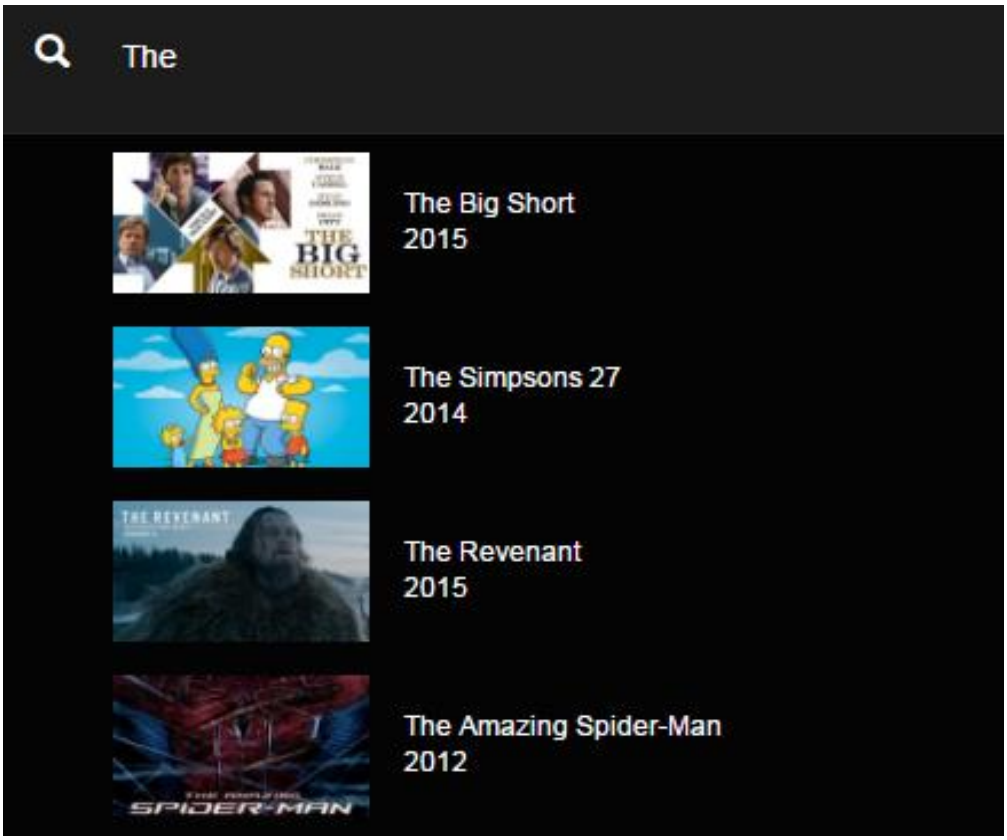
4.12.1 Overview

By enabling auto-suggestion, the user will be presented with search results immediately after having entered a few characters in the search field, without having to press the search button. The user can then choose a result from the search results, or continue typing into the search field. The auto-suggestions are updated and refined after each additional character is entered.

RiGHTv provides the most likely results based on the few characters entered.

The auto-suggestion search can be configured to search within the titles of videos and live programs.

Note for Analytics: The Analytics Platform extracts data sent when conducting a search.



4.12.2 Requests and Responses

Use the *SearchSuggest* request to provide auto-suggestion to the search facility.

Request: SearchSuggest (from COMPASS Search RT API)

Searches within the titles of videos and live programs. The following parameters can be specified:

Parameter	Description
text	The search string entered. Can include multiple terms separated by white space. This is the only mandatory parameter.
language_code	Specifies the language in which to search. If not specified, will use the customer's default language if specified, or the primary language defined within the system.
max_results	The maximum number of search results to return. The default value is 20.
image_name	The name of the image type to return. Typically `HorizontalImage` or `VerticalImage`. If not specified, the search results will not include images.

Parameter	Description
entity_type	A comma-delimited list of entity types within which to search, for example `content`.
content_type	A comma-delimited list of content types to include in search results. Valid values include `movie`, `season`, `episode`, `program`. This parameter can only be specified if *entity_type* is set to `content` or not used.
from	The index number of the first result to display. Useful for displaying search results over a number of screens.
count	The number of results to return, starting from the *from* index.

For more information, see the COMPASS Search RT API Developers Guide.

Response: SuggestResult (from COMPASS Search RT API)

Provides search results.

Property	Description
id	The ID of the search result.
entityType	The type of returned entity, for example `content`.
contentType	The type of content (relevant in case entityType is `content`). For VOD contents possible values are `movie`, `season`, `episode`. For live programs the only possible value is `program`.
externalId	The external id of the entity.
name	The name of the entity.
year	The year of the content (relevant in case *entityType* is `content`).
contentSeq	The sequential number for the content item in the season (relevant if *contentType* is `episode` or `program`).
seasonName	The name of the season (relevant if *contentType* is `episode` or `program`).
seriesName	The name of the series (relevant if *contentType* is `season`, `episode` or `program`).

Property	Description
broadcastStartTime	The start time of a live program broadcast (relevant in case *contentType* is `program`).
broadcastEndTime	The end time of a live program broadcast (relevant in case *contentType* is `program`).
channelName	The name of the channel in which a live program is broadcasted (relevant in case *contentType* is `program`).
channelNumber	The number of the channel in which a live program is broadcasted (relevant in case *contentType* is `program`).
imageUrl	The URL of the image of the entity (whose name was given in the *image_name* parameter).
availabilities	The array of availabilities associated with the content (relevant in case *entityType* is `content`). This array includes only one property: *externalId*: the ID of the video (for VOD content) or program (for Live content).

For more information, see the COMPASS Search RT API Developers Guide.

4.12.3 Example

```
https://<operator>.tvaas.com/search/compass/SearchSuggest?image_
name=HorizontalImage&language_code=en&entity_type=content&content_
type=movie%2Cseason%2Cprogram&text=The&client=json
```

This request gets all contents (movies, seasons and live programs) that include the search term the in their English titles. The search results will be returned with horizontal images.

The sample response below shows one search result.

```
  "year": "2015",
  "entityType": "content",
  "availabilities": [
    {
      "externalId": "The Revenant_TVOD"
    },
    {
      "externalId": "67ec2294-ec2a-4566-8ac7-678842b30cbd"
    },
    {
      "externalId": "The Revenant_SVOD"
    }
  ],
  "imageUrl": "/attachments/theRevenant_horizontal1.jpg",
  "name": "The Revenant",
  "externalId": "The Revenant",
  "id": "23544",
  "contentType": "movie"
},
```


4.13 Register Search Event

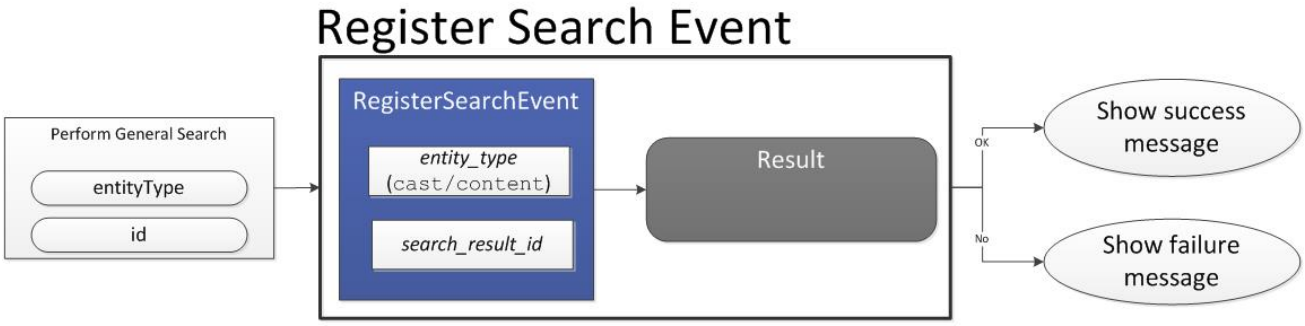
4.13.1 Overview

The suggestion algorithm can be continually improved by informing the system which of the search results the user actually selected. The system will take this information into account in future searches.

It is highly recommended to include this functionality within the client application.

Note for Analytics: The Analytics Platform extracts data sent when seleting a search result.

4.13.2 Requests and Responses



Request: RegisterSearchEvent (from COMPASS Search RT API)

Informs the system which of the returned search results was selected.

Parameter	Description
entity_type	The type of entity selected, e.g. `content`.
search_result_id	The ID of the result selected. Corresponds to the *id* parameter in *SearchResults* and in *SuggestResult*.

For more information, see the COMPASS Search RT API Developers Guide.

Response: Result (from COMPASS RT API)

Indicates whether the *RegisterSearchEvent* action was successful or not, and returns an error message if not.

Property	Description
Status	Indicates whether the request resulted in a SUCCESS or FAILURE.
Message	A short message from the server

4.13.3 Example

https://<operator>.tvaas.com/search/compass/RegisterSearchEvent?entity_type=content&search_result_id=22335&client=json

This request informs the Service Delivery Platform that the search result 22335 was selected.

The value 2235 is taken from the *SearchResults* or *SuggestResult* responses, as in the example below.

```
{
  "contentSeq": "3",
  "prLevel": "0",
  "year": "2011",
  "entityType": "content",
  "seriesName": "Glee S2",
  "externalRating": "8.3",
  "availabilities": [
    {
      "externalId": "Glee S3 Ep3"
    }
  ],
  "externalId": "Glee S3 Ep3",
  "genres": [
    {
      "name": "Drama"
    },
    {
      "name": "Comedy"
    },
    {
      "name": "Music"
    }
  ],
  "seasonName": "3",
  "name": "Glee S3 Ep3",
  "id": "22335",
  "contentType": "episode",
  "isCatchup": 0
},
```