



Viz Social User Guide

Version 1.1



Viz Social

Powered by Never.no



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Created on

2022/01/26

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1 Introduction

Viz Social was built for you: News, entertainment, and sports TV producers tasked with the creation of social segments for today's events. It was also built with the strong belief that one doesn't need to be a technical wizard to produce and manage social media content for TV. What the market needs today is a product that guides you through the necessary steps for researching, formatting, and publishing social segments in an intuitive way, hiding all underlying technological complexities.

This is precisely what Viz Social achieves.

With Viz Social you can find, process, moderate and publish the most valuable social content extracted from large collections of posts from a multitude of channels, just seconds after it became available online.

With Viz Social we took the power of [Never.no](#)'s award-winning Bee-On platform and used this well-established technology to power the creation of social spots and formats for broadcast, advertising, and digital playout. We overlaid the technology with an intuitive and simple web application that manages the data processing factory and database. This underlying infrastructure is designed for handling huge amounts of data, without losing flexibility and responsiveness. Hence, with Viz Social you can find, process, moderate, aggregate and publish the most valuable social content extracted from large collections of posts from a multitude of channels, just seconds after it became available online.

By combining 20 years of development invested in interactive communication solutions, the latest data processing technologies and a clever and simple UI, we've created a platform with which anyone can produce and manage social media content for TV. It'll open technological doors that so far no one had even bothered to try to open and its extreme intuitive approach immediately translates into major cost savings. Moreover, it integrates smoothly with companion apps so that the online universe can become part of the social formats produced by Viz Social as well. Finally, the scalable architecture is easily expandable, making Viz Social fully prepared for integration with future technologies.

The Viz Social application is built within a scalable and robust framework with a proven track record under high load and other extreme circumstances.

1.1 Document Structure

This document is structured as follows.

- [Overview](#) describes the product architecture, its context, and the fundamental concepts necessary to operate Viz Social.
- The [Gather](#), [Build](#), [Publish](#) and [Analyze](#) sections describe the functional features of the four main product modules.
- [Roles and Access Rights](#) focuses on the user roles and permission structure of Viz Social. Finally,
- [Volume and Performance Limits](#) specifies limits imposed on Viz Social by some of the Social APIs.

1.2 Feedback And Suggestions

We encourage suggestions and feedback about our products and documentation. To give feedback and/or suggestions, please contact your local Vizrt customer support team at www.vizrt.com.

2 Overview

Viz Social's main data unit is a Story. Stories are combinations of social feeds, online sources and visual formats that together drive integration of social data with broadcast productions. A Story can consist of social Searches, for example certain hashtags, posts by a few individual users, pictures by a set of celebrities, aggregated into a Carousel feeding a lower third and a ticker. The product guides you through the creation of these Searches and Carousels and gives you immediate and continuous control over which data is when On Air, online or any other digital destination.

2.1 Conventions

To differentiate between well-defined concepts used by Viz Social and similar, but not necessarily identical concepts used in everyday life, the former ones are capitalized in the Viz Social documentation. Examples of these concepts and their spelling are: Carousel, Filter, Format, Post, Search, Story, View.

2.2 Architecture

The Viz Social solution consists of:

- Viz Social (running in Amazon cloud), which consists of a backend and a frontend, where the customer accesses the frontend via a web browser.
- DCS (usually running locally), which handles the communication between Viz Social and the Vizrt components.
- Viz components.

The Dynamic Content Scheduler (DCS) is the Viz Social component responsible for integration with target environments and destinations. It exposes an API through which other applications and components (in this case the Viz Social Backend) can manage dynamic behavior of scenes provided by the most popular Character Generators (CGs). Today, it natively supports the APIs of Vizrt and Brainstorm. It also forms the gateway to Never.no's HTML-based CG. It is also capable of producing an equivalent XML, JSON or RSS feeds itself. DCS is usually pre-configured with a set of virtual destinations. From within Viz Social, users can select one of the virtual destinations on DCS for each of the Formats. Scenes themselves can be managed via a scene-dependent button menu that is chosen when setting up a social Format.

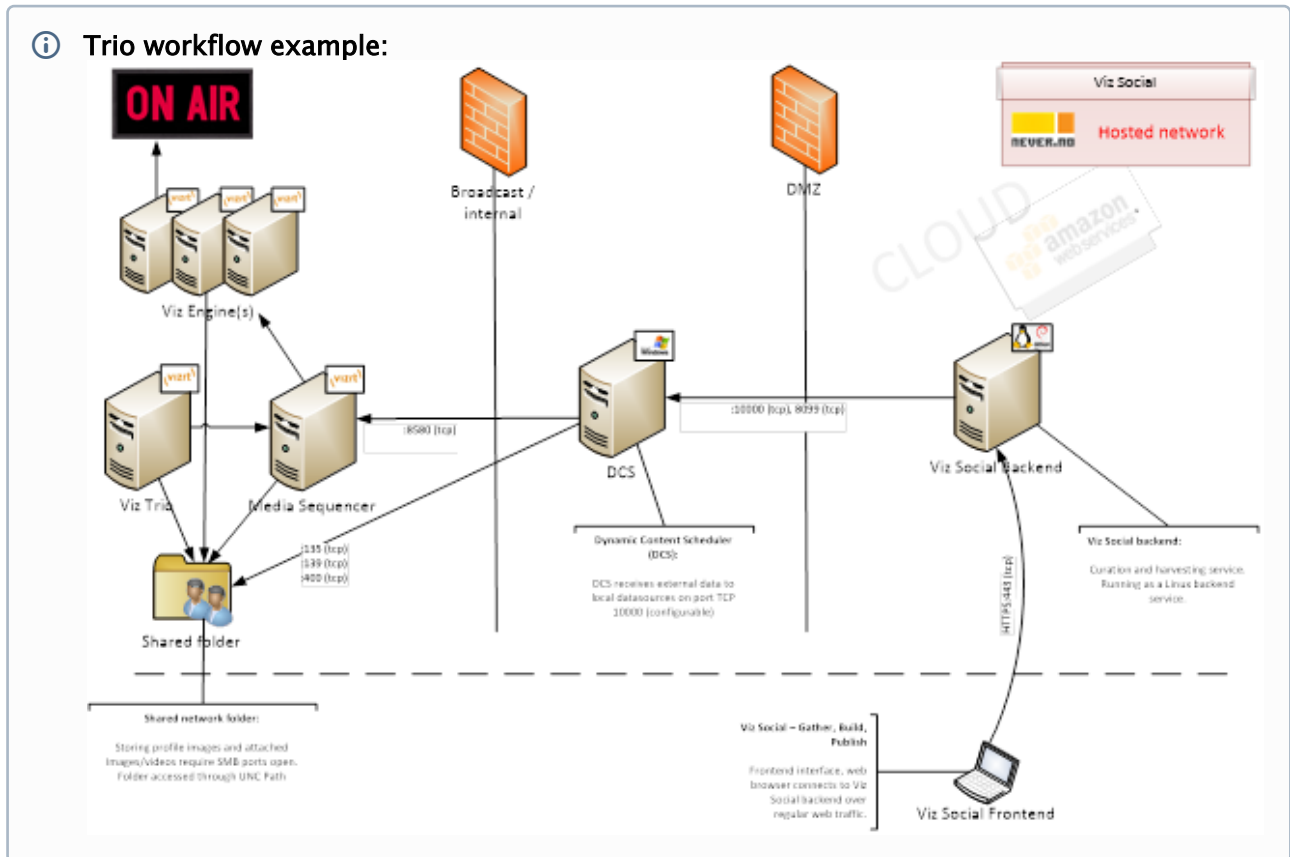
In parallel, we have introduced the Harvester which allows Viz Social to connect to a wide variety of external feed formats, integrating with them by via configuration changes only. Using the Harvester, new formats, new feeds, and new social networks can be connected and integrated in a matter of hours.

In between those components, Viz Social's data processing infrastructure is responsible for filtering, queuing, storing and selecting of incoming and outgoing data. The queue factory safeguards that asynchronous effects and external interrupts are handled reliably. Storage is provided by an Elasticsearch database with an extremely powerful search engine also used for geographic parameters. The database and the rest of the underlying architecture have been designed so that they can be physically distributed. This safeguards a future growth path by several orders of magnitude. Finally, the Viz Social Backend manages the whole infrastructure and

contains all intelligence, with the Viz Social frontend providing parallel web access over simultaneous sessions.

Below are example workflow drawings for a Trio and a DataHub solution.

Note: These are only examples, the exact workflow is client-specific.



In these set-ups the role of Viz Social is the collection, moderation and selection of relevant social data and to initiate or trigger the playout. DCS mediates and translates the triggers in instructions for Viz Media Sequencer while uploading attachments to the appropriate shared folders.

DCS can be configured to control one or more Viz Media Sequencer devices, which appear as possible format destinations in Viz Social.

2.3 Application

In practice, Viz Social is a web application allowing users to manage social media content for TV production or to feed other broadcast or online events with social data.

Information: Support for Chrome, Firefox, and Safari are for the latest version only.

Internet Explorer, Opera and other browsers are not supported. Viz Social's Publish module can be installed as an iPad App for TV presenters for live publishing of interesting posts or aggregated Formats such as Polls. Viz Social cannot be accessed via smartphones.

2.4 Workflow And Stories

Viz Social works with a well-defined workflow, consisting of three steps: **Gather**, **Build** and **Publish**. Each of these phases corresponds with a dedicated module within the Viz Social application. The fourth module called **Analyze** monitors the data flows and provides statistics.

Before entering the workflow, users must select an existing Story to work on or decide to create a new Story. This can be done on the Story Overview page, which is the first page after logging in. Via this screen, new (empty) Stories can be created and existing ones can be entered, renamed or deleted. After having selected an existing Story the user enters the Gather module.

Stories	Owner
Tennis (1.43k messages, 5 active searches, 0 paused searches, 1 format, 0 reports)	aselill
Formula1 (40.6k messages, 0 active searches, 4 paused searches, 2 formats, 1 report)	aselill
Morning show (26.1k messages, 1 active search, 1 paused search, 1 format, 0 reports)	aselill
Soccer (0 messages, 0 active searches, 0 paused searches, 0 formats, 0 reports)	peterpan
Golf (7.68k messages, 4 active searches, 0 paused searches, 1 format, 2 reports)	peterpan

Create new Story

2.5 System Management

Everywhere in the UI the system status is displayed in the right top corner of the UI via four traffic lights that can each be either **red**, **orange** or **green**. The lights indicate the status of:

1. Access to external APIs.
2. Internal message processing.
3. Storage and queuing.
4. Publication.

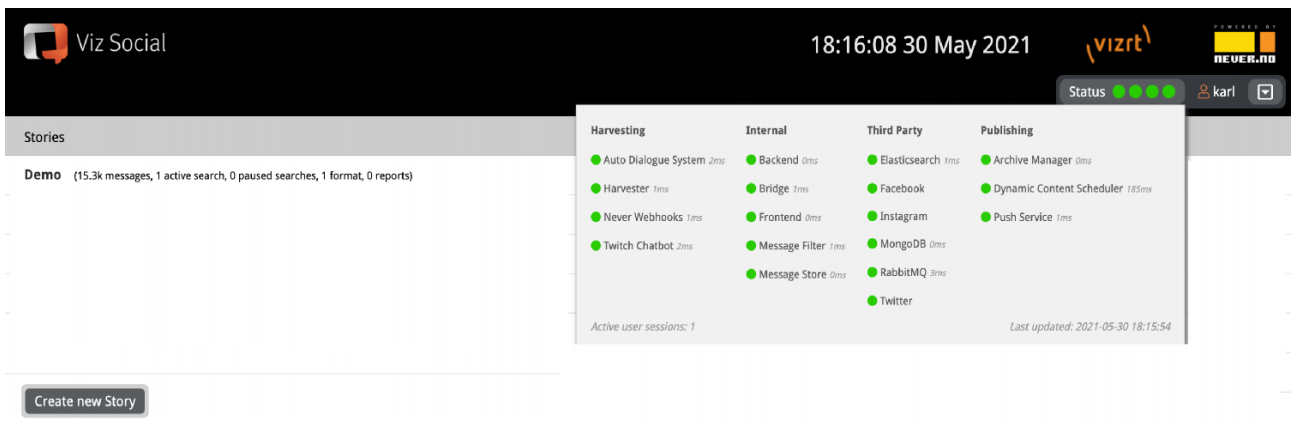
2.5.1 Status Overview

Green means everything is OK, **orange** means a temporary or non-critical issue has occurred and **red** signals a persistent or critical problem.



2.5.2 Detailed Status Overview

When clicking on the status overview, a more detailed, per-component overview is shown.



For several of the components, it's possible to access an even more detailed process overview by clicking on them. Under normal operations it's not necessary to monitor this; it's mostly useful for troubleshooting by support personnel.

3 Gather

Gather helps social media managers to create Searches from various social sources, based on keywords, hashtags, lists, pages, and users, against which various additional Filters can be applied.

Choose a social channel in the left column, fill in the relevant search terms in the middle column and after saving the Search, the right column shows a preview of collected posts so far. Gather provides the capability to create, set-up, and test all social Searches well in advance of the production itself so that sufficient time is left to gather data of the right quality or to further gauge the feeds.

The screenshot displays the Viz Social interface. At the top, the time is 11:01:58 on 30 May 2021. The interface is divided into three main sections:

- Left Column (Searches and Buckets):** Lists various search categories with their respective counts:
 - Players (609)
 - rogerfederer (404)
 - rafaelnadal (205)
 - ATP Tour (1.03k)
 - #atptour (300)** (highlighted in orange)
 - #atptour (1) (50)
 - And the winner will be... (685)
- Middle Column (Search Configuration):** Shows the configuration for the selected search:
 - Search type: Term search (low volume, incl history)
 - Twitter account: None
 - Retrieve Tweets containing: #atptour
 - Start by retrieving the: 300 most recent posts
 - Advanced options: This search was created on 30 May 2021 at 10:57. It will stop when 20000 posts have been harvested or on 9 Jun 2021 at 10:57, whichever comes first. It will harvest at most 100 posts per 60 seconds. Limits can be modified or removed in the "Advanced" tab.
 - An **Update** button is visible at the bottom right of this section.
- Right Column (Incoming feed):** Displays a list of tweets from the search:
 - TennisSection @Tennis_Section: Roland Garros 2021: Alexander Zverev vs. Oscar Otte Tennis Pick and Prediction on TennisSection! Read Now! #RolandGarros #French-Open #atptour #atp #zverev #otte #oscarotte #alexanderzverev #bettingtips #tennisprediction #tennispick #tennispreview #tennis tennissection.com (278) 10:29:45 30 May 2021
 - TennisSection @Tennis_Section: Roland Garros 2021: Stefanos Tsitsipas vs Jeremy Chardy Tennis Pick and Prediction on TennisSection! Read Now! #RolandGarros #French-Open #atptour #atp #chardy #tsitsipas #jeremychardy #stefanostsitsipas #tennisprediction #tennispick #tennispreview #tennis tennissection.com (279) 10:29:15 30 May 2021
 - TennisSection @Tennis_Section: Roland Garros 2021: Dominic Thiem vs. Pablo Andujar Tennis Pick and Prediction on TennisSection! Read Now! #RolandGarros #French-Open #atptour #atp #andujar #thiem #dominictiem #pabloandujar #aljazbedene #tennisprediction #tennispick #tennispreview #tennis tennissection.com (280) 10:28:45 30 May 2021
 - TennisSection @Tennis_Section: Roland Garros 2021: Roberto Bautista Agut vs. Mario Vilella Martinez

3.1 Search Management

All Searches can be managed via their drop-down arrow on their right.

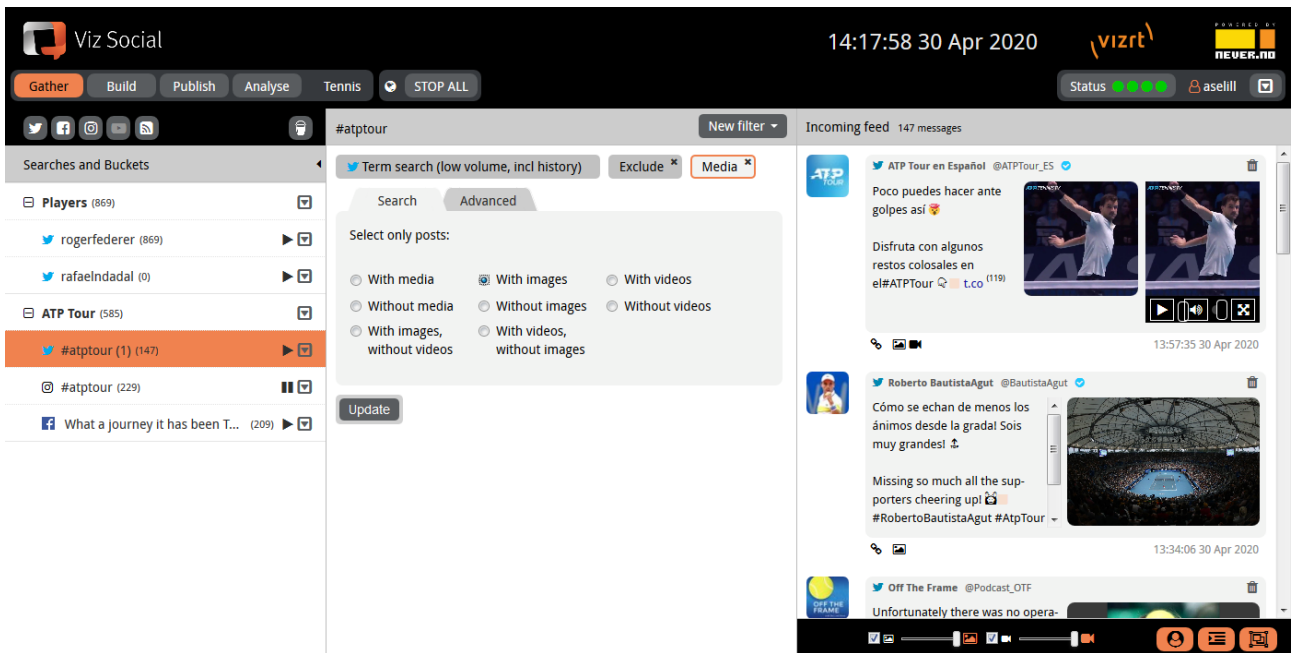
The screenshot displays the Viz Social application interface. At the top, the time is 14:17:28 on 30 Apr 2020. The interface is divided into several sections:

- Navigation Bar:** Includes buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', and 'STOP ALL'. There is also a 'Status' indicator and a user profile 'aselill'.
- Searches and Buckets:** A sidebar on the left lists various searches and buckets, including 'Players (868)', 'ATP Tour (585)', and '#atptour (1) (147)'. The '#atptour (1) (147)' search is currently selected and highlighted in orange.
- Search Configuration Panel:** A central panel for configuring the selected search. It shows:
 - Search:** 'Term search (low volume, incl history)' with an 'Exclude' option.
 - Advanced:**
 - Limit volume:** Checked, with 'Max volume' set to 20000 posts.
 - Schedule start:** 'Start search on' set to 30-04-2020 00:00.
 - Limit duration:** Checked, with 'Stop search' set to 'in 10 days' and 'at 09-05-2020 17:34'.
 - Limit rate:** 'Retrieve at most' set to 100 posts/interval and 'Search interval' set to 60 seconds.
- Incoming feed:** A right-hand panel showing a list of tweets related to the search. The first tweet is from '@ATPTour_ES' with the text 'Poco puedes hacer ante golpes así' and a video thumbnail. The second tweet is from '@BautistaAgut' with the text 'Cómo se echan de menos los ánimos desde la gradal Sois muy grandes!'. The third tweet is from '@Podcast_OTF' with the text 'Unfortunately there was no opera-'. Each tweet has a context menu icon (three dots) to its right.

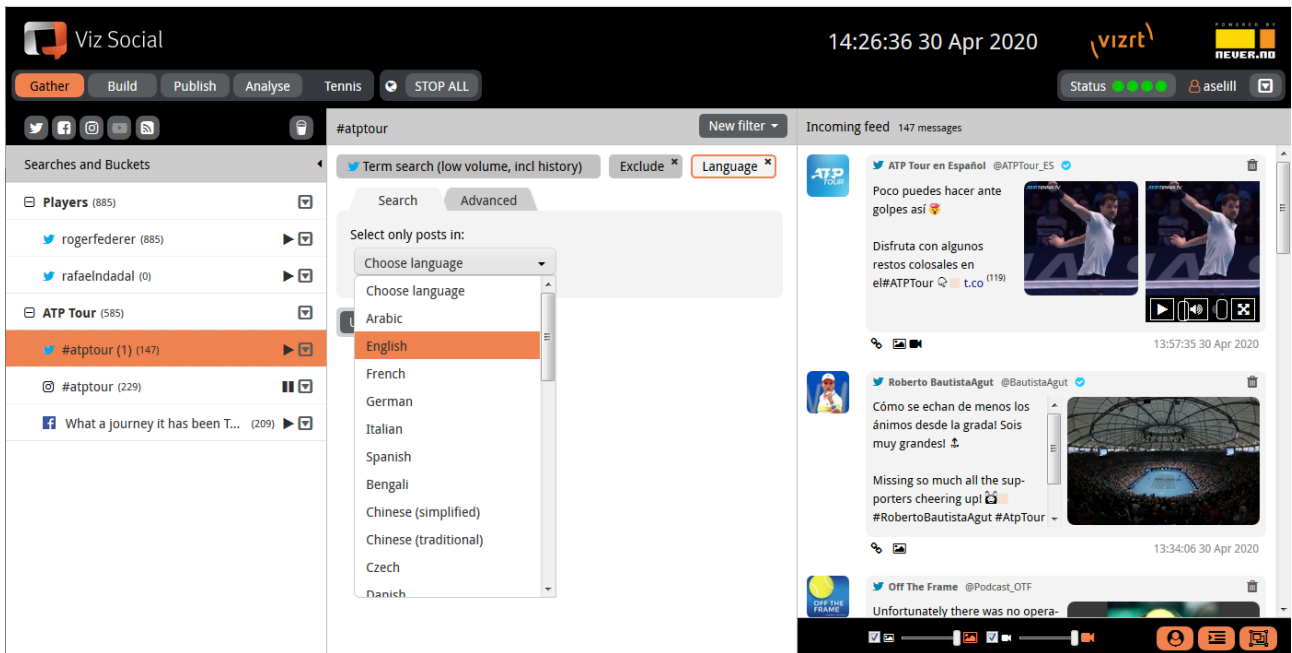
Static functions like renaming, flushing, removal, cloning and grouping are available, just as dynamical pause/play functions. Paused Searches are put on hold and stop harvesting posts until they are put into play mode again. The play/pause status of each post is indicated just left of its context menu. Searches can be re-ordered via drag and drop.

Existing search parameters can also be modified, but please be aware that the new parameters only apply to posts harvested after having saved the modifications. Hence, the preview might still show some old results.

The context menu of Searches and Groups also offers an export function. When selected, all posts collected in that Search or Group are exported on the Viz Social server and made available for download. This happens asynchronously so the user can continue working while this takes place and is notified when the material is ready for download. Links become available under the Archive Manager in the Status menu and remain active for about an hour. Exported data consists of one or more .csv or .json files, zipped into a single archive.



In the left column, Searches can be combined into Groups by using the group function in the context menu. This also works for Searches from totally different social channels. This way social Groups can be formed that, for example, harvest similar information on a variety of social media. Group objects can be collapsed and expanded as if they were folders.



The **Refresh** button helps to make sure that one looks at the latest harvested posts. The right-hand column continuously refreshes when being scrolled downwards (a feature of all lists/previews in Viz Social). Posts in the right column display picture and video previews where relevant.

Inappropriate posts can be deleted immediately by clicking on the wastebasket button in the right top corner. Please keep in mind that deleted posts are removed immediately from all Formats that

use the Search as input. More sophisticated tools and functions to manage posts are available in the Publish module.

3.2 Advanced Settings

Each Search is equipped with a second tab labeled **Advanced**. Under this tab are universal quota and scheduling parameters. To improve manageability and to prevent that forgotten Searches continue to consume system resources unnecessarily, all Searches are by default constrained both in volume as well as in time. In other words, each Search has a default maximum number of posts and a maximum time to run. The end time can be either an absolute moment or a relative one, measured from the start of the Search. Viz Social provides default settings (configurable per installation) that are the same for all Searches, independent of their origin.

The screenshot displays the Viz Social interface. At the top, there's a navigation bar with 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', and 'STOP ALL'. The current search is '#atptour'. The 'Advanced' tab is selected, showing an 'Exclude' button and a text input field containing 'covid-19'. Below this, there are 'Clear', 'Sort', 'Export', and 'Import...' buttons. A note states: 'The lists size may affect the maximum throughput. If you are in need of a long list of prohibited words (>30) for a high incoming volume (>10 posts/sec), please consider setting up an Exclude View in Publish.' There are also checkboxes for 'Also exclude' options: Retweets, Quoted tweets, Replies, and Sensitive tweets. The right side shows the 'Incoming feed' with tweets from 'TennisSection' about Roland Garros 2021 matches.

Some search options are based on periodic polling by Viz Social and have a default polling interval set at 60 seconds. This can be modified on a Search-by-Search basis, which allows users to decrease the end-to-end latency and puts users in charge of resource consumption. When needed, low traffic Searches can be assigned a low frequency and high traffic ones can be polled more frequently.

This applies to:

- All Twitter Searches.
- All Facebook Searches.
- All Instagram Searches.

Viz Social users always remain in control of their Searches because all quota can be changed or even disabled freely. When a Search is paused because it has reached one of its quotas, then the paused state is indicated in **red** instead of black. As soon as the limiting factor is taken away, the

Search can be run again. For Searches that use REST Query-Response APIs, users can also limit the speed of incoming posts, where any surplus is ignored.

In addition to limiting Searches in volume, time and speed, the **Advanced** tab also allows Searches to be scheduled to start at an arbitrary moment in the future (and stay in a **red** paused state until then).

3.3 Filters

Often a Search for a term or a hashtag is insufficient for finding exactly what one is looking for. For further drilling down, all Searches can be extended with one or more Filters. The set of available Filters depends on the functional capabilities of the corresponding social API, so it differs from channel to channel. Adding or changing a Filter is equivalent to modifying an existing Search, so the effects are only visible after the modification has been saved.

Filters always work cumulatively, so effectively they always narrow the data pipe. A Filter description is given along with the description of each social Search type.

Filters are added by choosing them from the **Filters** dropdown menu. Active Filters are shown as floating elements at the top of a Search. The floating elements act as toggles: clicking them once expands the Filter, while clicking them again collapses it again (while remaining active). Filters can be removed from a Search by clicking the delete symbol in their right top corner.

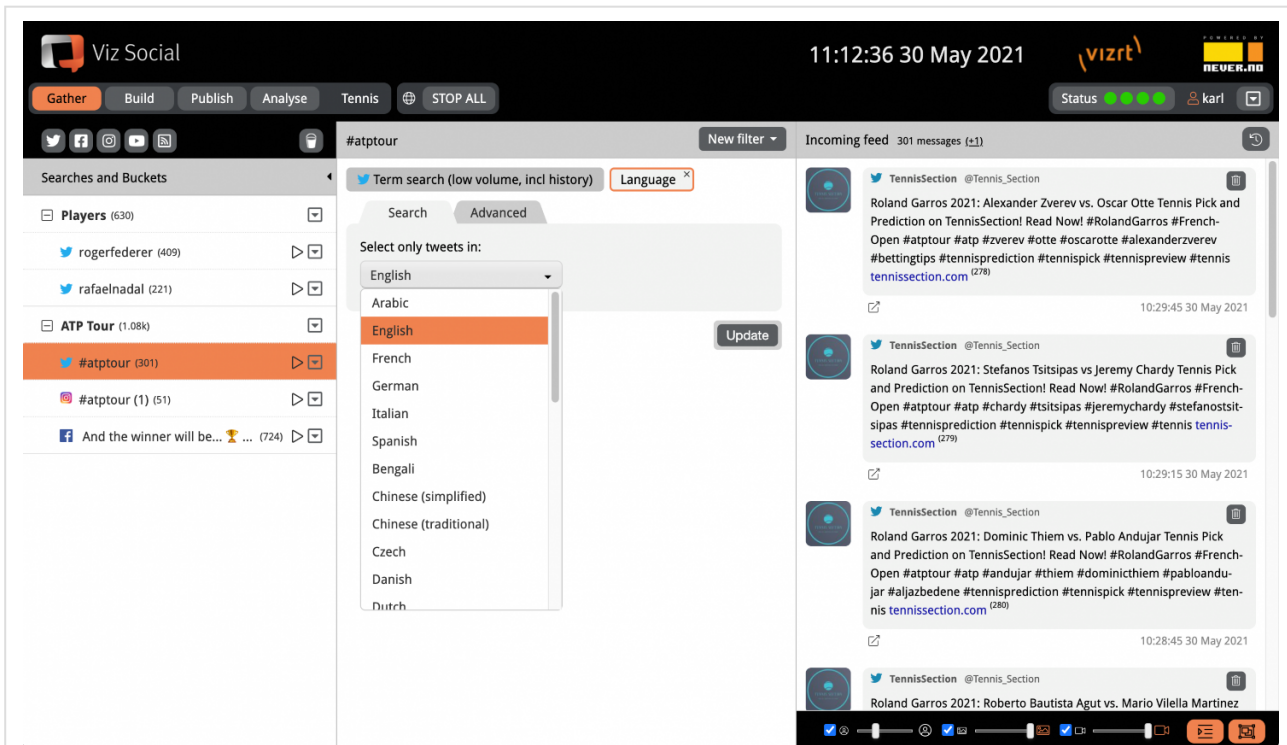
Twitter Search with a Media Filter

The screenshot displays the Viz Social interface for a Twitter search. The search term is '#atptour' and a 'Media' filter is applied. The search settings are as follows:

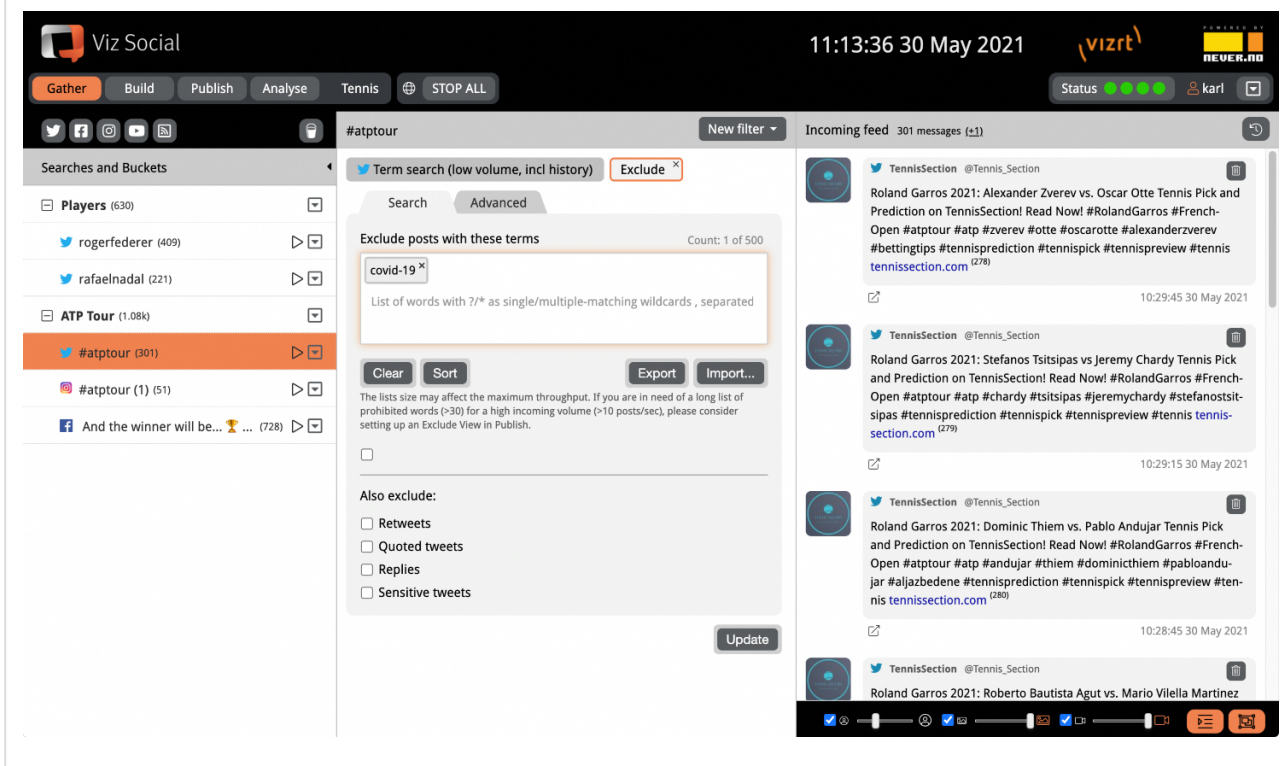
- Search Type: Term search (low volume, incl history)
- Filter: Media
- Select only posts:
 - With media
 - With images
 - With videos
 - Without media
 - Without images
 - Without videos
 - With images, without videos
 - With videos, without images
- This search was created on 30 May 2021 at 10:57.
- This search will stop when 20000 posts have been harvested or on 9 Jun 2021 at 11:14, whichever comes first.
- This search will harvest at most 100 posts per 60 seconds.
- Limits can be modified or removed in the "Advanced" tab. Twitter not only matches terms and #hashtags with the content of Tweets but also with the names / aliases of their authors.

The search results are shown in the 'Incoming feed' on the right, featuring tweets from users like Mary (@onemarymarks) and TennisSection (@Tennis_Section). The search is scheduled to start on 30 May 2021 at 10:57.

Twitter Search with a Language Filter



Twitter Search with an Exclude Filter



Filters come in two categories: specific filters and generic filters. The former category contains those filters that differ from Search type to Search type or social network to social network. An example is the language filter that is only available for Twitter Searches. Specific filters correspond

to API parameters that can be set in the requests to the social network and this implies that posts that do not satisfy the relevant filter criterion are not sent to Viz Social and do not burden the platform.

Generic filters on the other hand are universal across all Search types and are activate on Viz Social itself. As a result, posts that are filtered out by generic filters still eat system resources, even though they are thrown out of the incoming processing queues.

Generic filters are:

- Search Filter
- Exclude Filter
- Originator Filter
- Media

ⓘ Exception: For the high performance Twitter Search described in [Twitter](#), all Filters except the Originator Filter are specific, for reasons explained in [Originator Filter/Classification](#). This is done because this is a commercial API where users pay per Tweet based on the amount of Tweets sent to Viz Social, so on-platform filtering is considered unfair.

3.3.1 Originator Filter/Classification

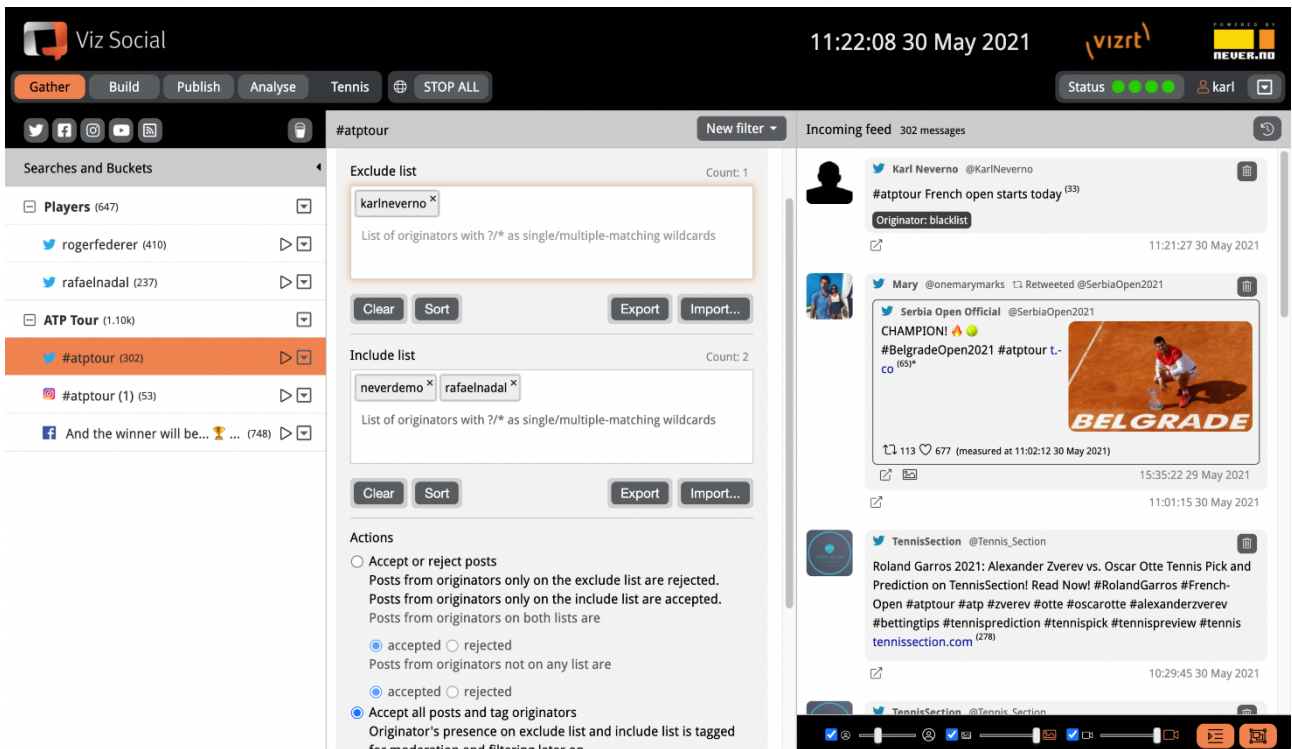
The Originator Filter is a special case of generic filter as it may act as a soft filter (only registering a classification, or as a hard Yes/No measure). The filter offers a Blacklist for users that are suspicious or foul, whose posts must either be rejected or inspected more closely. The filter also offers a Whitelist for users that are known or trusted, whose posts can be let through blindly or only after minimal inspection. Both lists support export and import functions. Entries on each list can either be full names like *barackobama* or *teammessi* or patterns like **hate** or *p?ck*, where *** can be zero or more arbitrary characters and *?* is exactly one arbitrary character.

The screenshot displays the Viz Social interface for configuring filters on the #atptour hashtag. The top navigation bar includes buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', and 'STOP ALL'. The main interface is divided into three sections:

- Searches and Buckets:** A list of search results including 'Players (639)', 'ATP Tour (1.09k)', and '#atptour (301)'. The '#atptour (301)' bucket is selected.
- Filter Configuration:**
 - Search:** 'Term search (low volume, incl history)' with 'Originator' selected.
 - Exclude list:** 'karlneverno' (Count: 1). Description: 'List of originators with ?/* as single/multiple-matching wildcards'. Buttons: 'Clear', 'Sort', 'Export', 'Import...'.
 - Include list:** 'neverdemo', 'rafaelnadal' (Count: 2). Description: 'List of originators with ?/* as single/multiple-matching wildcards'. Buttons: 'Clear', 'Sort', 'Export', 'Import...'.
 - Actions:**
 - Accept or reject posts**: Posts from originators only on the exclude list are rejected. Posts from originators only on the include list are accepted. Posts from originators on both lists are accepted.
 - accepted** **rejected**: Posts from originators not on any list are
- Incoming feed:** A list of tweets related to the #atptour hashtag, including a tweet from 'Serbia Open Official' and two tweets from 'TennisSection'.

Under the Black and Whitelists the user can decide how the system should handle the lists and what actions it must undertake:

- By default, the filter is a hard boolean that works like any other filter of Viz Social: It decides whether to accept or reject each post. This means it rejects all posts from originators that appear only on the Blacklist and it accepts all posts from originators that appear only on the Whitelist. The user can decide for him/herself what to do with each of the edge cases (originators that appear on both the Whitelist (default: accept) and the Blacklist and originators that appear on neither the Black nor the Whitelist (default: accept)).
- The filter can also be turned into a soft one, whereby no decision is taken, and all posts are passed on, independent of the Black/Whitelisting of their originators. If this option is selected, then posts are only tagged to classify the White/Blacklist registration of their originators. These system tags are indicated in black and cannot be removed via the normal tag functions in Publish. Further down the line this information can then be used to select different processing paths of these post categories.



3.4 Anatomy Of A Post

Viz Social receives its input from a variety of social sources: Twitter, Facebook, Instagram and RSS/Atom. To give a unified view and experience, each message is normalized when it enters the system. The picture below shows an explanation of the elements that form a normalized post.



Users can select which attachment(s) is/are displayed per post via the attachment icons at its bottom. Linked YouTube videos are shown via their own icon. Please be aware that YouTube content can be shown in browsers via links, but that the creation of physical copies for broadcast display or rendering is prohibited by YouTube’s user license.

Geo-tagged posts are labelled with a small geo-indicator in their footer. Clicking on it opens a small map that shows from where the post originates.




The length of the message is always shown right at the end of the message text. Please note that:

- The message on screen can be slightly shorter than the real message length because URL compression is used on screen (*t.co* links for Twitter for example). The count that is shown in blue at the end of each message text, always shows the real message length.
- For embedded structures the message length refers to the element that will be published. This means that for Retweets, the message length is the length of the original, retweeted Tweet, while for Quoted Tweets it is the length of the quoting Tweet.

3.4.1 Twitter-specific Enhancements

On Twitter people engage with each other through Retweets, Quotes and Replies (often in nested ways, sometime many levels deep). Therefore Viz Social displays Retweets and Quotes in a nested way, including their original context where possible.

Twitter Retweet

 **Karl Neverno** @KarlNeverno  Quoted @atptour

The official start of summer #atptour [twitter.com](https://twitter.com/atptour) ⁽⁶¹⁾

ATP Tour @atptour 

Today, it begins 🎾

Here we go, #RolandGarros
 [t.co](https://t.co/74) ^{(74)*}



 155  1.20k (measured at 11:49:34 30 May 2021)

08:03:22 30 May 2021

 11:45:21 30 May 2021

Twitter Quote

 **Vladimir Petrovic** @Vlada1959  Replying to @TennisTV

@TennisTV @Djoker-Nole Congratulations on winning this superbly organized tournament #Belgrade-

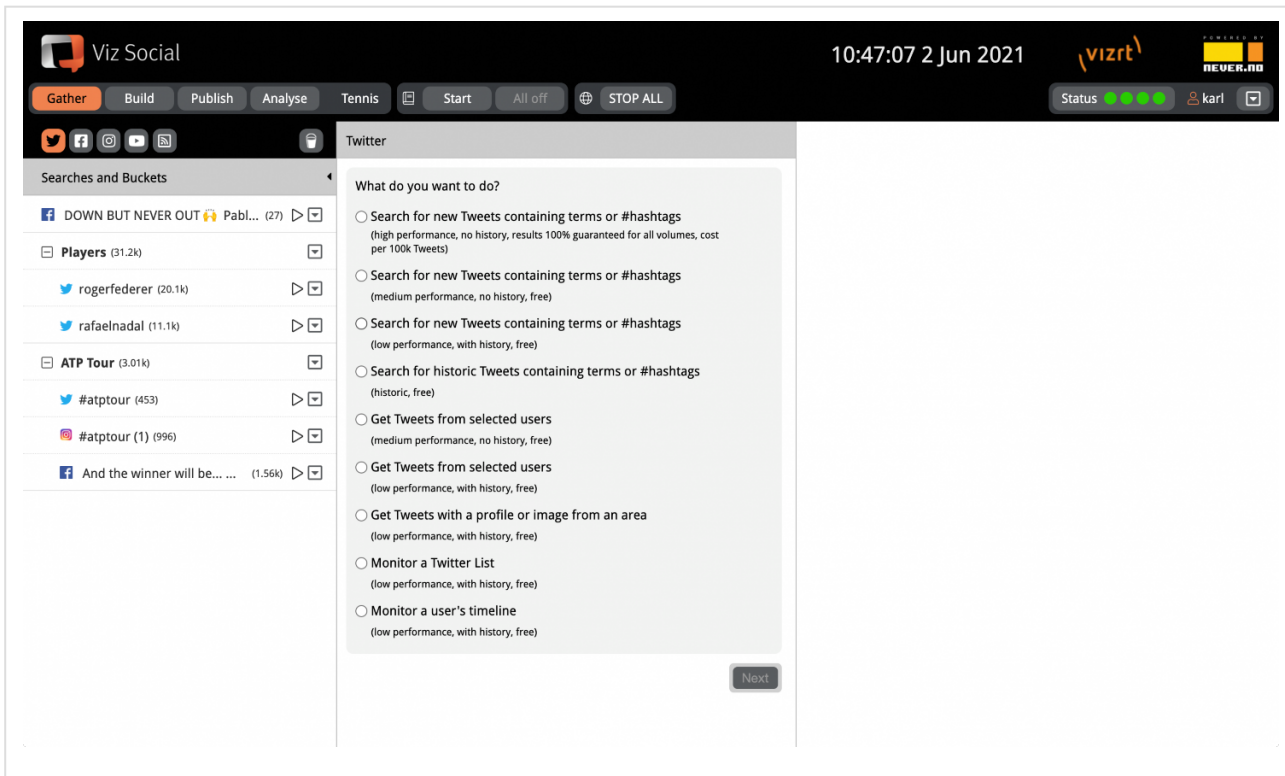


 0  1 (measured at 10:57:28 30 May 2021)

07:15:44 30 May 2021

Twitter Reply



It's important to understand the difference between Quote and a Retweet: a Quote consists of a Tweet with some extra text and is a completely new Tweet in itself. A Retweet is a repeat of the same Tweet with a different originator and does not have extra text. Replies can be shown as such and do have a context but it's not possible to embed/display the original Tweet (as is done for Retweets and Quotes). The **Fetch original** function in the context menu of Tweets allows users to retrieve the original of a Retweet, Quote or Reply, so that exchanges can be tracked all the way back to their original source.

Additionally, there is a switch in the footer of the middle and right Carousel columns in Publish to allow users to toggle between the flat and the nested visualizations. This switch offers users the possibility to see the information as it is published by Viz Social (which is the flat one).

3.5 Social Channels

For each social channel, selecting their icon in the top left corner starts a Search. A series of options is given to further guide the user in how to search. The set of options depends on the social channel and the capabilities of the underlying API.

This section contains information on the following topics:

- [Authentication](#)
- [Twitter](#)
- [Instagram](#)
- [Facebook](#)
- [YouTube](#)
- [WhatsApp](#)
- [Telegram](#)

- External Feeds
- Buckets
- Cloning Searches

3.5.1 Authentication

To comply with Facebook and Twitter’s login and security requirements, it is necessary that someone first authenticates in Viz Social before any Facebook, Instagram or Twitter Search can be set up.

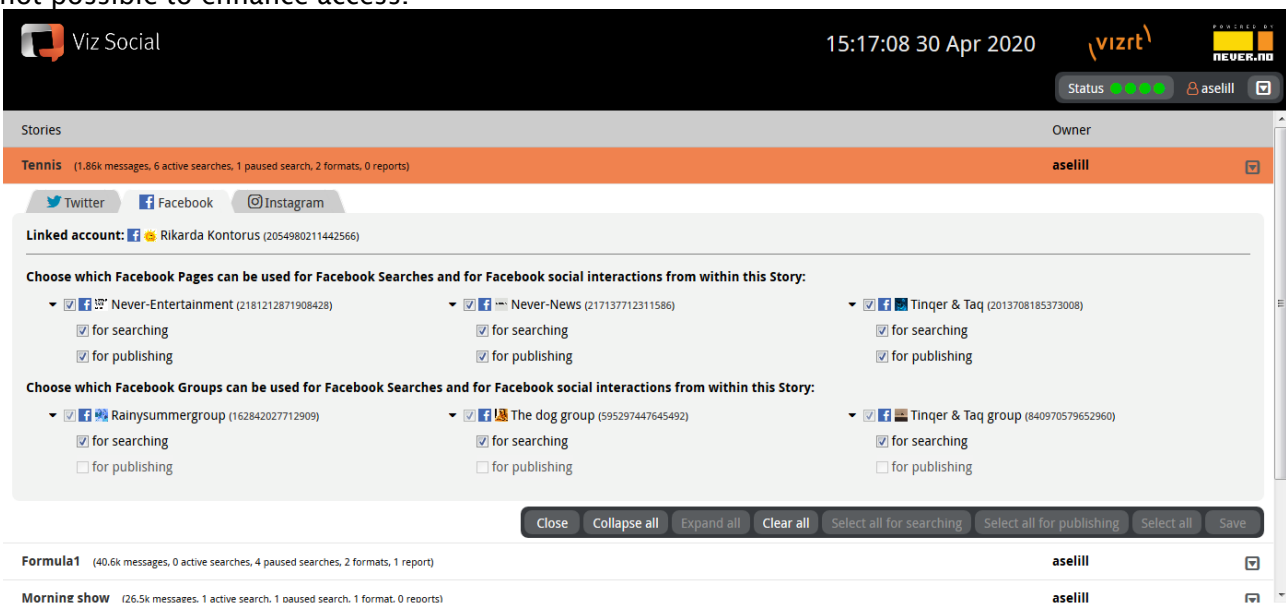
The authentication logic on Viz Social can operate in two modes:

- Global, in which there is a single authenticated Facebook and Twitter account for all Stories on the whole installation,
- Local, in which a separate authenticated Facebook and Twitter account is used for each Story.

Prior to authentication, search options that require authentication are always disabled and a login option is offered.

Global Access Control

In global mode the authorization during the first login procedure is used in all Stories and for everyone on the Viz Social installation. Administrators see an enable option **Manage social accounts** in their context menu in the right top corner. When this option is selected, a page opens where the administrator can further narrow down which Pages/accounts are made available in Gather (*for searching*) and in Publish (*for social reactions*). It is only possible to further restrict and not possible to enhance access.



On the Story Overview page, the exact same pages/accounts are available for administrators and for the owner of each Story. This gives admins and owners the option to narrow down access rights per Story. Here one can only further restrict and not enhance what has already been allowed on installation level via login.

Local Access Control

Access control in Local mode works exactly like in Global mode, except that Page/Account access is managed per Story and not per installation. So, there is no option to set social accounts via the context menu in the right top corner, but only one on the Story overview page. For every new Story Facebook and Twitter login are needed again.

Searches for which the account's permission is withdrawn while running is paused until a new (valid) account is provided for them. The *Manage social accounts* page can also be used for unlinking the authorized Facebook or deleting Twitter account(s).

Facebook and Instagram Authentication

To receive access to their social data, Facebook and Instagram require you to have a:

- a Facebook Page.
- a role on that Page.
- an Instagram business account.

After Facebook login via Viz Social, the Facebook Pages that the authenticated user manages become available for use in the Facebook Searches. For this reason, it is important that the authenticated Facebook user has been granted sufficient permissions by the Facebook Page owners.

The Instagram account has to be a business account connected to the Facebook page. For more details about this see, [Connecting Instagram Business Accounts](#).

Before the login process is completed, all Facebook/Instagram Search options are disabled and only the Facebook login button is enabled. Selecting this option leads the user through the login procedure which results in the registration of one or several Facebook pages and Instagram accounts if Instagram is being used.

If there is an active Facebook session in the same browser (you are logged into Facebook), it is assumed you are logging in on behalf of that identity. To use another user, log out of Facebook in the browser first on facebook.com.

Click the **Login** button to start authentication process.

Facebook

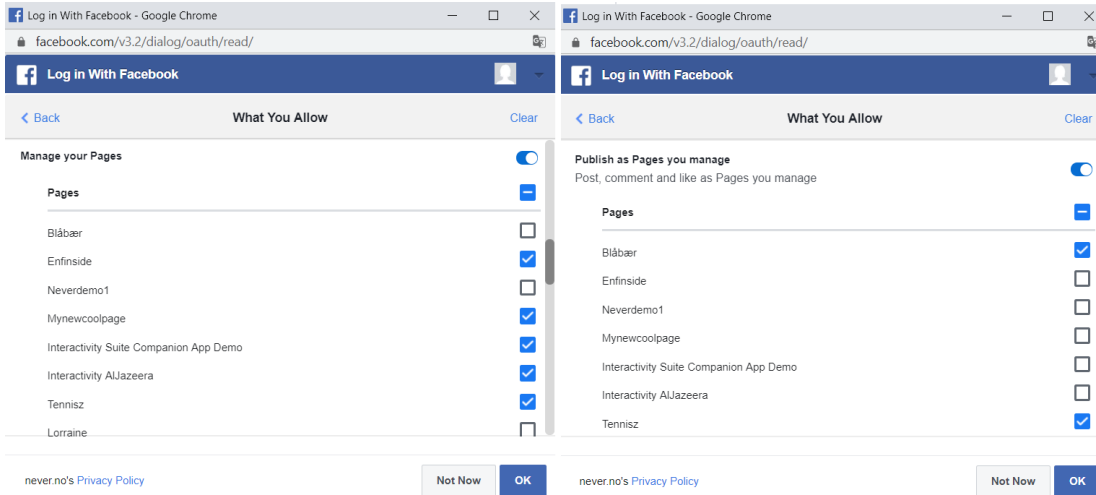
What do you want to do?

- Retrieve Comments under a Post on a Facebook Page
- Retrieve Posts on a specific Facebook Page
- Retrieve Comments under a Post in a Facebook Group
- Retrieve Posts from a Facebook Group

Next

 Login with Facebook

After having authenticated with Facebook, the user can select which of the Pages and linked Instagram business accounts he/she manages, should become available within Viz Social. Independent permissions can be set for collecting (in Gather) and for publishing (in Publish) on a Page by Page basis.

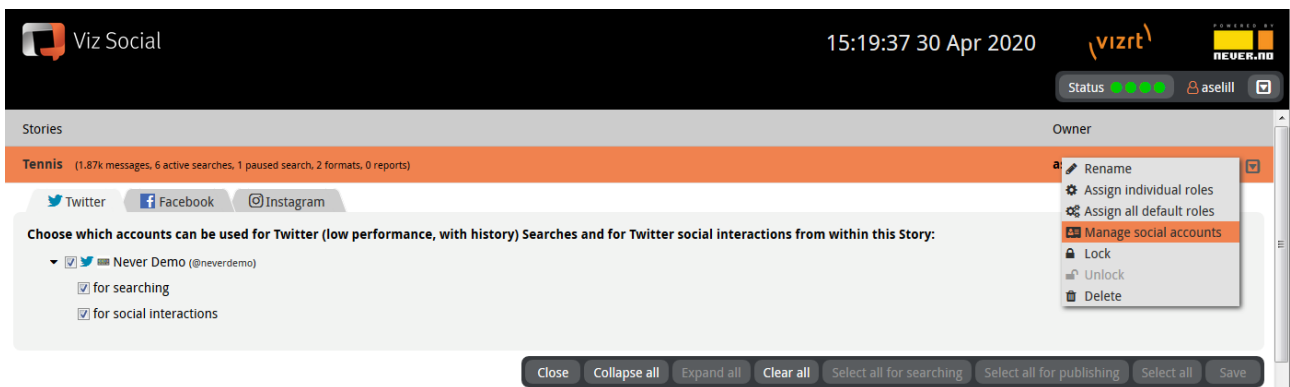


After this procedure, all Facebook and Instagram Search options are available again.

Twitter Authentication

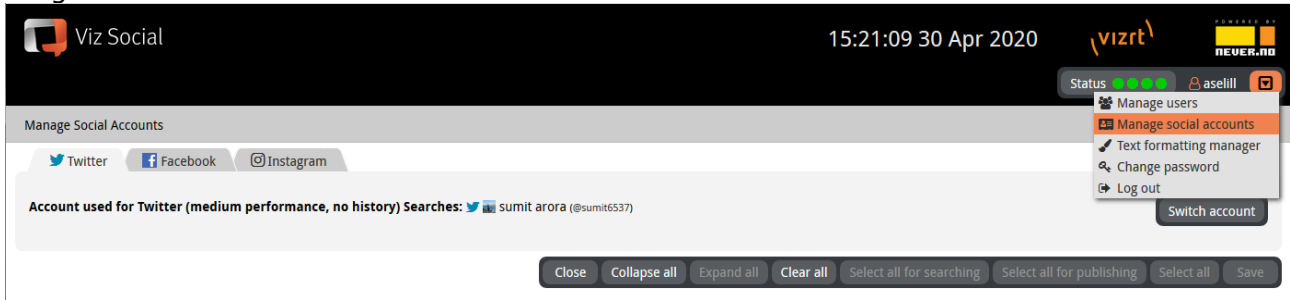
Before the first Twitter Search is set up, all Twitter Search options are disabled and only the Twitter login button is enabled. Selecting this option leads the user through the Twitter login procedure which results in the registration of a Twitter account.

After the first Twitter account has been authenticated, additional account can be added via the Manage Social Accounts menu. If there is an active Twitter session in the same browser (you are logged in on Twitter), it is assumed you are logging in on behalf of that identity. To use another user, log out of Twitter in the browser first on twitter.com.



One account (usually the oldest) is also assigned to the 'medium performance, no history' Searches. This type of Searches only needs a single system-wide Twitter account and its assignment does not affect the account in any way, so its selection is completely arbitrary. By default, Viz Social uses the first Twitter account registered on the platform, but another one can be

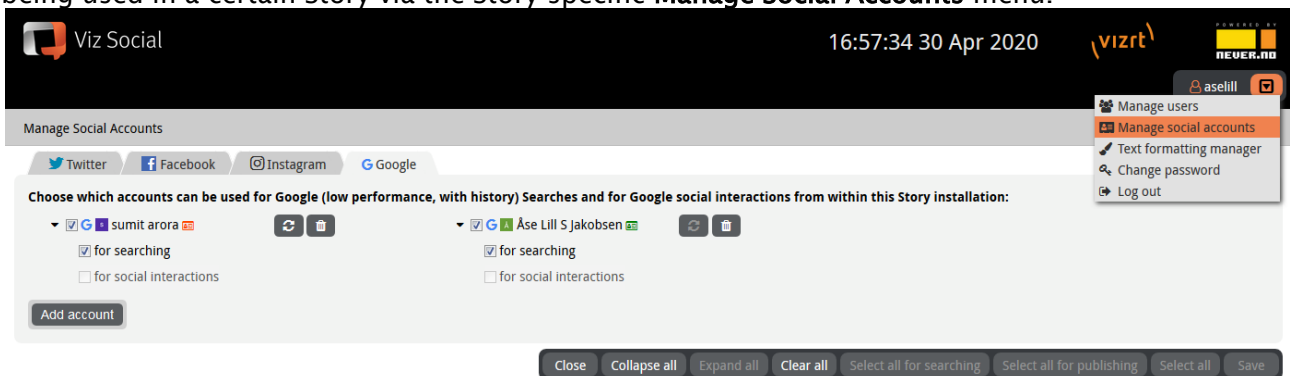
assigned via the **Switch account** button.



Google Authentication (for YouTube)

Google Login is always administered system wide, so it only needs to be done once per installation, and the authenticated YouTube user is subsequently available within all Stories on the platform.

Admins can add additional authenticated YouTube-users to the system via the system-wide **Manage Social Account** menu. It is also possible to prevent registered YouTube accounts from being used in a certain Story via the Story-specific **Manage Social Accounts** menu.



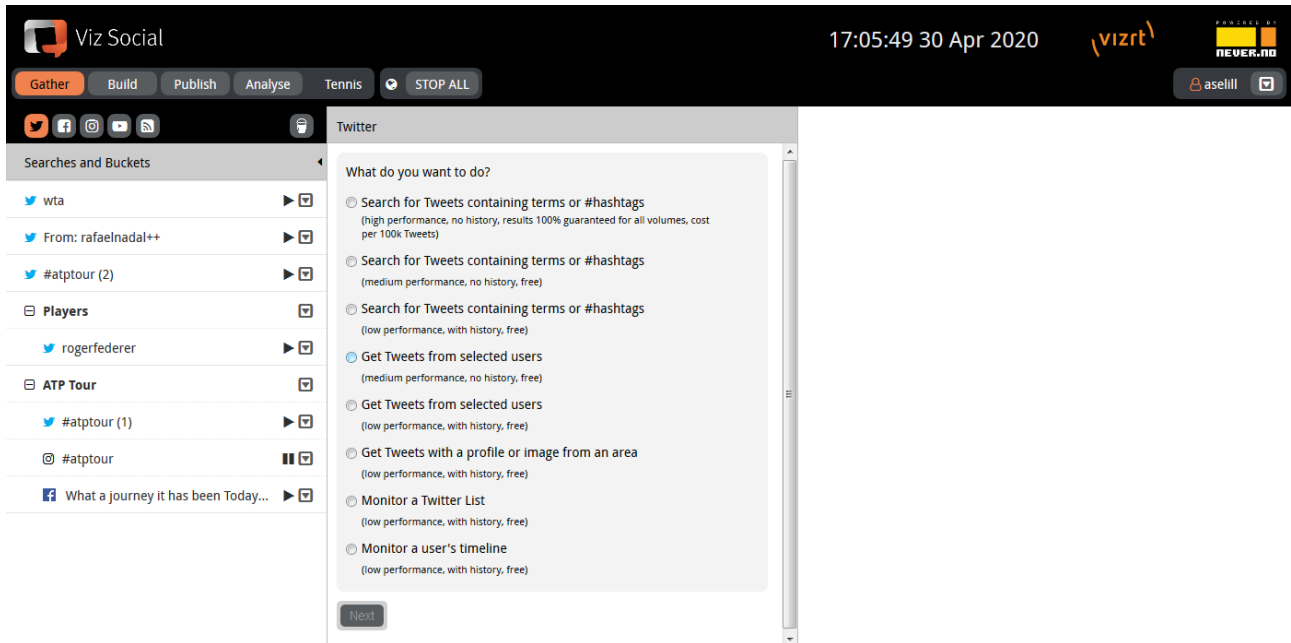
Note: Google must grant your YouTube account the permission to stream first. The procedure for requesting this is explained here: <https://support.google.com/youtube/answer/2474026?hl=en>. It usually takes 24 hours to be granted the requested permission.

3.5.2 Twitter

The Twitter section supports various Search options:

- The *Term or Hashtag Search*, which comes in three flavors:
 - *High volume, no history, results 100% guaranteed for all volumes, cost per 100k Tweets* : Based on Twitter's/Gnip's Powertrack API.
 - *Medium volume, no history, free* : Based on Twitter's Streaming API.
 - *Low volume, with history, free* : Based on Twitter's REST API.
- The User Monitor, which comes in two flavors:
 - *Medium volume, no history, free* : Based on Twitter's Streaming API.
 - *Low volume, with history, free* : Based on Twitter's REST API.
- The List Monitor, *Low volume, with history, free*: Based on Twitter's REST API.

- The Twitter Moment Monitor, **Low volume, with history, free**: Partly based on Twitter's REST API.
- The Timeline Monitor, **Low volume, with history, free**: Based on Twitter's REST API.
- The Tweet Monitor, **High volume, without history, cost per tracked account** : Based on Twitter's Account Activity API.



The advantage of the Twitter Search API over Twitter's Streaming API is that the former allows one to (also) look back into the history (at most seven days and no more than 10.000 Tweets). The disadvantage is that Twitter does not guarantee completeness of the response and gives no specific logic why some Tweets are returned and others not. The Twitter Streaming API is complete (up to its rate limit) but is not able to take in any Tweets from before it was set-up.

According to the Twitter rules, all requests must be issued on behalf of a Twitter account. All registered Twitter accounts are available for use in the 'low volume, with history' Twitter Searches.

From a functional perspective the choice of Twitter account in a Search is not relevant. However, Twitter assigns each account its own quota, so using multiple accounts is a method to increase bandwidth and to avoid congestion.

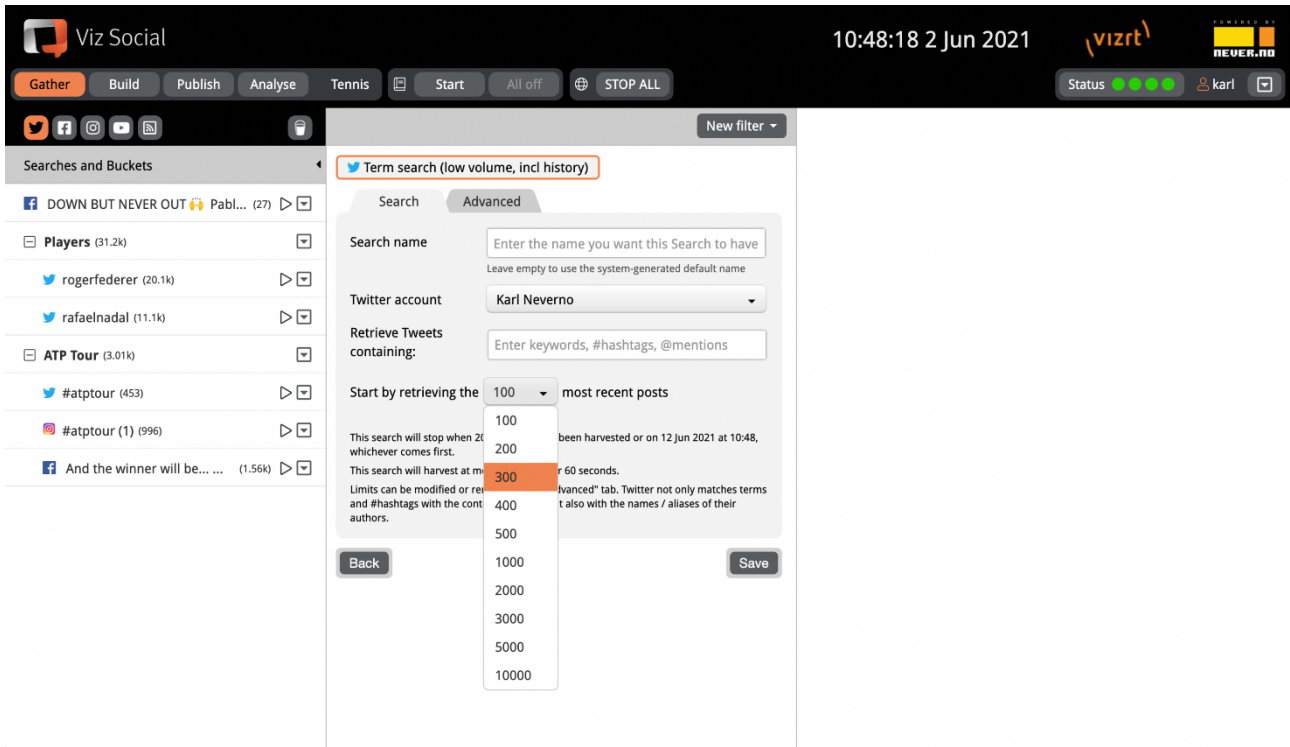
Twitter Term Search (low volume, with history, free)

The Twitter Term Search (low volume, with history, free) queries Twitter for Tweets in the recent past containing the search pattern. Search terms can contain #hashtags, @mentions or just separated words. When multiple terms are separated by a space a logical AND is applied. When multiple terms are separated by a comma a logical OR is assumed. Alternatively, "AND" and "OR" themselves (in capitals) can be used as well. The number of historical posts to begin with can be selected from the dropdown list.

By default, the Query is executed once per minute, but it is possible to query more or less often on the advanced tab. The default interval of 60 seconds translates into an average end-to-end latency of 30 seconds and a maximum one of 60 seconds. This is sufficient to cover almost all use cases. Lower frequencies free up resources at the cost of an increased latency. Higher frequencies

decrease latency at the expense of resources (which translates in a reduced number of parallel Searches).

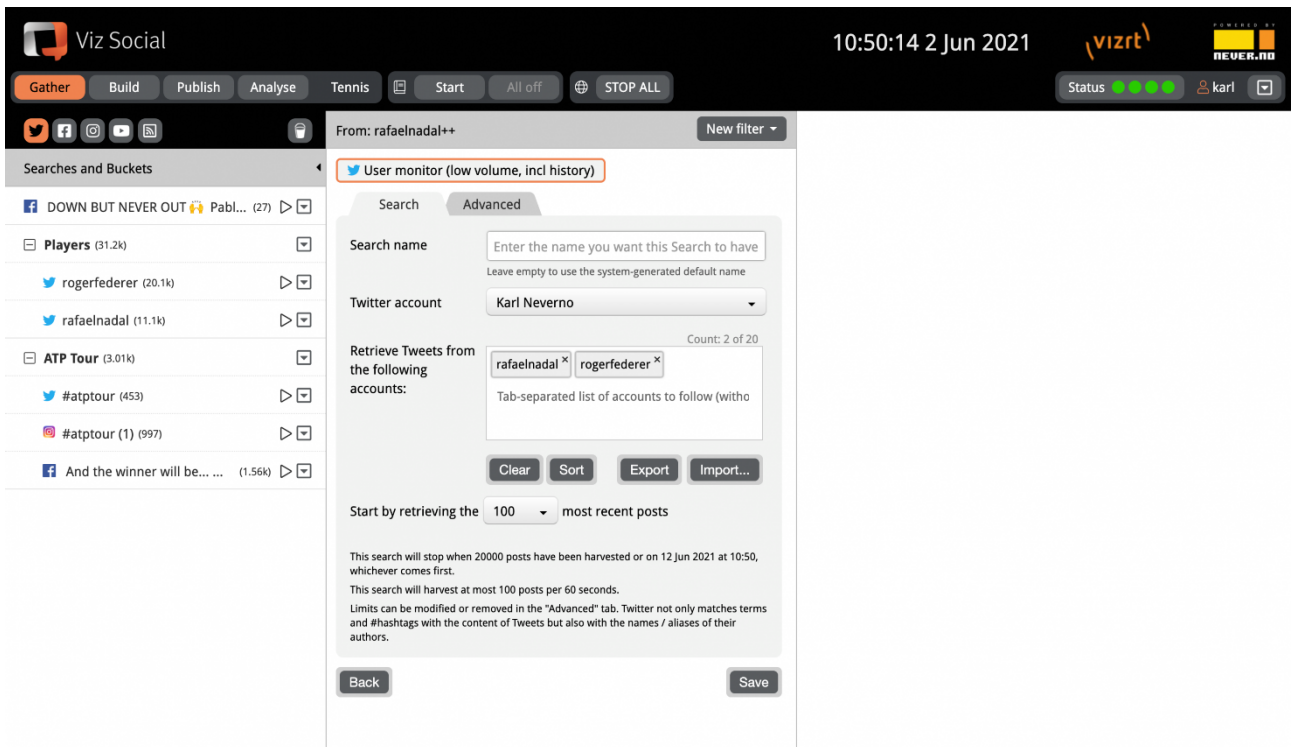
Note: It is recommended to first do a sanity check together with Vizrt support before changing these values.



User Monitor (low volume, with history, free)

The Twitter User Monitor (low volume, with history, free) tracks the Tweets from the specified Twitter users. Apart from one or more monitored accounts, no further input is necessary. At most 20 Twitter accounts can be tracked in a single Search.

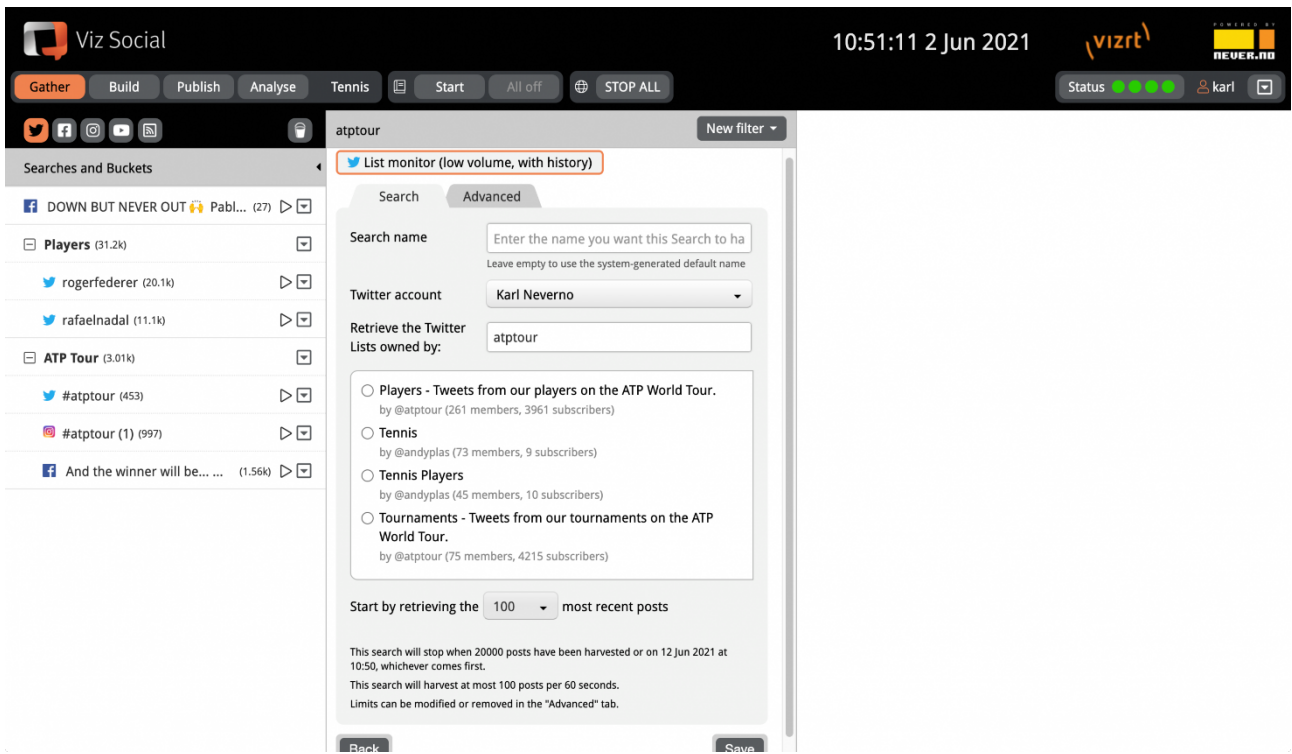
The Search frequency can be set for this Search as well. The same considerations as in the [Low volume Twitter Term Search](#) apply.



List Monitor (low volume, with history, free)

The Twitter List Monitor (low volume, with history, free) queries Twitter for Tweets on a particular Twitter List. The set-up of this Search a two step process: First, the list owner is requested, which is then used by Viz Social to find all Twitter Lists owned by this user. The user can then choose which list to be monitored.

The Search frequency can be set for this Search as well. The same considerations as in the [Low volume Twitter Term Search](#) apply.



Timeline Monitor (low volume, with history, free)

The Twitter Timeline Monitor (low volume, with history, free) queries Twitter for Tweets originating from a certain account, including Retweets, Quoted Tweets and Replies.

The Search frequency can be set for this Search as well. The same considerations as in the [Low volume Twitter Term Search](#) apply.

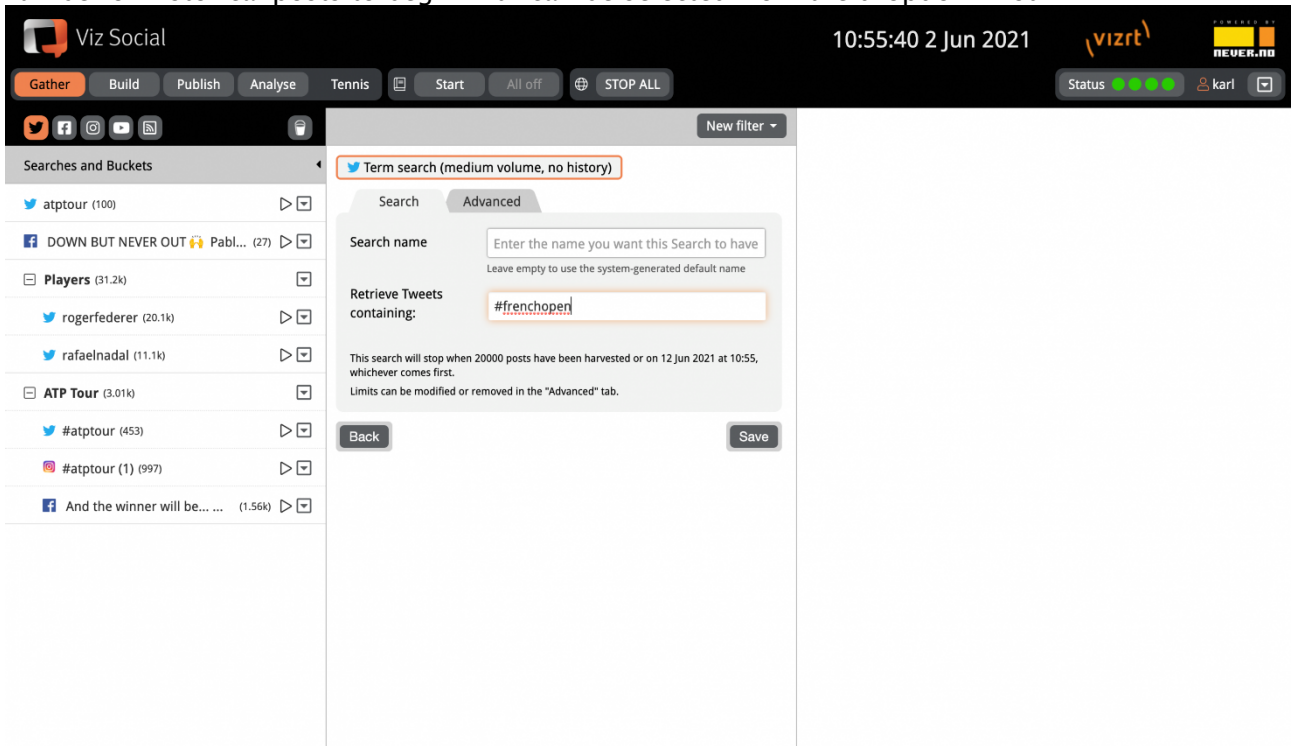
The screenshot displays the Viz Social interface. At the top, the time is 10:53:23 on 2 Jun 2021. The user is logged in as 'karl'. The main navigation bar includes 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', 'Start', 'All off', and 'STOP ALL'. The 'Searches and Buckets' sidebar on the left lists several searches, with 'atptour (100)' selected. The main search configuration panel shows a 'Timeline monitor (low volume, with history)' search for the Twitter account 'Karl Neverno', retrieving tweets and replies by 'atptour'. The search is set to start by retrieving the 100 most recent posts. The 'Incoming feed' on the right shows several tweets from the ATP Tour (@atptour), including headlines about Roland Garros and Djoker Nole's performance.

Term Search (medium volume, no history, free)

The Twitter Term Search (medium volume, no history, free) queries Twitter for Tweets in the recent past containing the search pattern. In contrast to the low volume Search, it does not return historic Tweets to start with, so it starts harvesting posts the moment it is activated. On the other hand, it has a significantly higher capacity and guarantees completeness of the results as long as its rate limit isn't crossed (see [Volume and volume Limits](#)).

Search terms can contain #hashtags, @mentions or just separated words. When multiple terms are separated by a space a logical AND is applied. When multiple terms are separated by a comma a logical OR is assumed. Alternatively, AND and OR themselves (in capitals) can be used as well. The

number of historical posts to begin with can be selected from the dropdown list.



User Monitor (medium volume, no history, free)

The Twitter User Monitor (medium performance, no history, free) tracks the Tweets from the specified Twitter users. Apart from one or more monitored accounts, no further input is necessary. At most, 500 Twitter accounts can be tracked in a single Search.

In contrast to the low volume Search API, it does not return historic Tweets to start with, so it starts harvesting posts the moment it is activated. On the other hand, it has a significantly higher capacity and guarantees completeness of the results as long as its rate limit isn't crossed (see

Volume and Performance Limits).

Term Search (high-performance, no history, cost per 100k Tweets)

The high-performance Twitter Firehose Term Search offers access, at a volume dependent cost, to the Twitter Firehose where all tweets worldwide are being published. Setting up Searches via this channel guarantees completeness of the harvested tweets satisfying a certain Search pattern, irrespective of the volume. This way all chatter around massive events like the Oscars, the Super Bowl or the Eurovision Song Contest can be tracked and processed. In addition, the Twitter Firehose is useful for contests where the legal obligation exists to prove that literally **all** relevant Tweets after a call-to-action are captured before prizes/winners are drawn.

Searches on Twitter's Firehose use the same syntax as other Twitter Searches.


i Example:

- searching for '*cat dog*' or '*cat AND dog*' returns all Tweets containing both '*cat*' and '*dog*'
- searching for '*cat OR dog*' returns all Tweets containing '*cat*' or '*dog*'
- searching for '"*cat dog*"' returns all Tweets containing '*cat dog*'
- ~ means NOT, so search for *cat ~dog* returns results that contain *cat* but not *dog*.
 - Extra rule 1: to keep search volumes within reasonable limits, it is not allowed to solely search for an exclusion. For instance, searching for *~dog* would return all Tweets that do not contain *dog*, which is an extremely high volume.
 - Extra rule 2: for the same reason, it is not allowed to search for an exclusion combined only with ORs. For instance, *cat OR ~dog* would return all Tweets containing *cat*, or not *dog*, or both. Again, an extremely high number.

- (and) are parenthesis to modify the order in which operands are executed. This is a form of nesting and there is no limit to the nesting level as long as the search string remains syntactically correct (mostly that all parentheses must come in pairs).
 - For instance, searching for cat dog OR duck (which is the same as searching for (cat dog) OR duck because the operands are executed from left to right) returns results containing either both cat and dog, or duck (or both).
 - Whereas searching for cat (dog OR duck) returns results containing cat and either dog or duck (or both).

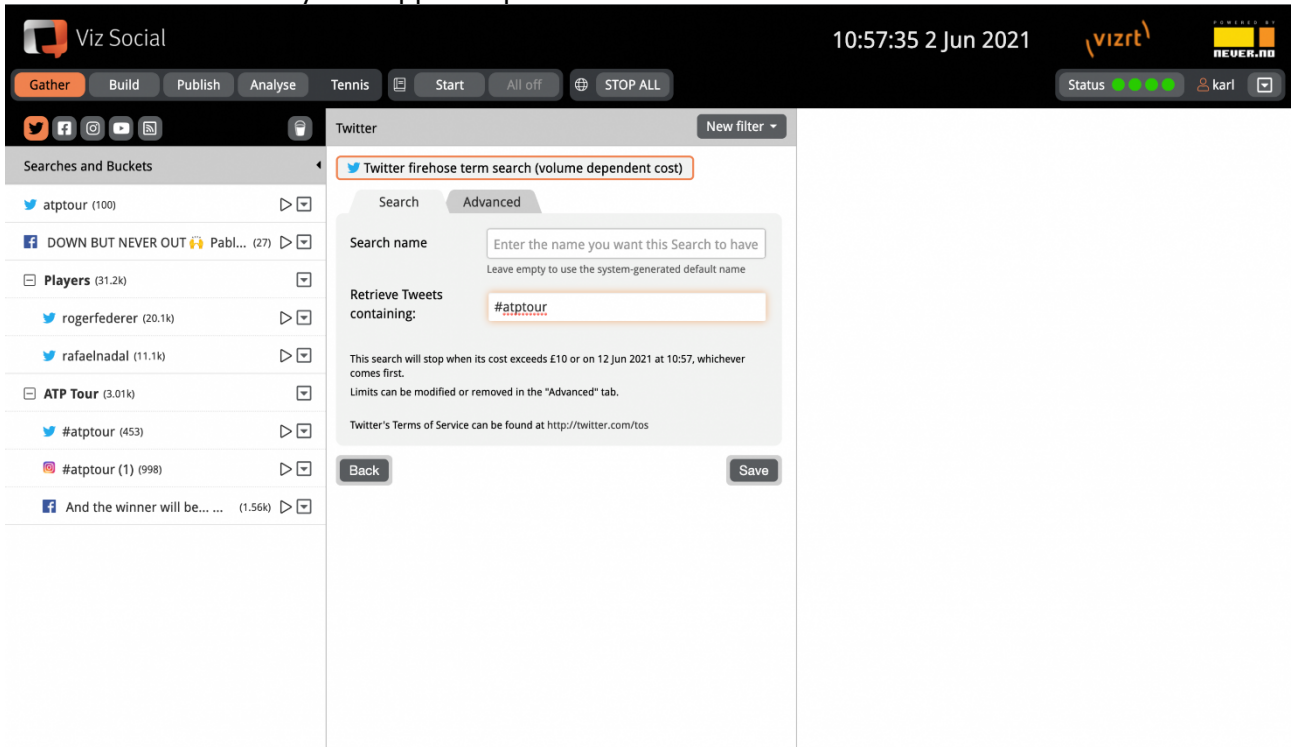
The current cost for each Search is shown in the left column of Gather. In the **Advanced** tab, a maximum cost for the Search can be configured. The monthly total cost for the overall server is shown in the status menu in the top right corner.

To prevent bill shock situations where high volume Searches unintentionally lead to enormous and unexpected costs, search queries only containing one of the most frequently used words (so-called *stop words*) are not allowed. If you need to find a phrase that contains a stop word, either pair it with an additional term, or use the exact match operators such as "*on the roof*". If there is at least one required allowed term in the query, the whole query is allowed.

 **Note:** The current list of stop words is: *a, an, and, at, but, by, com, from, http, https, if, in, is, it, its, me, my, or, rt, the, this, to, too, via, we, www, you*. Please note that this list is subject to change.

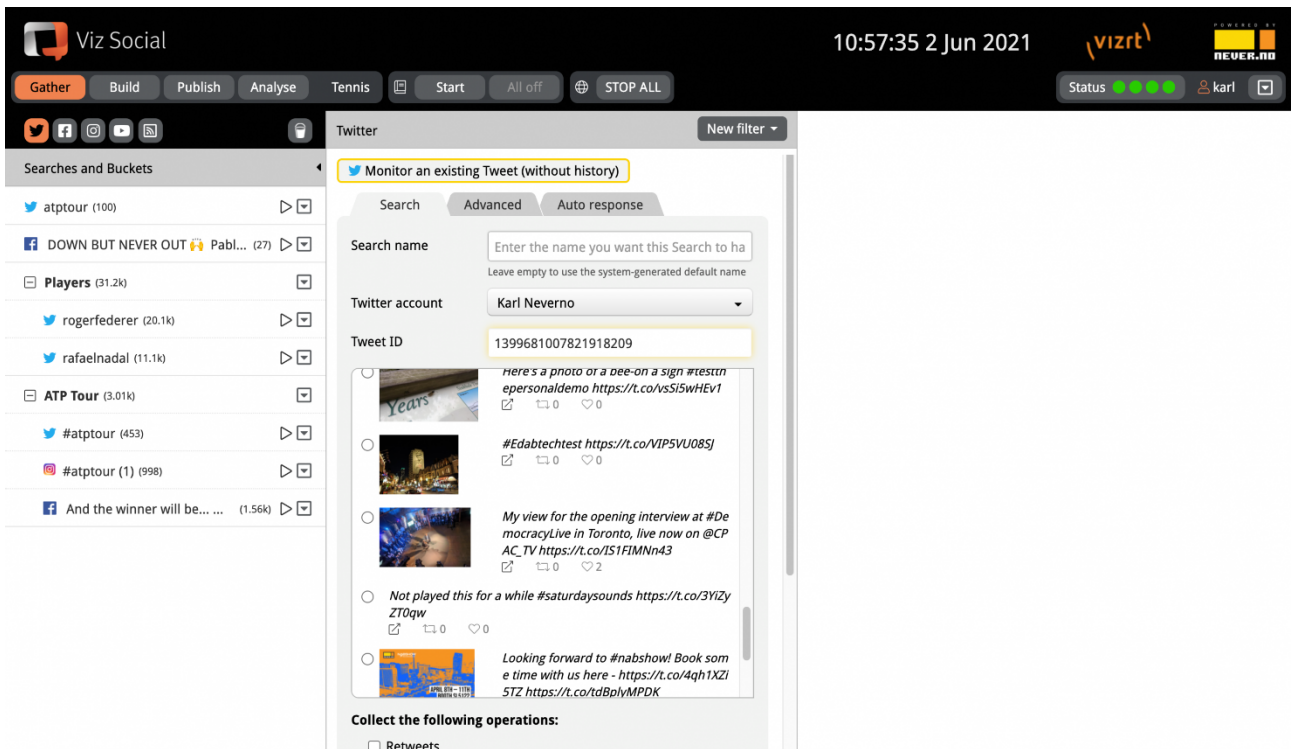
Because of its guaranteed completeness even under the highest of peaks, we advise our customers to consider using the Firehose Search when tracking Twitter during mass events or for competitions that require guaranteed completeness and exactness.

Access to the Twitter Firehose requires a separate commercial license and its access is disabled by default. Please contact your Support representative for further information.



Monitor a Tweet

The Twitter Account Activity API allows users to monitor selective activity related to a specific Tweet. Viz Social supports tracking of a Tweet's likes, retweets, quotes and replies. The user can decide which of these operations need to be tracked on a Tweet-by-Tweet basis. Only Tweets owned by the selected Twitter account can be monitored. Viz Social shows the tracked Tweet as a pinned post at the top of the results and all activities as individual posts below it.



The Search comes in two varieties, labelled respectively **Monitor an existing Tweet** and **Monitoring a new Tweet**. For monitoring an existing Tweet, when owning account has been chosen, Viz Social then offers a list of recent Tweets by that account that the user can choose to monitor. The monitoring starts the moment the Search is created, so it doesn't fetch any operations from before that moment.

For monitoring a new Tweet, the user can compose a new Tweet including attachment which is tracked immediately after its creation.

Retweets, quotes and replies are displayed like they are in other Twitter Searches. Likes appear similar to retweets, except with a heart icon and *liked* instead of a retweet icon and *retweeted*.

Access to the Twitter Account Activity requires a separate commercial license and its access is disabled by default. Please contact your Support representative for further information.

Filters

Supported filtering capabilities for Twitter Searches are:

- Exactly matched, partially matched, regexp matched words/terms (not for Twitter Firehose Searches).
- Exclusion of specific words/terms
- Exclusion of retweets, quoted tweets, replies, likes or sensitive tweets
- Originator white or blacklist
- Min/max number of followers and friends
- Account age
- Verified accounts (Y/N)
- Tweet language (with configurable presets to adjust to local preferences).
- Media (type) presence

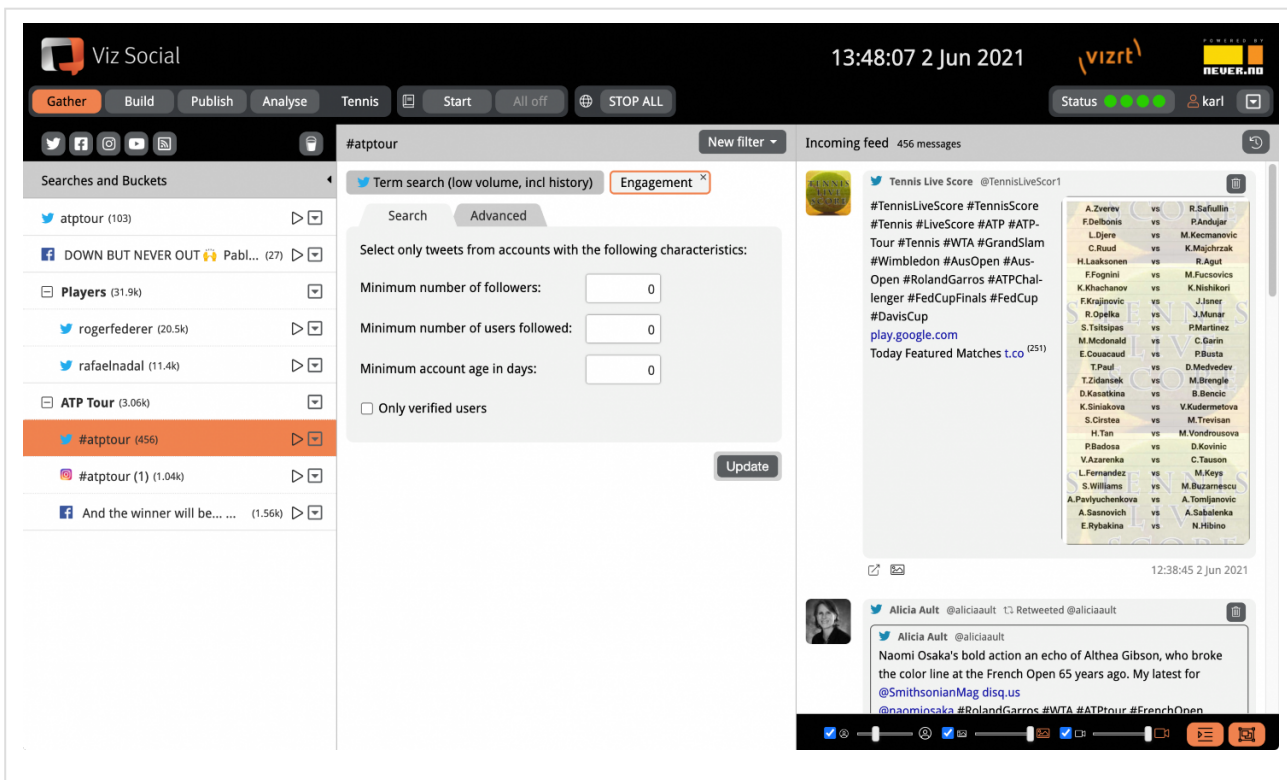
Twitter Term Search with Media Filter

The screenshot shows the Viz Social interface at 11:43:36 on 2 Jun 2021. The user is logged in as 'karl'. The main search bar contains '#atptour' and the filter is set to 'Media'. The search results are displayed in an 'Incoming feed' with 453 messages. The first tweet is from Sportsmatik (@sportsmatik) dated 10:05:53, discussing the top 5 ATP men's rankings. The second tweet is from TennisSection (@Tennis_Section) dated 08:35:11, discussing the Roland Garros 2021 match between Daniil Medvedev and Tommy Paul.

Twitter Term Search with Exclude Filter

The screenshot shows the Viz Social interface at 13:46:54 on 2 Jun 2021. The user is logged in as 'karl'. The main search bar contains '#atptour' and the filter is set to 'Exclude'. The search results are displayed in an 'Incoming feed' with 456 messages. The first tweet is from Tennis Live Score (@TennisLiveScore1) dated 12:38:45, featuring a list of tennis matches. The second tweet is from Alicia Ault (@aliciaault) dated 12:38:45, discussing Naomi Osaka's bold action at the French Open.

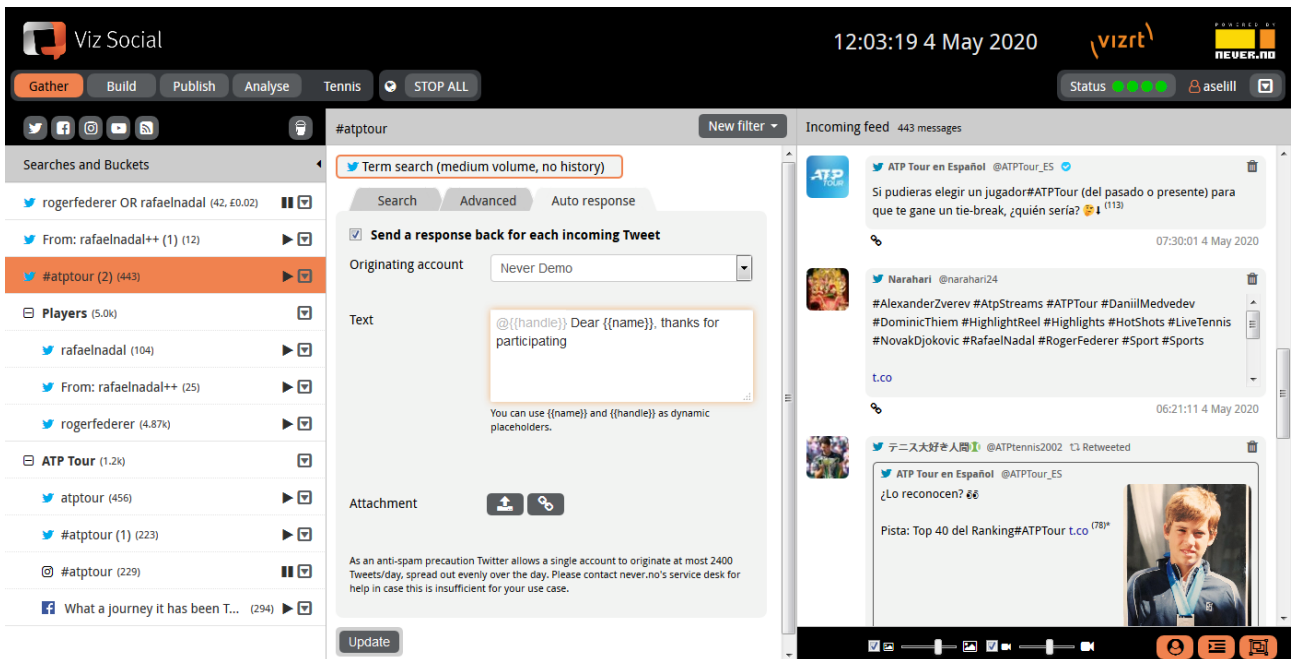
Twitter Term Search with an Engagement Filter



Auto-Response

Viz Social comes with a built-in auto-reply function for all Twitter Searches. Running a social campaign, enables operators to thank their participants and/or to provide them with further information or instructions.

This function is available under the Auto-response tab in Gather for the Term/Hashtag Searches (**Low performance**, **Medium performance** and **High performance**) and the Tweet Monitor (**High performance**). When active, it offers the possibility to send a configurable message back to the originator of each incoming Tweet or tracked Tweet activity. Apart from the message text, an attachment and the originating account of the response can be chosen as well. The response is sent as a reply to the Tweet or, in case of a tracked Twitter like, a mention of the liked Twitter User.



The auto-response function must be specifically enabled by Support staff under separate discussion.

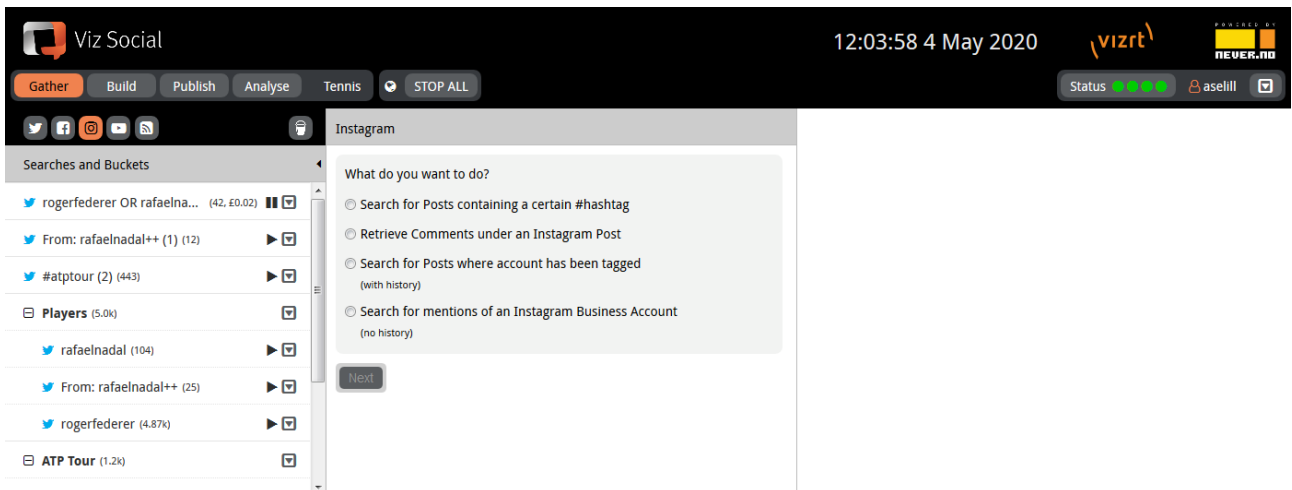
Note: By default each Twitter account can send at most 2400 Tweets per day, so usually an outgoing throttle limit is set to protect Viz Social from being marked as a spamming application.

Contact Support for help approaching Twitter in case these volumes are insufficient for the use case at hand. For certain agreed cases this default limit can be lifted by Twitter.

3.5.3 Instagram

For searching on Instagram four Searches are offered:

1. Hashtag Search
2. Comments Search
3. Search for posts with a tagged account
4. Search for mentions of a business account



According to the Facebook/Instagram rules, an Instagram business account must be used for all Instagram-related interactions with the network. After Facebook login, all registered Instagram accounts connected to one of the authorized Facebook Pages are available for use in the Searches.

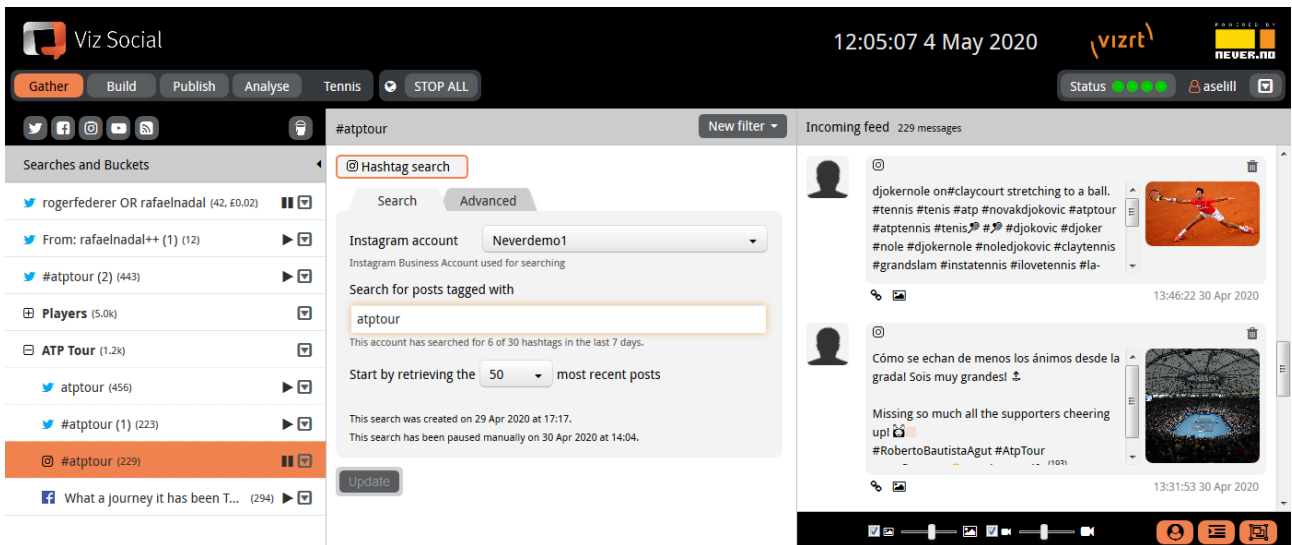
From a functional perspective the choice of Instagram account in the Hashtag Search is not relevant. However, Instagram assigns each account its own quota, so using multiple accounts is a method to increase bandwidth and to avoid congestion.

Hashtag Search

The Instagram #Hashtag Search allows users to search for Instagram content on the basis of a #hashtag. The input for each Hashtag Search is a single #hashtag and the Instagram Business Account used to access the API (selected from the available ones in a dropdown). In addition, users can indicate how many old posts should be retrieved for starters.

The Instagram Business Account is used by Facebook to protect its data against anonymous big data scrapers: every Instagram Business Account can only search for 30 unique #hashtags within a running seven day window. The same #hashtag can be used in Searches as often as one wishes, as long as the total number of used #hashtags over seven days does not exceed 30.

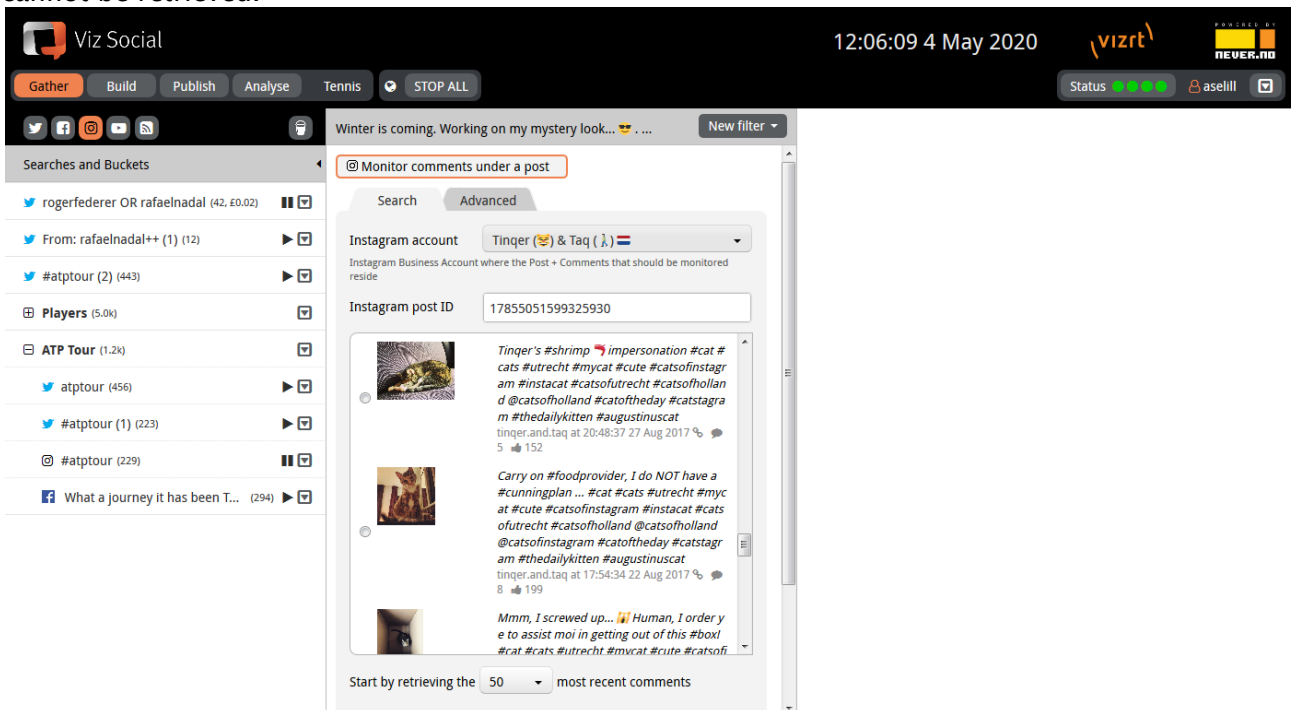
Instagram anonymizes the results of Instagram Hashtag-Searches, meaning avatar and name are not initially shown. In Publish, the blank elements can be fetched on a post by post basis by choosing **update** in the context menu of an Instagram post.



Comment Search

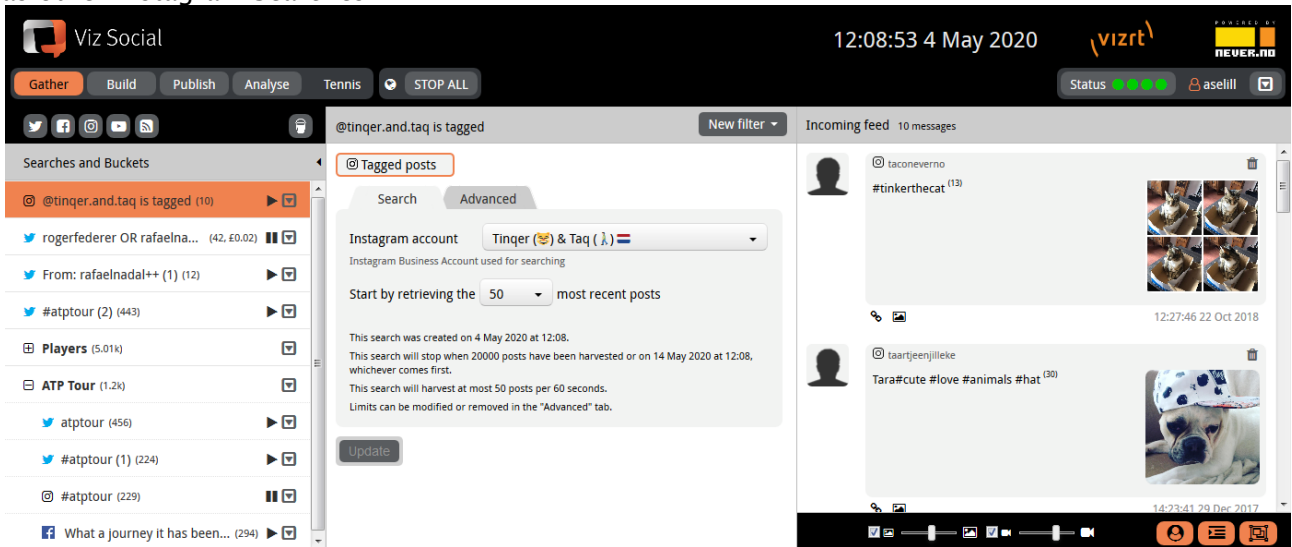
The Instagram Comment Search collects all Comments under a particular Instagram Post. The most important input parameter of this Search is the Instagram Business Account. After selecting it from the available ones in the dropdown, a list of the most recent Posts from that account is presented (scroll downward to fetch more). From that list a Post can be selected, whose Comments are then retrieved.

Comments under Posts that are not owned by one of the available Instagram business accounts cannot be retrieved.



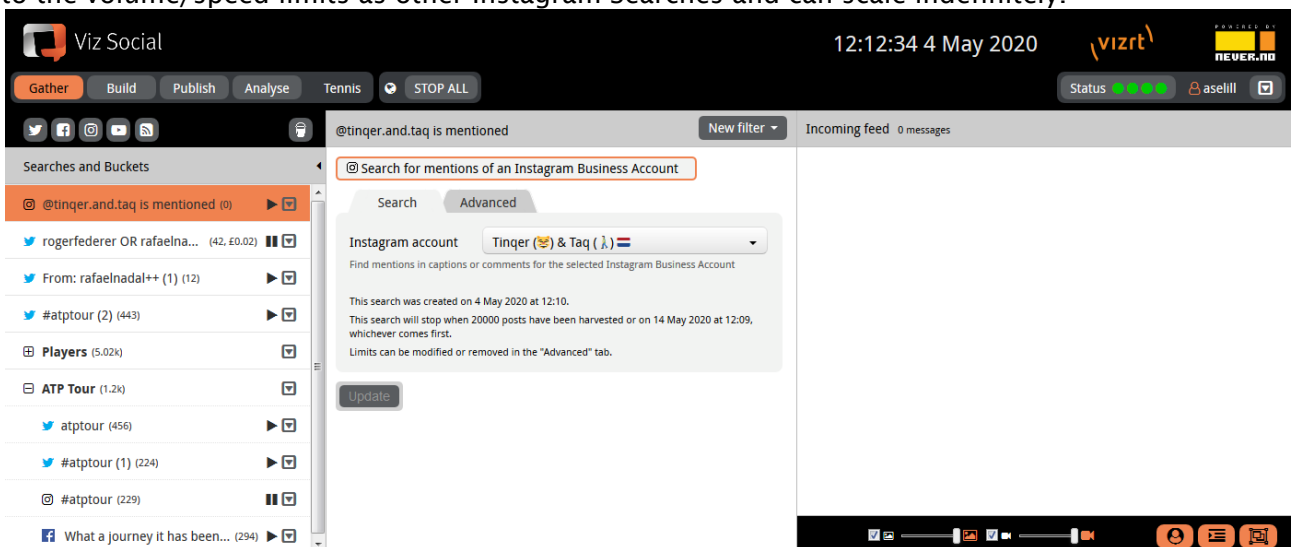
Tagged Account Search

The tagged account search gathers all posts in which the authorized Instagram account is tagged. The input for the search is Instagram account only. This Search offers history, so it starts by collecting old posts that the account was tagged in. It is subject to the same volume/speed limits as other Instagram Searches.



Mention Search

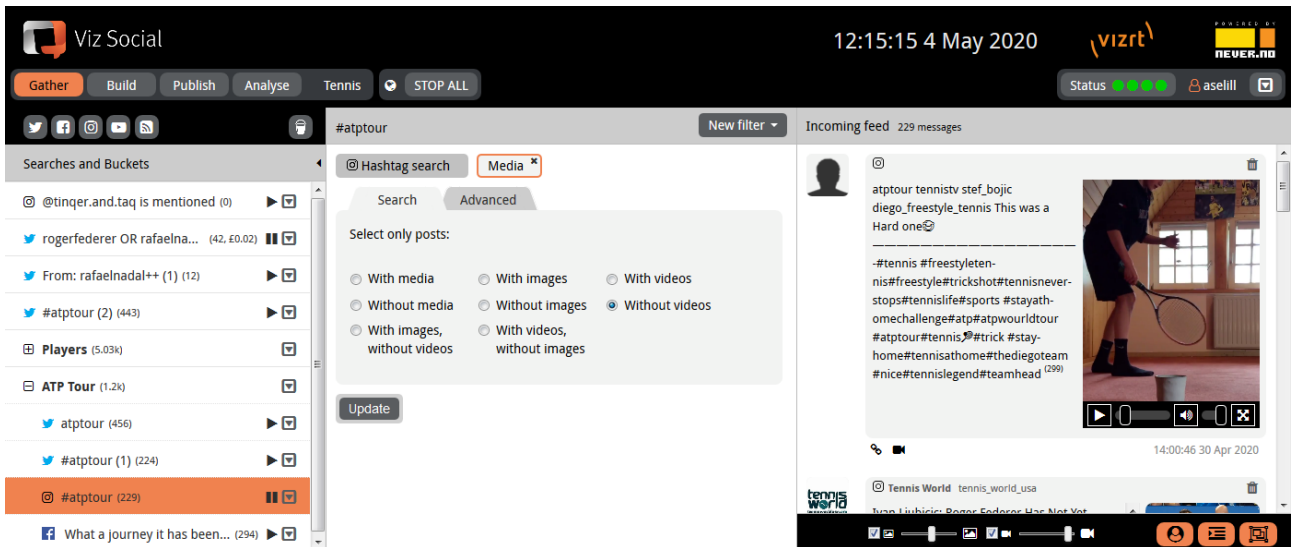
The @mention search collects all captions and comments in which the authorized Instagram account is mentioned. The input for the search is the Instagram account only. This Search offers no history, so it only collects @mentions from the moment the Search is created. It is not subject to the volume/speed limits as other Instagram Searches and can scale indefinitely.



Filters

All Instagram Searches support these additional filtering capabilities:

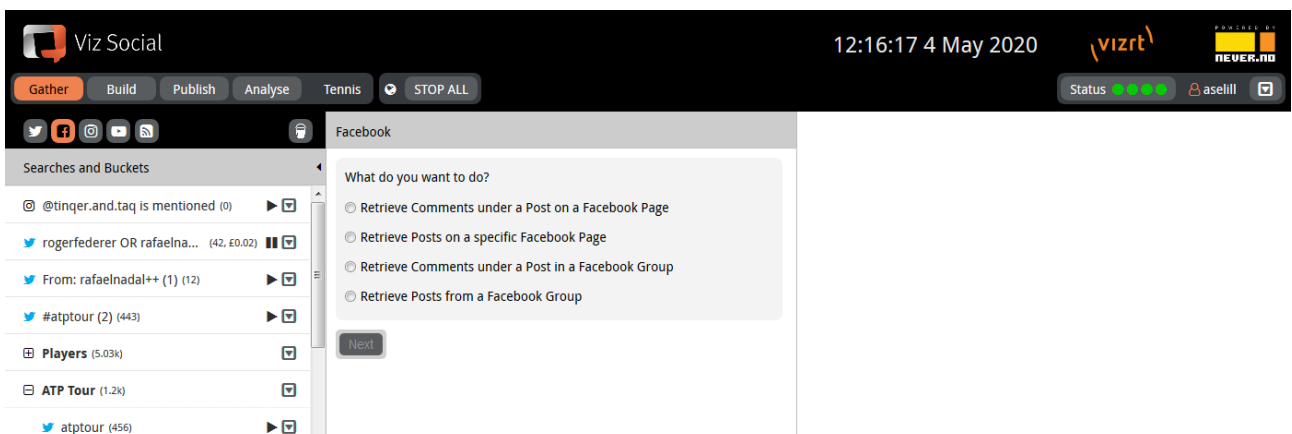
- Exactly matched, partially matched, regexp matched words/terms
- Exclusion of specific words/terms, exactly or partially matched.
- Media (type) presence



3.5.4 Facebook

For searching on Facebook, four different methods are offered:

1. Monitor all Comments under a certain Post on a Page.
2. Monitor all Posts on a certain Page (and optionally their comments).
3. Monitor all Comments under a specific Post in a Group.
4. Monitor all Posts in a specific Group.



According to the Facebook rules, a Page/User account must be used for all interactions with the network. After Facebook login all authorized Facebook Pages are available for use in the Searches. For the Group Searches, the authenticated user is assumed to be responsible for Searching.

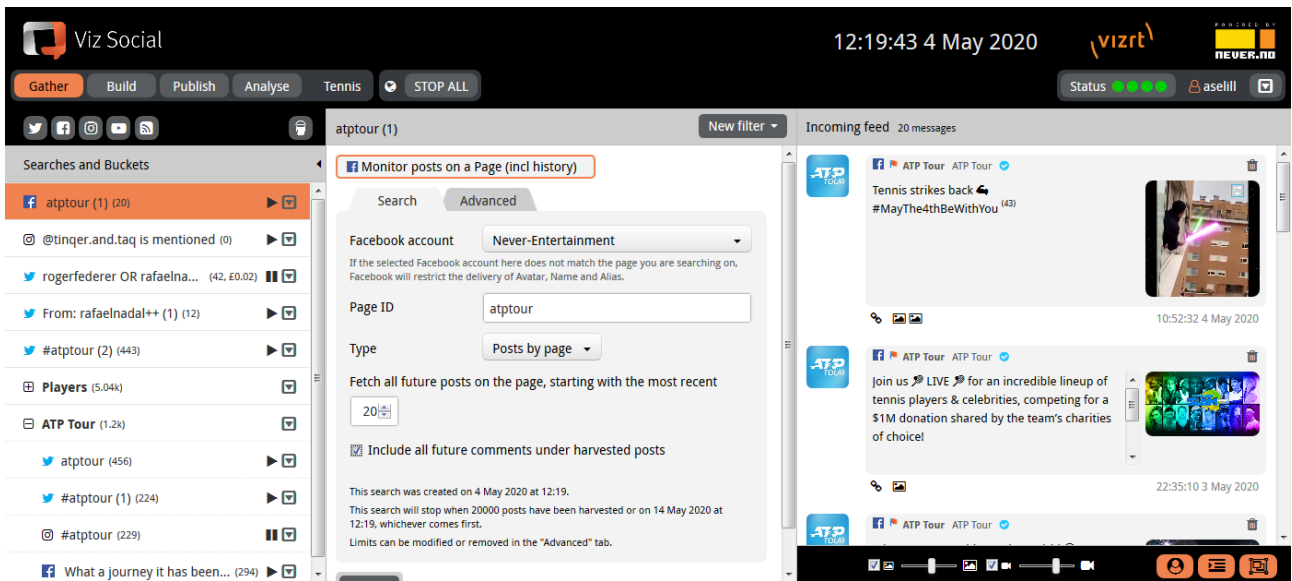
Page Post Monitor

The Facebook Page Post Monitor gives users the ability to harvest all comments under a certain Facebook post on a public page. The Pages for which data collection is enabled become available as accounts in the account selection dropdown. When one of those accounts is chosen, the associated Page name is automatically filled out in the Page field itself. It is possible to collect comments from non-authorized pages, but they are anonymous (no name and no avatar). When choosing account and Page name, Viz Social immediately pre-fetches the last posts on that Page and makes them available for selection by their title (and some metadata). Use the scrollbar to see more posts. Once the monitored post has been selected, the Search immediately starts to retrieve all its comments and continues to do so. The original post itself is always shown at the top of the columns with comments.

The screenshot displays the Viz Social application interface. At the top, the status bar shows the time as 12:18:20 on 4 May 2020. The main navigation bar includes buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', and 'STOP ALL'. Below this, a search bar contains the text 'What a journey it has been Today marks 18 years sin...'. The left sidebar, titled 'Searches and Buckets', lists various search criteria such as '@tinquer.and.taq is mentioned (0)', 'rogerfederer OR rafaelnadal (42, £0.02)', and '#atptour (2) (443)'. The main content area is divided into two sections: 'Search' and 'Advanced'. The 'Advanced' section shows the 'Facebook account' set to 'Never-Entertainment', the 'Page name' as 'atptour', and the 'Post ID' as '10158514917778701'. Below this, a note states: 'This search was created on 29 Apr 2020 at 17:11. This search will stop when 20000 posts have been harvested or on 9 May 2020 at 17:11, whichever comes first. Limits can be modified or removed in the "Advanced" tab.' The right section, 'Incoming feed', displays a list of comments under the selected post, including one from 'ATP Tour' and another from 'Helene Barthes'.

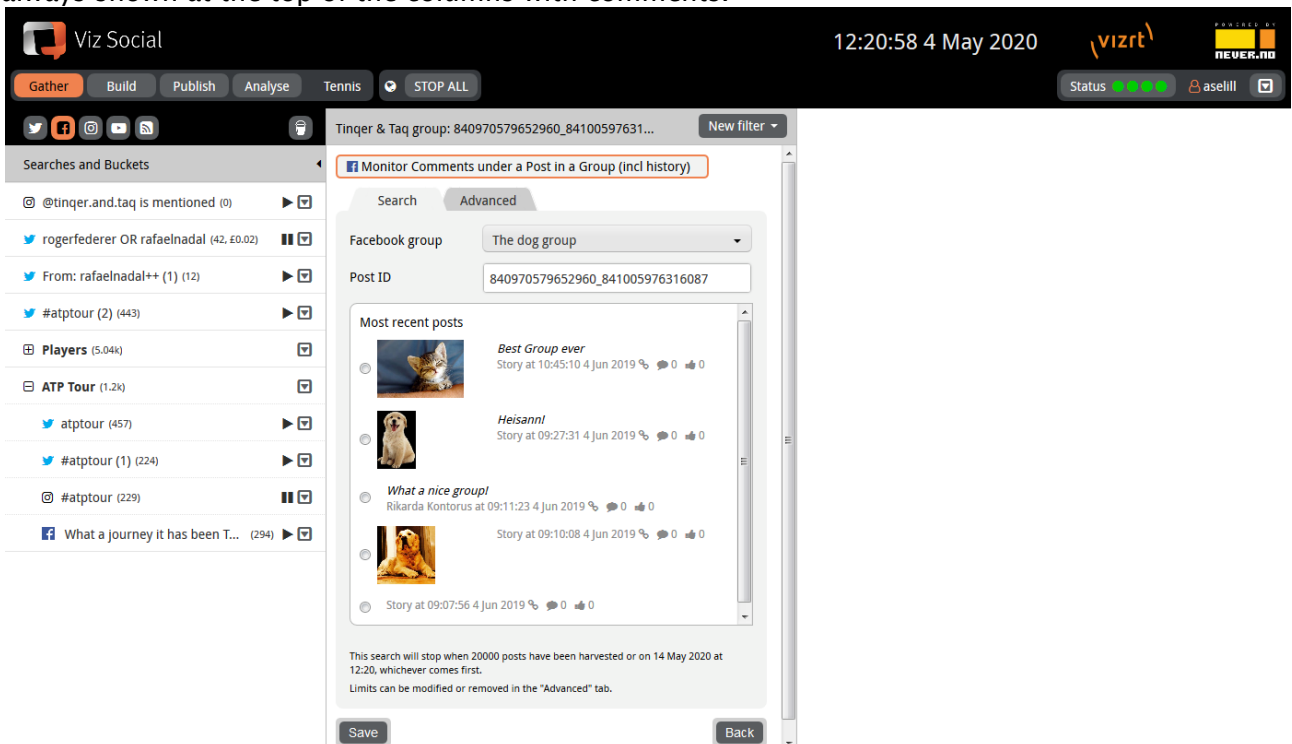
Page Monitor

Facebook Page Monitor gives users the ability to harvest (public) posts on a certain Facebook page. As with the Page Post monitor, the Pages for which data collection is enabled become available as accounts in the account selection dropdown. It is possible to collect Posts from non-authorized Pages, but they are anonymous (no name and no avatar). Once the account/page has been provided, the user can decide in the dropdown menu whether posts from the page owner, posts from other users or all posts are harvested. In addition, the Limit parameter sets the maximum number of historic posts that the Search starts with. Please note that Facebook restricts this latter parameter but doesn't document how, so we advise not using values larger than 50. There is also a checkbox to allow/prevent comments from being harvested.



Group Post Monitor

The Facebook Group Post Monitor gives users the ability to harvest all comments under a specific Facebook Group Post. The Groups for which data collection is enabled become available in a dropdown. When one of those Groups is chosen Viz Social immediately pre-fetches the last posts in that Group and makes them available for selection by their title (and some metadata). Use the scrollbar to see more posts. Once the monitored Group post has been selected, the Search immediately starts to retrieve all its comments and will continue to do so. The original post itself is always shown at the top of the columns with comments.



Group Monitor

Facebook Group Monitor gives users the ability to harvest posts in a certain Facebook group. As with the Group Post monitor, the Groups for which data collection is enabled become available in a dropdown. Once the monitored Group has been selected, the Search immediately starts to retrieve all its Posts and continues to do so.

Comments to posts are not harvested, to do so use the Facebook: Group Post Monitor.

Filters

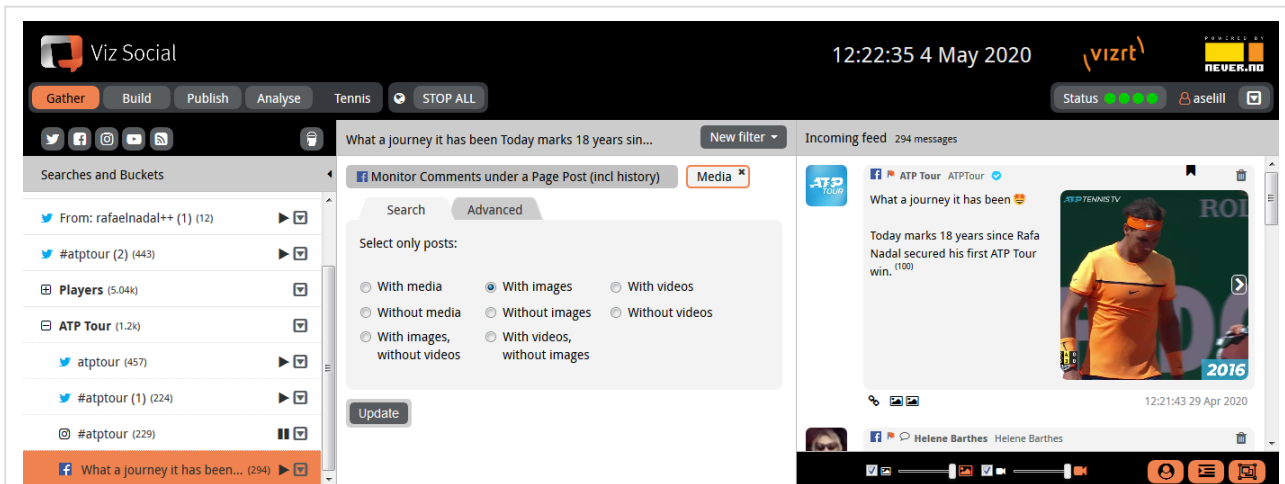
All Facebook Searches support filtering based on the following parameters:

- Exact words/terms
- Exclusion of specific words/terms.
- Originator
- Media (type) presence

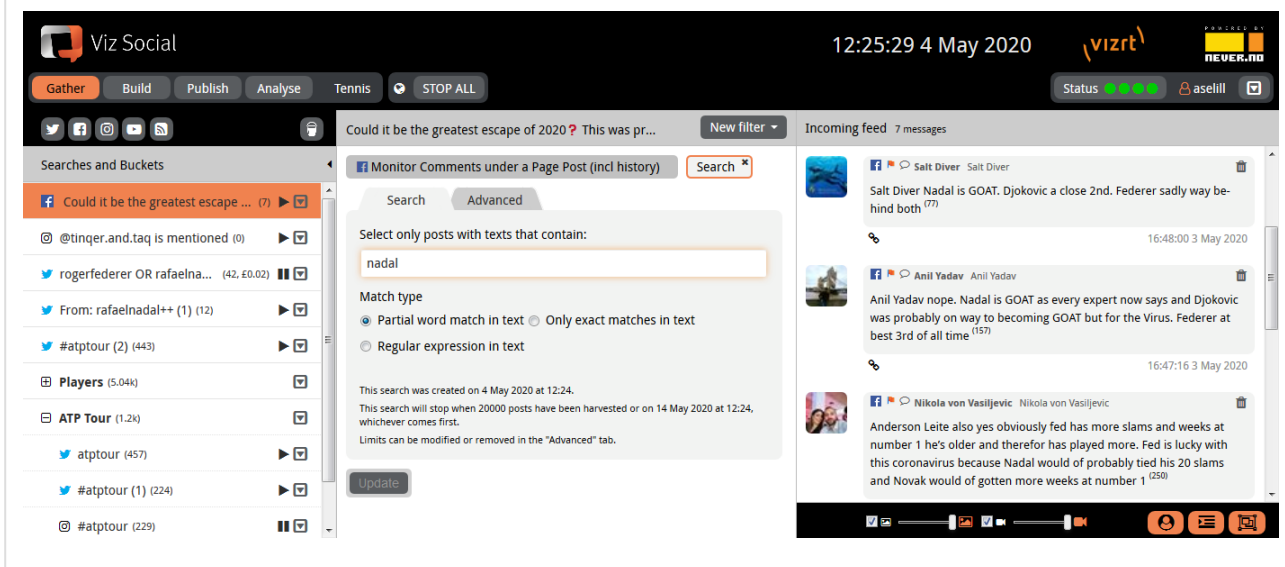
Facebook Page Post Monitor with Exclude Filter

The screenshot displays the Viz Social interface for monitoring Facebook posts. The top navigation bar includes buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', and 'STOP ALL'. The search bar contains the text 'What a journey it has been Today marks 18 years sin...'. Below the search bar, there are 'Search' and 'Advanced' tabs, and an 'Exclude' button. The 'Exclude' section shows a list of terms to filter out: 'covid-19' and 'phrases can be put her too'. There are also 'Clear', 'Sort', 'Export', and 'Import...' buttons. The right side of the interface shows an 'Incoming feed' with 294 messages, displaying several posts from the ATP Tour and other tennis-related content.

Facebook Page Post Monitor with Media Filter



Facebook Page Post Monitor with Match Filter



To support such a wide variety of services, the set of relevant and genuine Filters is limited to:

- Exact words/terms
- Exclusion of specific words/terms.
- Media (type) presence

3.5.5 YouTube

The creation of YouTube Searches requires a dedicated Google project for each Viz Social server and are disabled by default. Contact Support to activate access.

Each project comes with YouTube's default set of quotas and those quotas apply to the Viz Social server as a whole. Quotas are automatically refreshed every day at midnight (PST), which is 8:00 AM (GMT)/9:00 AM (CET). Quotas are shared between all active YouTube Comment Searches on an installation. Every day each server receives sufficient quotas to run two YouTube Comment Searches with default settings for 24 hours in parallel. More Searches can be run when lengths and

poll frequencies are decreased. We can mediate with Google to increase quota in case the default set of quotas does not suffice.

YouTube content can be published like any other social content managed by Viz Social.

⚠ Please be aware of the following:

- When a YouTube video is published by Viz Social, only its URL is shared, but not the physical video. The YouTube terms and conditions do not allow the video itself to be downloaded as clip. Hence, any applications that displays Viz Social's published content must be able to call and play from YouTube URLs.
- The avatars/profile images of commenting users have a low resolution. Unfortunately, this is the image quality currently in use by YouTube.

These different searches are offered:

- [YouTube Comments Search](#)
- [Video Search based on a search term](#)
- [Video Search based on current trends.](#)

All standard Search management functions (rename, delete, pause/play, ...) and advanced Search functions (scheduling, volume/time/rate limits, interval) are available for YouTube Searches as well.

YouTube Comments Search

In line with similar Searches for Facebook and Instagram, the YouTube Comment Search retrieves the comments under a specific YouTube Video. The input is either the video's link or its ID. Viz Social users can decide for themselves how many older comments should be retrieved for starters.

The set of available Filters is limited to Include and Exclude only because of the constraints of the YouTube API.

The screenshot displays the Viz Social application interface. At the top, the time is 12:33:21 on 4 May 2020. The user is logged in as 'asellll'. The main navigation bar includes 'Gather', 'Build', 'Publish', 'Analyse', and 'Tennis'. A search bar at the top right contains the text 'Roger Federer Top 33 Ridiculously Skillful Touches'. Below this, a 'Monitor comments under a video' search configuration is shown. The search is set to 'Advanced' mode with the YouTube video ID 'Cujxz6o_teM' entered. The search is configured to start by retrieving the 100 most recent comments. A note indicates that the search was created on 4 May 2020 at 12:32 and will stop when 20,000 posts have been harvested or on 14 May 2020 at 12:32, whichever comes first. Another note states that the search will harvest at most 100 posts per 60 seconds. The search can be updated. On the left, a 'Searches and Buckets' list shows various searches like 'Roger Federer Top 33 Ridiculous...', 'From: rafaelnadal++', '#atptour', 'Players', 'ATP Tour', 'atptour', '#atptour', and 'What a Journey it has been T...'. On the right, an 'Incoming feed' shows 39 messages, including a video post from 'The BTFGAME' about Roger Federer, a post from 'Leonardo Miro' with the text 'Che bei punti', and a post from 'Trent S' with the text 'nice video.'.

Search for Videos on YouTube

This Search retrieves videos based on a search term. It is also possible to narrow down the results by adding a region or category filter. The Search starts by retrieving the 100 (configurable) most recent videos matching the Search criteria and continues to fetch new videos going forward.

Retrieve Trending Videos on YouTube

This Search shows the most popular videos in a specific region and/or category. The Search starts by retrieving the 100 (configurable) most recent videos matching the Search criteria and continues to fetch new videos going forward.

3.5.6 WhatsApp

This section includes information about:

- [Number Integration](#)
- [Searching](#)
- [Auto Response](#)

Number Integration


The telephone number (MSISDN) used by your audience to send WhatsApp messages is the most important enabler for WhatsApp search. The only prerequisite for this is the registration of one or more MSISDNs. You can either just ask your account representative for 1 or more numbers, or explicitly provide the ones you want to use to us. In case you prefer to choose a number yourself, then it has to satisfy the following criteria:

- The number must never have been used in a mobile device for WhatsApp before.
- The number must be real and able to receive phone calls/SMS. This will be needed to receive the activation code.
- The number cannot be a shortcode or toll-free.
- The number can either have a fixed or mobile format.

The registration process will be fully handled by [never.no](#). It usually takes just 3-4 days to activate a new number, but the official maximum lead time set by Facebook (who own WhatsApp) is 2 weeks.

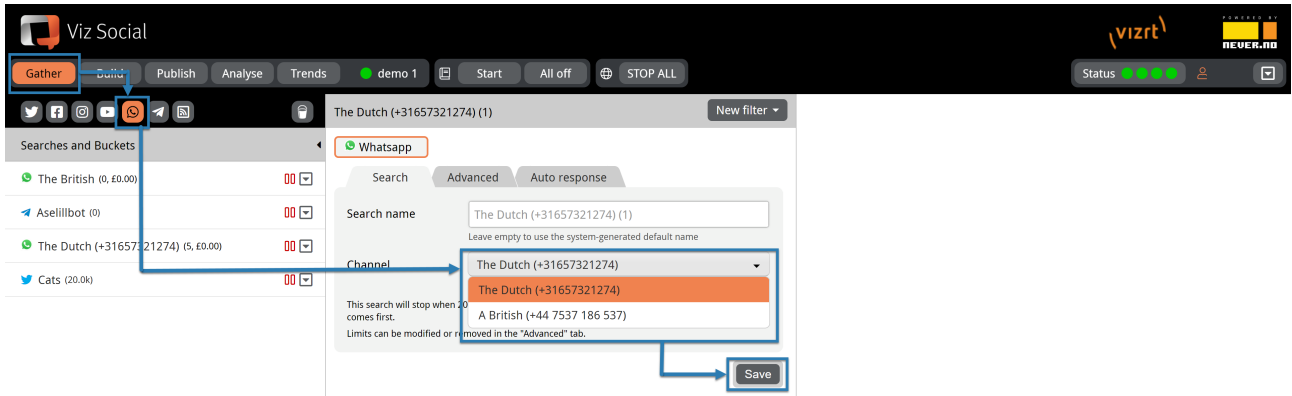
Each registered number, regardless of its origin, will be yours and will never be shared with anyone else. However, as long as it is registered for receiving messages via Viz Social, the number must not be used for WhatsApp on a mobile device.

You can register as many numbers as you like. Once registered you can associate individual numbers with specific productions or campaigns and set-up Viz Social accordingly. Numbers will be yours indefinitely (unless you decide to cancel them) and you can reuse them for different purposes as often as you want.

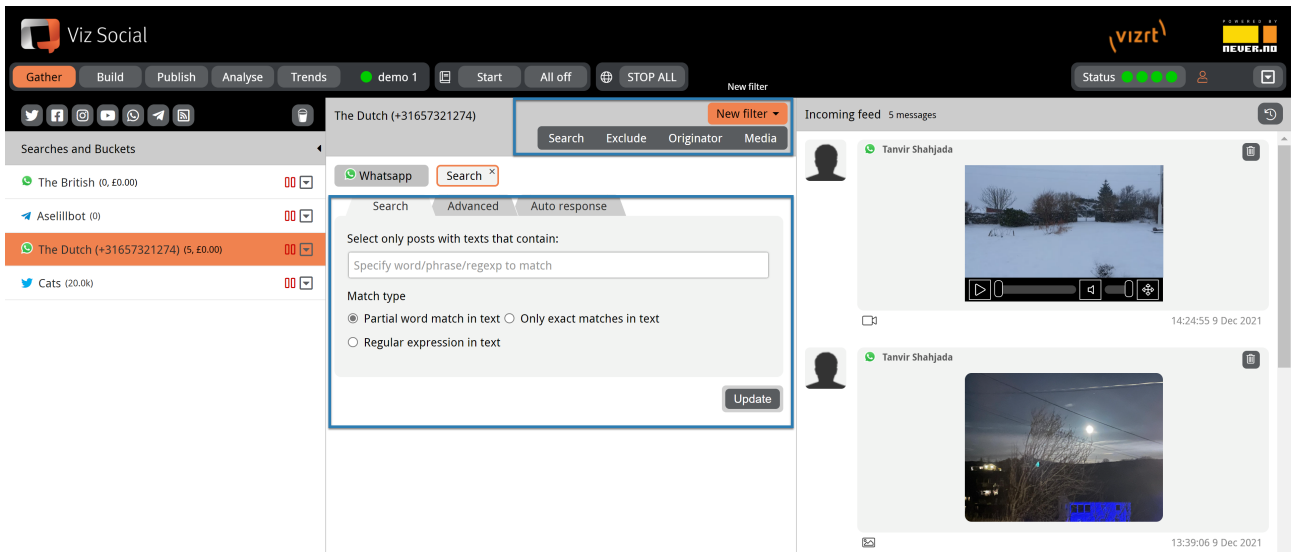
 **Note:** WhatsApp access is a separately licensed option. Please contact your account representative to discuss conditions and details.

Searching

Once one or more numbers have been registered, it becomes really easy to set up WhatsApp Searches. Go to **Gather > WhatsApp > Select number > Save**

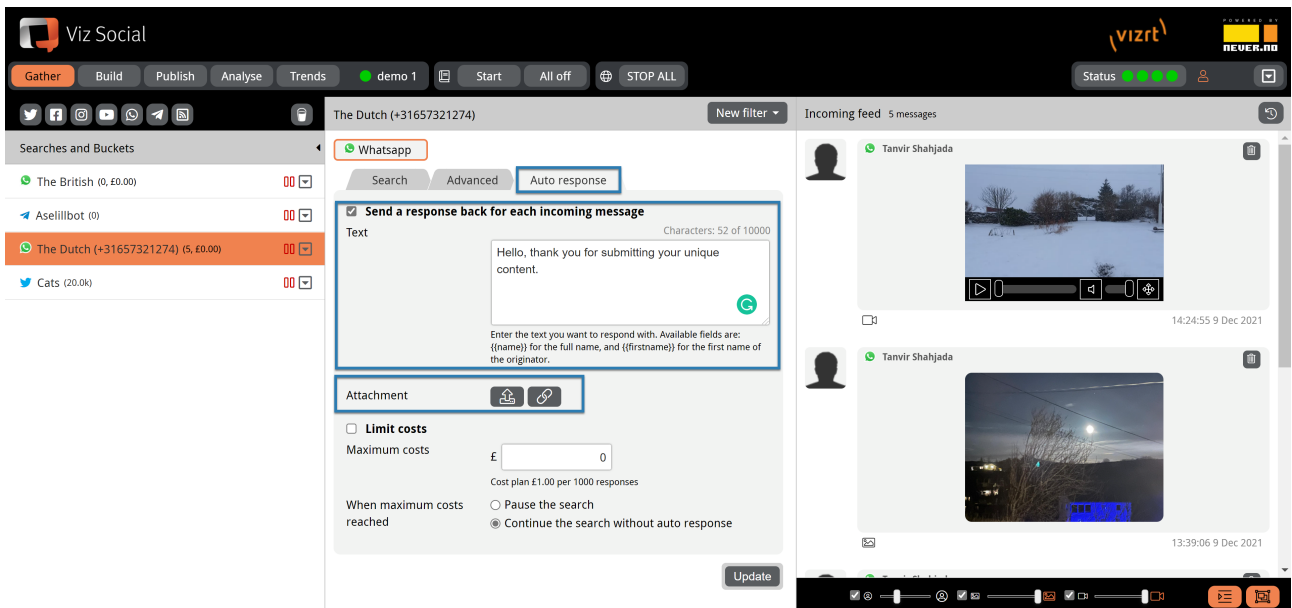


All Search management functions (For example pause/play, rename, delete) and the Filter set are available as usual. Once captured by the platform, the posts from WhatsApp can be used like any other Post sourcing Carousels, Polls, and Other Formats.



Auto Response

The WhatsApp channel also provides support for instant automated replies (often used as confirmation and/or thank-you notes). To enable this, please navigate to the auto-reply tab of a WhatsApp Search in Gather and fill in its fields (note that image attachments are allowed, but video attachments are not). After saving, a response will be sent back for every incoming message.



3.5.7 Telegram

This section includes information about the following:

- [Telegram Integration](#)
 - [Telegram Bots](#)
- [Searching](#)
- [Auto Response](#)

Telegram Integration

This integration allows individual Telegram users to send messages to a dedicated Telegram bot which passes them on to a Telegram search from where they can be used in Carousels, Polls, and Word Clouds like any other post.

Telegram Bots

Telegram bots are virtual robots or agents designed to listen to real users in the Telegram platform and to forward every message they receive to Telegram Searches running on board of your Viz Social server. Bots can be addressed directly to p2p (Peer-to-Peer) by other Telegram users or live in a Telegram Group/Channel where they capture the complete chat.

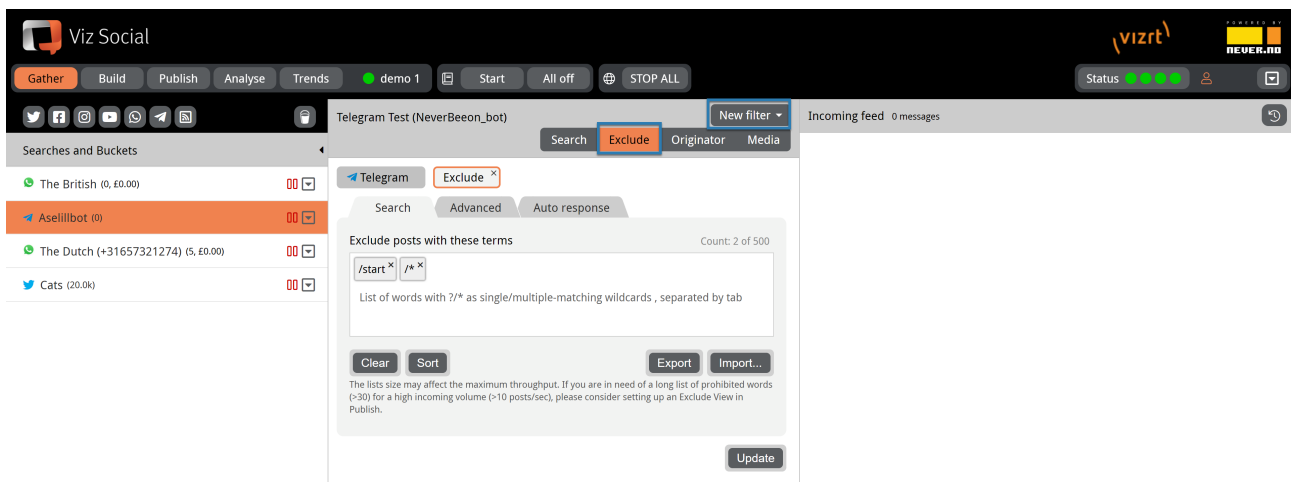
Telegram users can look up your bot by its name and start a dialogue with it. Bots are never shared between customers and each customer can own as many bots as they like.

Searching

The creation of bots is usually a one-time action. Once the bot is running and installation updated, it becomes available for Searches via a simple dropdown.

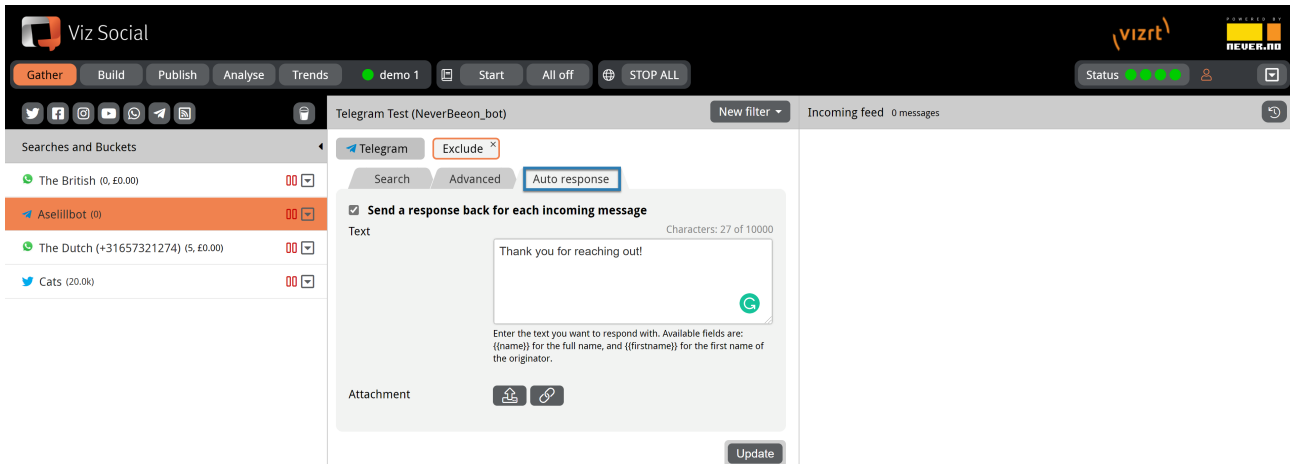
To start the ingestion of Telegram messages received by one of your bots just click on the Telegram icon in Gather, choose the bot you want to listen to from the dropdown and press Save to create your new Telegram Search. From now on all Telegram messages received by the selected bot will be forwarded to the newly created Search.

A Telegram Search can be filtered, paused/played, grouped, and be used for sourcing Formats like any other Search. You will see a `/start` message for each new user that starts a dialogue with your bot. You can filter these messages out by adding an Exclude filter for `"/start"`. In case you do not want to see any commands sent to your bot, please add `"/*"` to the same Exclude filter.



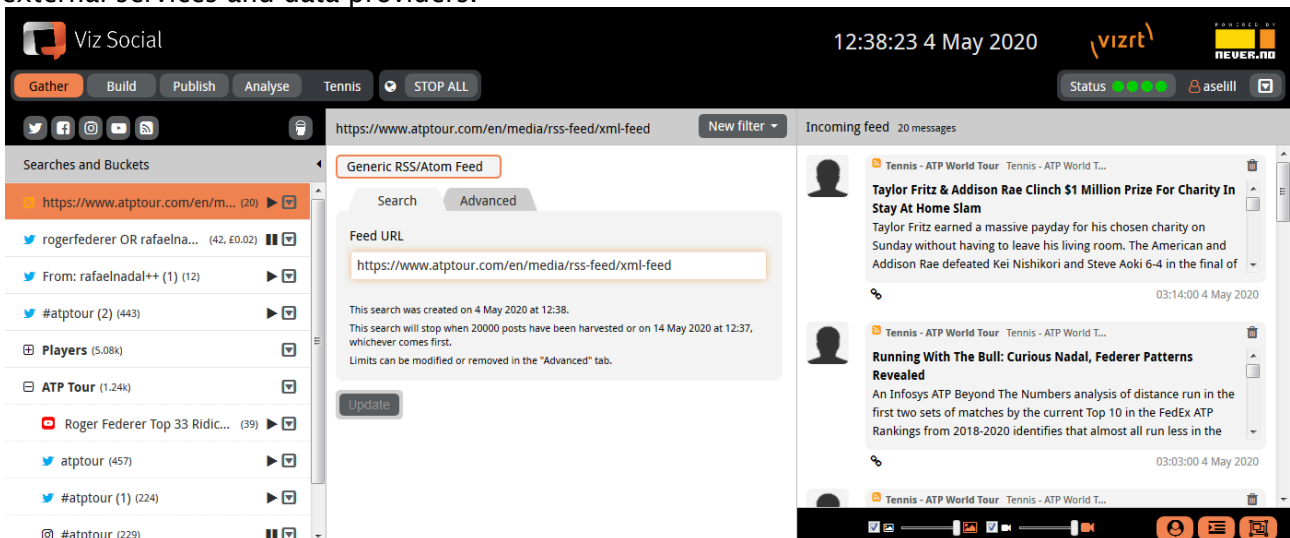
Auto Response

Telegram Searches also supports Auto-Response messages. The text and possible attachment of these auto-responses can be enabled in the Auto-Response tab of the Telegram Search. Currently, only image attachments are allowed for Telegram auto-responses and just like attachments of incoming messages, the maximum outgoing attachment size is 20 MB.



3.5.8 External Feeds

Viz Social offers the possibility to integrate with external JSON/XML/RSS/Atom feeds. Integration with each new service is set-up once in order to match external and internal data formats (performed by support staff, so therefore not further described here). Once this has been set up, the external feed can be used as any other data source in Viz Social. This way, Viz Social can integrate with SMS aggregators, email, WeChat, Disqus, ScribbleLive and many, many more external services and data providers.



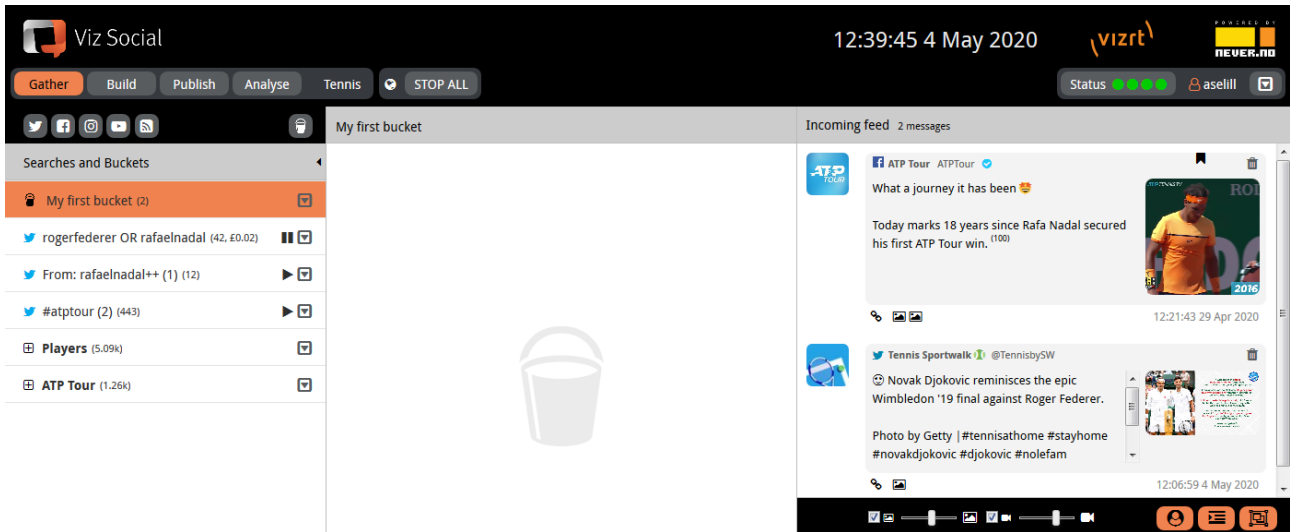
To support such a wide variety of services, the set of relevant and genuine Filters are limited to:

- Exact words/terms.
- Exclusion of specific words/terms.
- Media (type) presence.

3.5.9 Buckets

Viz Social supports daisy-chains of linked Carousels to allow complex multi-stage curation architectures to be set up. Buckets serve as containers in-between the various moderation stages

and have to be defined first. Buckets can be created just like regular Searches, by clicking on the bucket icon in the top of the left column of Gather. They stay empty until they have been set up as a destination of a Carousel and individual posts are manually put in them.

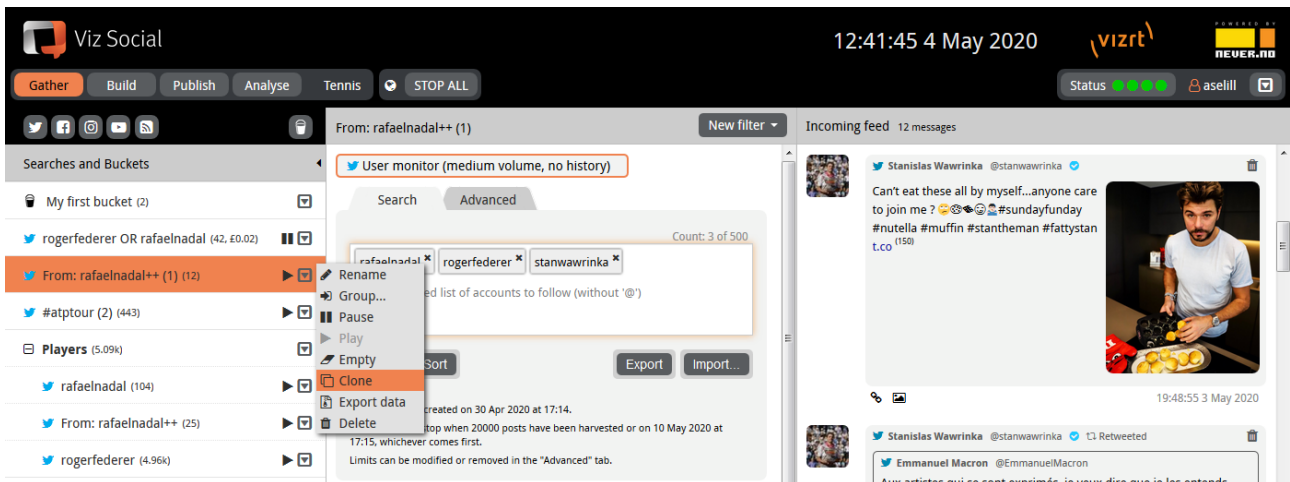


See Also

- [Carousel Formats](#)

3.5.10 Cloning Searches

Every Search in Gather can be cloned. The creation of a Search clone is triggered via the context menu of the original Search.



Cloned Searches are always created in paused state so that they can be tuned and adjusted before becoming active.

4 Build

Build is the module where the social streams from Gather are associated with one or more Formats to specify how their harvested content is going to be interpreted. Today Viz Social supports four Formats: Carousel, Nested Carousel, Poll and Competition.

Formats have a source (either a Search or a Group of Searches) and one or more destinations. An On Air destination is a visual element in a scene (a location where the interpreted and moderated data is displayed). Digital destinations are usually XML publishing targets. Each source can be used by many Formats simultaneously, and thus feed into multiple destinations, where it can be represented in many different ways. In contrast with this, each digital destination can only be used once. Buckets created in Gather, on the other hand, can be overloaded and be used as a destination of various Formats of the Carousel kind.

When creating a Format, it is possible to assign a pre-configured button Group with that particular Format instance. In the Publish phase, this button group gives users the option to control the scene play-out directly and in real-time from within Viz Social.

The set of logical destinations and the button group configuration are part of the static configuration of Viz Social. Contact support if changes are necessary. Occupied destinations are marked with a small orange circle in the destination dropdown menu.

Formats have their own context menu with functions to rename, clone and delete them (and others where relevant). Formats can be re-ordered via drag and drop.

Cloning is available for all types of Formats. Clones are exact copies of their parent Formats, except for XML/JSON destinations which are cleared from the clone because they can serve only one Format at a time. Set-ups for destinations for graphics engines are copied into clones like any other parameter. Clones are automatically saved as independent Formats and can be edited and fine-tuned freely without affecting their parent Formats.

This section contains information on the following topics and procedures:

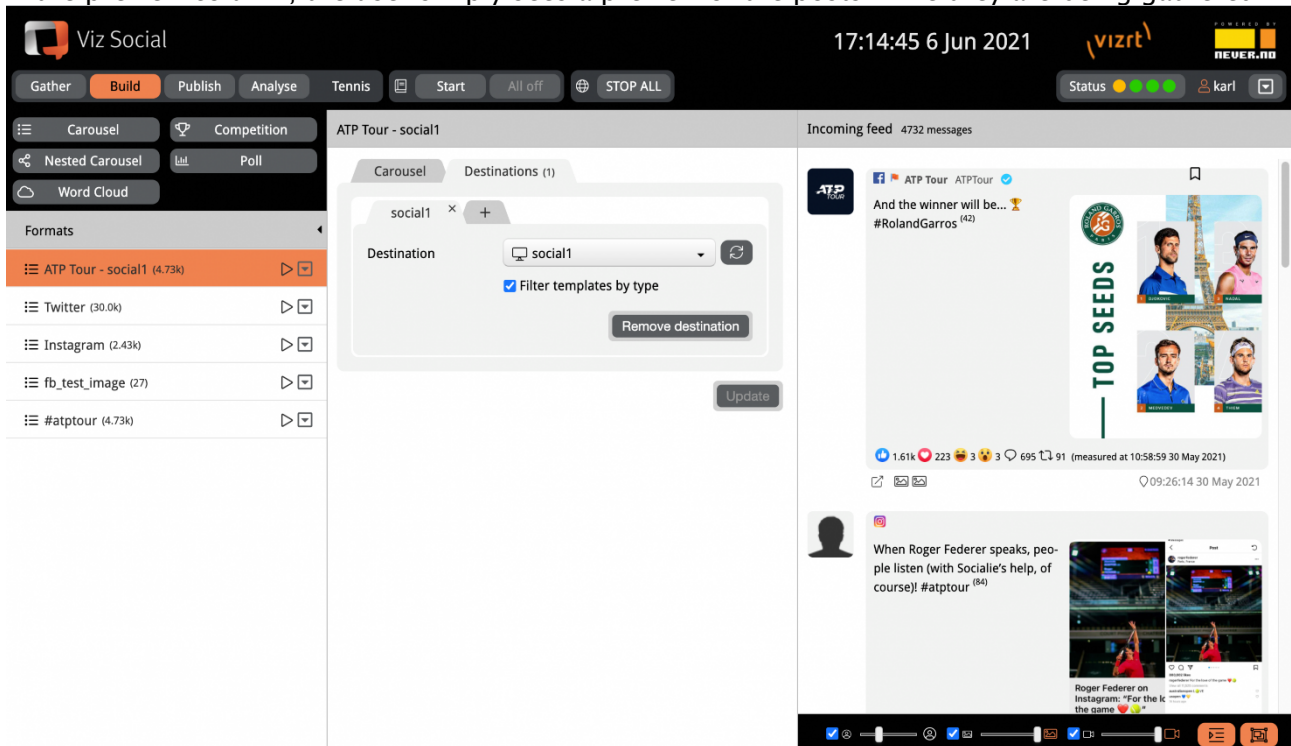
- [Carousel Formats](#)
- [Polls](#)
- [Competitions](#)
- [Viz Social Carousel Set-Up](#)
- [Word Cloud Format](#)

4.1 Carousel Formats

4.1.1 Normal Carousels

The Carousel Format (or normal Carousel) allows for managing and publishing individual posts to digital destinations. Users can select a source from the Searches and Groups defined in Gather and a destination, which is basically the logical endpoint, often connected to an area of a scene where this Carousel data plays out. Furthermore, a button group can be chosen to give users real-time control over the layout. The user can decide whether this Carousel automatically moderates or automatically publishes (see [Carousel](#) for an explanation) and for which originators this applies (all, only those on the Whitelist or only those not on the Blacklist, see also [Filters](#)).

In the preview column, the user simply sees a preview of the posts while they are being gathered.



4.1.2 Nested Carousels

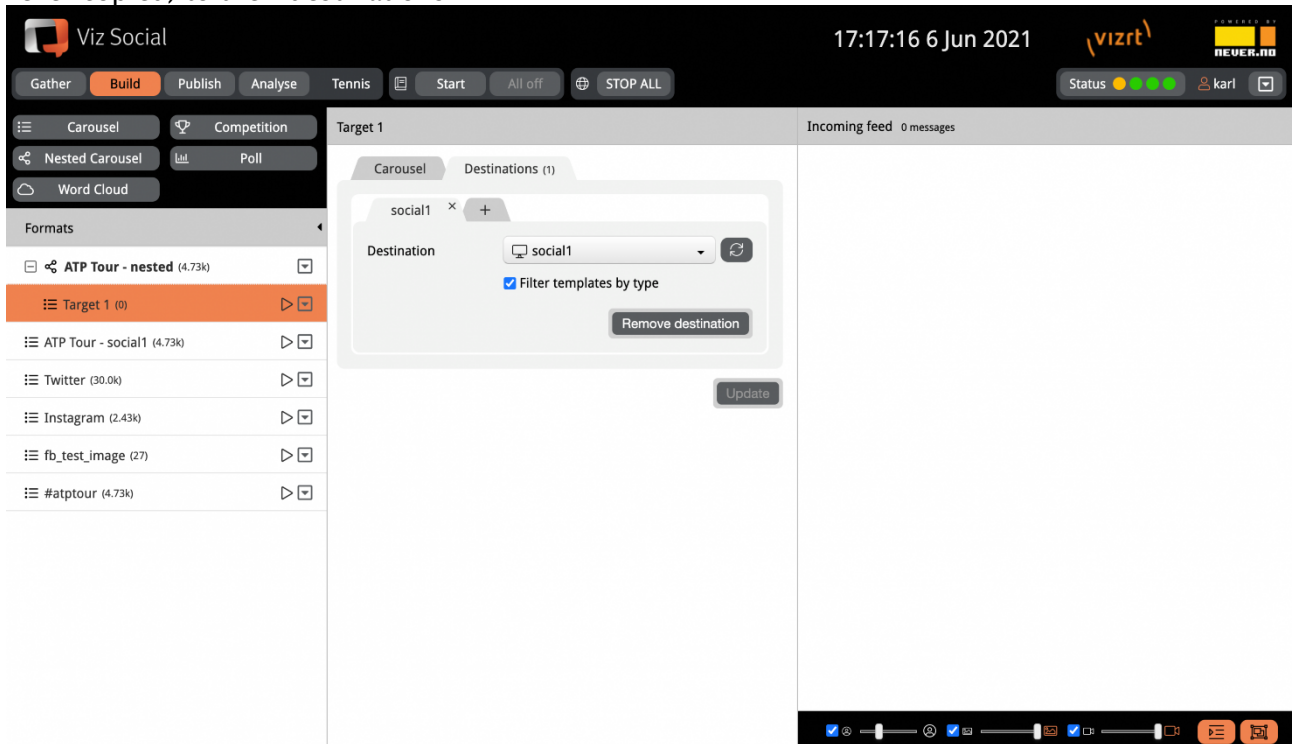
The Nested Carousel Format is a natural extension of the normal Carousel Format. It introduces two new concepts:

- A nested structure with one parent Carousel and multiple child Carousels living under it, and
- Routing of message from parent Carousel to one or multiple child Carousels.

In the set-up of a Nested Carousel, one input data source is connected with multiple (default = 3) targets. The source becomes the parent Carousel and each target is realized as a (child) Carousel, with routing functionality in-between. The targets each have their own name, their own destination element and can be set-up as auto-publish Carousels or regular ones.

Nested Carousels facilitate a $1 \rightarrow N$ curation model. By default, moderation is manual and messages are moved when they are added to their destinations. It is possible to choose a distribution where they are copied instead, while in manual mode. For moderating larger data sets that require parallel processing, pre-moderation can be done automatically, without user interference, in round-robin mode. In auto moderation mode, messages are always moved (and

never copied) to their destinations.



4.1.3 Linked Carousels

Viz Social supports daisy-chains of linked Carousels to facilitate multi-stage curation. In between those Carousels buckets serve as destination of one Carousel and as source for the next one. Many Carousels can publish into the same bucket. This way linked Carousels facilitate an $N \rightarrow 1$ curation model.

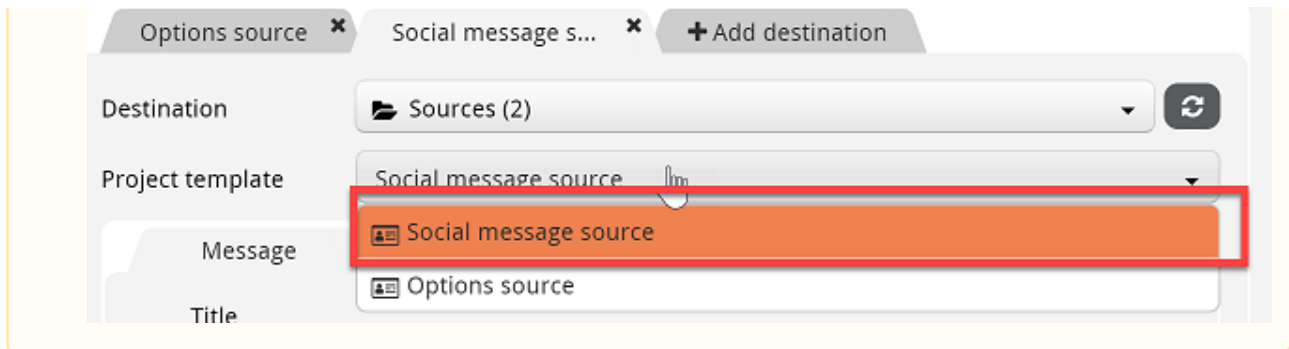
Buckets have to be created first in Gather before they are available. On creation each bucket starts out empty. Later when set-up as destinations, they can be filled (usually manually) with interesting posts. Once a post has been put into a bucket, it stays there until the bucket is deleted or it is removed explicitly, even after the originating Search was deleted.

4.2 Polls

The Poll Format provides the opportunity to measure audience opinions about one or more alternatives.

Classic Viz Social Polls use locally collected Posts / Tweets as votes and do their counting and apply their business logic locally as well. In addition, Viz Social also supports a multitude of pre-aggregated Poll types. Pre-aggregated means that the votes counted externally and only the aggregated standings are made available to Viz Social.

Note: Make sure you are selecting the correct template for the format. For polls, this is **Options source**, and for a carousel it is **Social message source**. You can use the checkbox labeled **Filter templates by type** to show the default source for the format type.



The set-up details of the various Polls differ from type to type but they all share some common parameters as described below.

The Poll's most important parameters are shown on its main tab. Apart from the obvious source, destination and button group, these are:

- **Question:** The statement or phrase that forms the basis of this Poll. An image and a preferred color can be associated with the Poll as a whole.
- **Instructions:** Extra text to e.g. inform about how to vote. This field is optional.
- **A set of alternatives:** created automatically or manually depending on poll type. Each alternative has:
 - A label (the way the alternative is shown in output).
 - An image.
 - A color linked to it.

The Advanced tab gives access to more technical configuration parameters:

- **Percentage calculation:** Percentages can be either rounded according to standard mathematical rules (which might cause them not to add up to 100%) or forced to sum up to 100% by adjusting either the smallest or the largest score.
- **Percentage accuracy:** Percentages can be presented with precision of zero, one, two or three decimal places.
- **Publish Strategy:** Can be either Manual or Automatic. When automatic is chosen, the user is able to specify the publish interval in seconds.

In the preview column, the user simply sees an overview of the Poll standings at that very moment, including a graphical preview to guide the eye and help interpretation. It is shown both as a bar and pie chart. Alternatives that contribute <1% are grouped together and labelled *other*. Through their context menu, Polls can be paused and restarted again. This makes it possible to publish the exact numbers as they are displayed in the UI on screen. In the background, a paused Poll continues to process new posts and the updated numbers are shown as soon as the Poll is put in playing mode again.

The export function in the context menu allows users to export a snapshot of the Poll standings into a *.json* file. The Export (Filtered) Data creates a set of *.zip* files (one per alternative) that can be downloaded. Depending on the number of posts in a Format, multiple *.zip* files per alternative might be created. In the *.csv* files for Polls, dedicated columns indicate the matched alternative and the vote's validity, given any active constraints limiting the number of votes per user.

4.2.1 Classic Polls

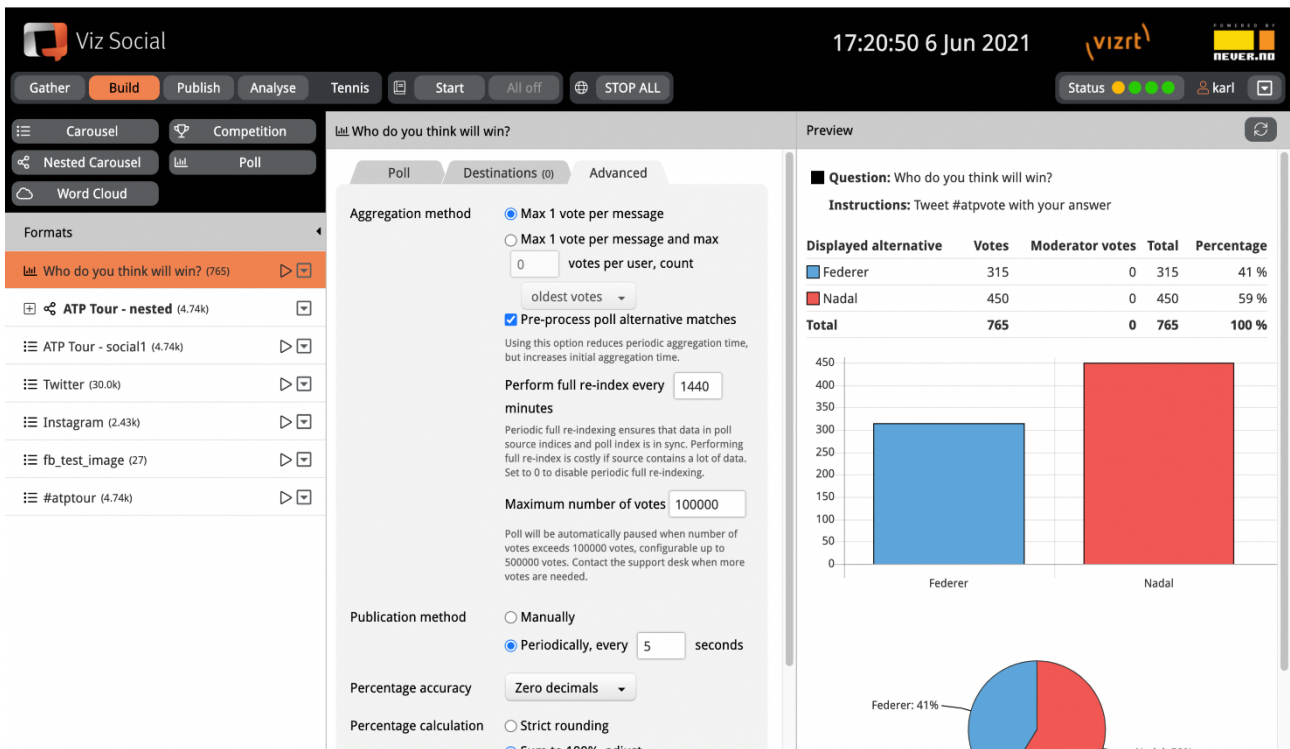
This Poll is created manually by entering the question and alternatives in Viz Social. By default, there are three alternatives, alternatives can be added or removed at will. Poll type also has a field for a series of matched strings (the keywords that are used to match a vote with a Poll alternative). This poll is often used with incoming social feeds as a source, with the counting based on #hashtags or other terms listed in *Matched phrase*.

Note: Terms written without hashtag do not match the hashtag term. For example, if you want both *cat* and *#cat* to match, both must be entered.

Displayed alternative	Votes	Moderator votes	Total	Percentage
Federer	315	0	315	41 %
Nadal	450	0	450	59 %
Total	765	0	765	100 %

Under the advanced tab the following can also be specified:

- Maximum number of votes per user: Viz Social can limit the number of votes per user. The limit is enforced separately per social channel, based on the user alias. If a vote matches multiple alternatives, then only the first alternative is counted (in UI order).
- Logic how to proceed when a user exceeds his/her maximum number of votes: Either count the oldest votes or the newest.



4.2.2 Pre-aggregated Polls

These polls are defined, managed and aggregated elsewhere and Viz Social merely reads their aggregated standing periodically. Their set-up usually only requires a URL where the Poll lives or is displayed. Currently these polls are supported:

- [Facebook Reactions Polls](#)
- [Facebook Live Video Polls](#)
- [Facebook Recorded Video Polls](#)
- [Twitter Polls](#)
- [Apester Polls](#)
- [Crowdsignal Polls](#)
- [Monterosa Polls](#)
- [Viz Social Pre-aggregated Polls](#)

⚠ Note of the following miscellaneous aspects:

- Whenever a pre-aggregated Poll is created in Build, a corresponding Search feeding it is automatically created in Gather and linked with the Poll. This Search can be managed like any other.
- Whenever a pre-aggregated Poll is deleted in Build, an option is offered to also delete the corresponding Search in Gather. By default, the feeding Search is deleted as well.

Pre-aggregated Polls use external objects/Posts as their source, and these often have an originating account associated with them. Viz Social fetches these originators, shows them as part of the Poll and publishes a reference to them as part of the XML/JSON Poll object.

This applies to Twitter Polls and Facebook Polls (reactions, live video).

The screenshot shows the Viz Social interface. The top navigation bar includes 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', 'Start', 'All off', and 'STOP ALL'. The main content area is split into a configuration panel on the left and a preview panel on the right.

Configuration Panel:

- Source:** FAN FAVOURITE POLL - The ...
- Question:** FAN FAVOURITE POLL - The Big Four #Federer #Murray #Djokovic #Nadal
- Instructions:** (Empty field)
- Displayed alternative 1:** Roger Federer
- Displayed alternative 2:** Andy Murray

Preview Panel:

Question: FAN FAVOURITE POLL - The Big Four #Federer #Murray #Djokovic #Nadal

Original: <https://twitter.com/drivevolleys/status/925848139021594632>

Poll was created at: 22:12:52 1 Nov 2017

Poll was closed at: 22:12:51 3 Nov 2017

Originator: @drivevolleys

Displayed alternative	Votes	Moderator votes	Total	Percentage
Roger Federer	451	0	451	48 %
Andy Murray	90	0	90	10 %
Novak Djokovic	88	0	88	9 %
Rafael Nadal	309	0	309	33 %
Total	938	0	938	100 %

A bar chart below the table visualizes the vote counts for each alternative.



Facebook Reactions Polls

The Facebook Reactions Poll monitors a specific Facebook post and interprets the counts of its six standard Facebook reactions (like, love, haha, wow, sad, angry) as a real-time six alternative pre-aggregated Poll.

The input parameters needed are the Facebook Page account and the post whose reactions are monitored. At set-up time the post text is used as question and the six alternative names, icons and colors are automatically filled in as well.

The results are automatically synchronized every 60 seconds (configurable).

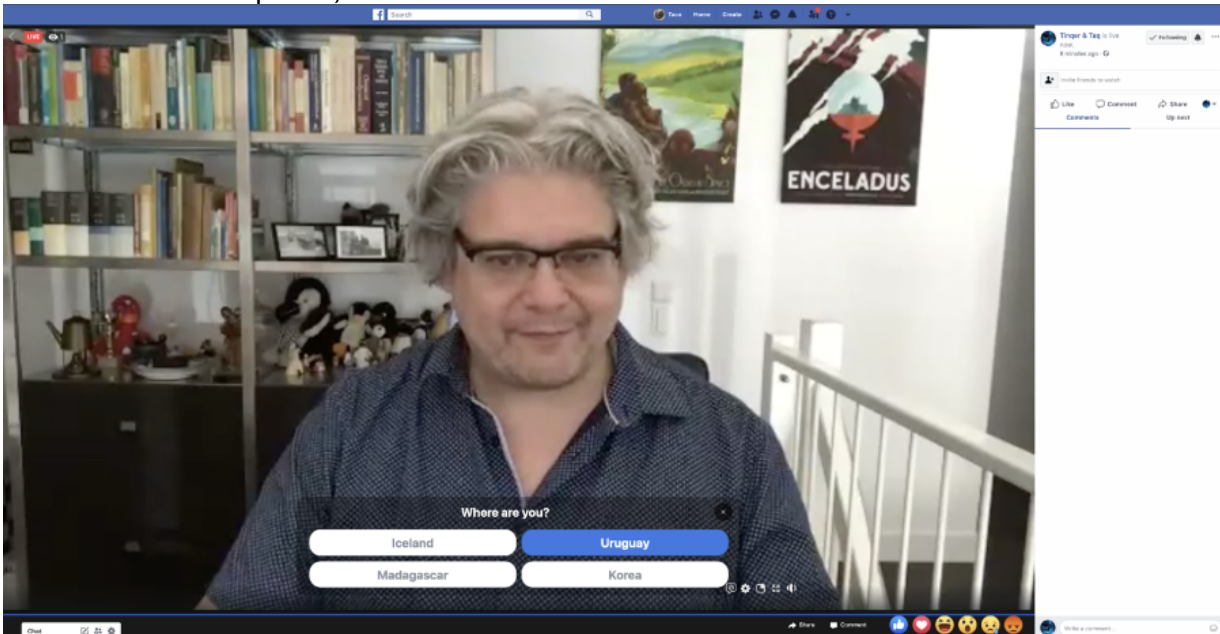
Facebook

a c t i o n s P o l l S e t - u p

F a c e b o o k R e a c t i o n s P o l l i n B u i l d


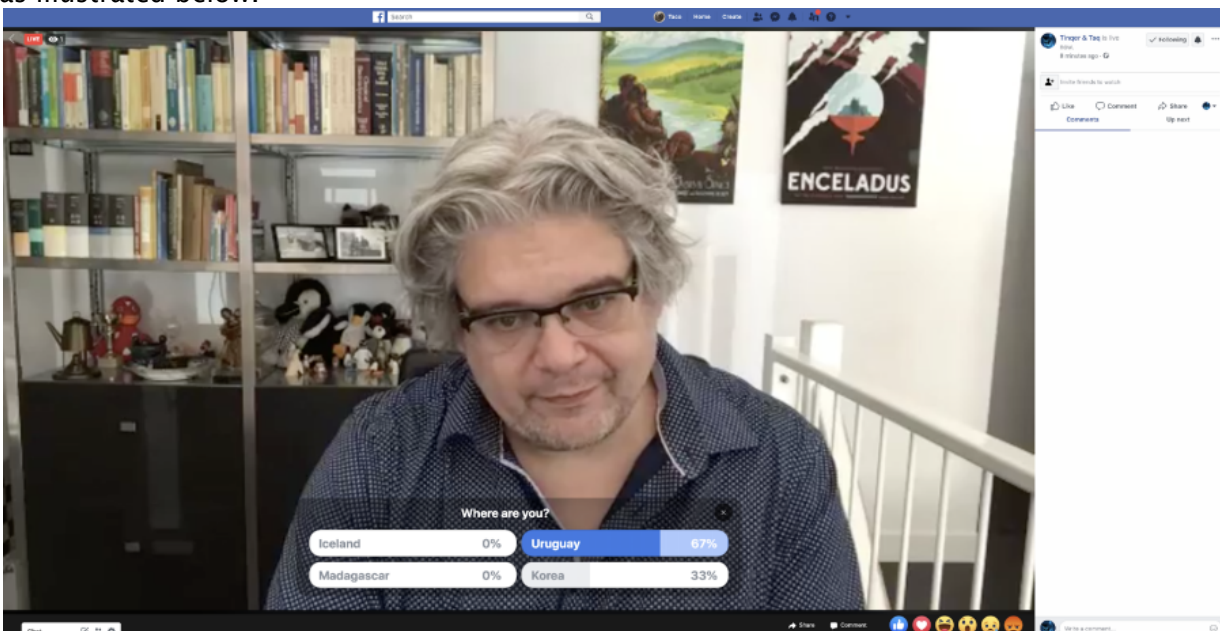
Facebook Live Video Polls

Facebook Live Video Polls are Polls set-up from within Viz Social that are not only displayed integrally inside a Facebook Live Stream, but also support in-stream interactive voting by the viewers of that stream.

The user experience is best illustrated via a few screenshots. After a talent started a Facebook Live Stream on a Facebook Page, a Live Video Poll can be shown to the viewers of his/her stream. Viewers of the video can respond to the question asked by its owner/streamer by clicking on their favorite response, as shown below.



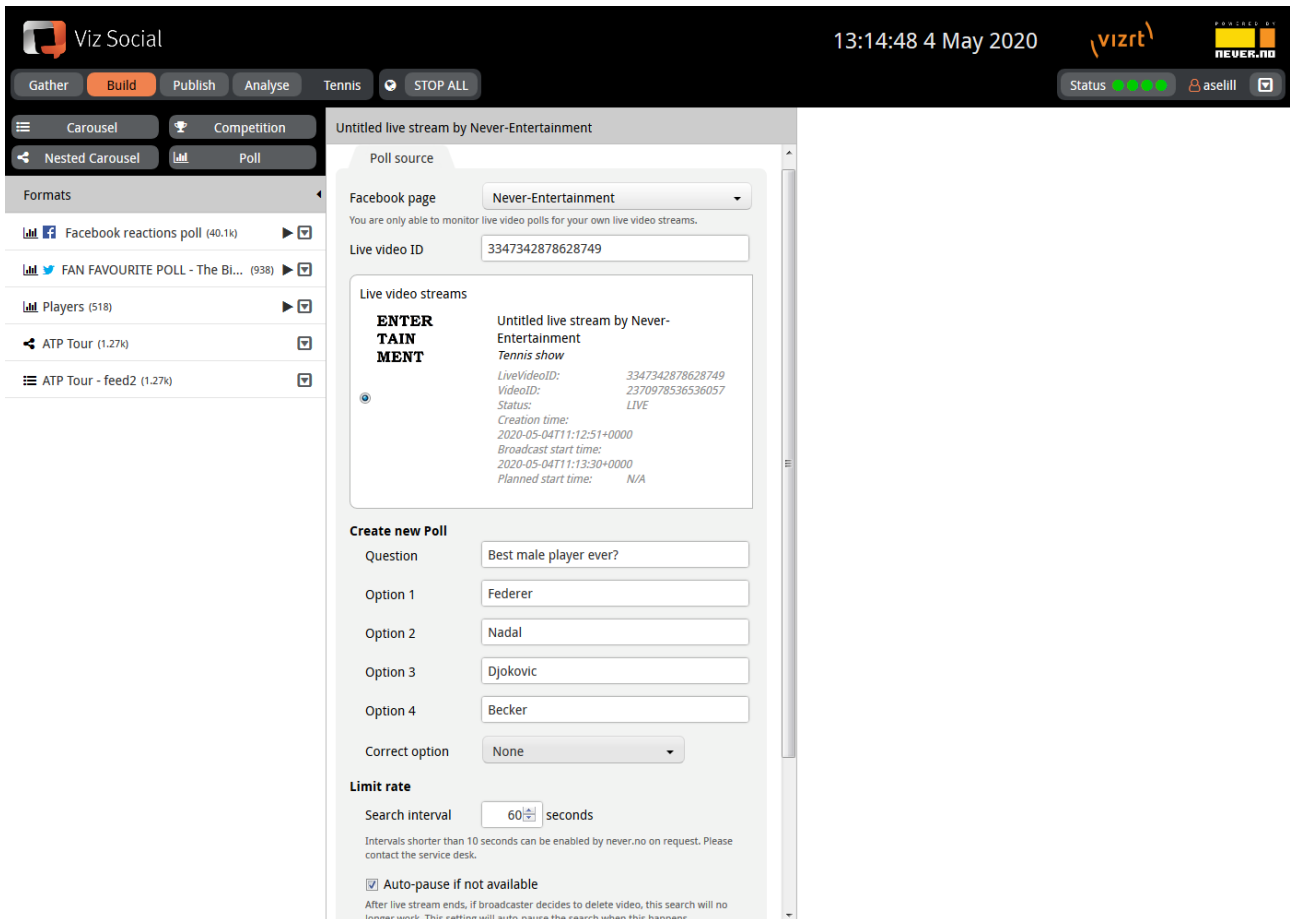
The owner can then decide to close the Poll at some point and trigger the responses to be shown, as illustrated below.



Step-by-step approach to set up in Viz Social:

1. Most important thing is to start a Facebook Live Stream first. This must be done in the context of a Facebook Page that allows you to stream (usually the ones you own or manage) and it can use your mobile cam (with the Facebook App), desktop cam (via www.facebook.com) or any third party streaming application. To start streaming, simply go

- to the area where you past updates and click on **Live** or **Live Video**. Please be aware that there can be a 15-30 sec delay between the stream source and the stream destination.
2. Once you are streaming you can create a Live Poll from within Viz Social. Go to Publish, Click on the Poll button. Click on the option **Facebook create live video poll**. In case that option is disabled, login via Facebook first, which enables the option.
 3. In the account dropdown, choose the Page where the stream was created. If that Page is not shown than the logged in account is probably not the owner of the stream.
 4. Fill in your question and define two, three or four responses. You can assign one of the answers as the correct one. On Viz Social itself this notion is not yet in use, but in the payout on Facebook it is visualized. Press **Save** and you see:
 - a. **In the window of the streamer:** The poll has been set-up immediately.
 - b. **In the windows of the viewers (with a 15-30 sec delay):** The poll has been set-up and is ready for voting.
 - c. **On Viz Social:** The Poll has been created and can now be managed like any other external Poll. Please note that changing the question/alternatives does not affect the presentation of the Poll on Facebook.
 5. All viewers can now vote on their preferred alternatives. The originating stream sees the aggregated totals, but all viewers only see (for now) what they voted for themselves. You see the standings on Viz Social aggregating the votes (please allow for a delay of up to 60 sec).



Some general notes about Facebook Live Polls:

1. It is possible to run an arbitrary number of consecutive Polls for a single stream. By default, only the latest is shown to the viewers, but each one's alternatives/standings can still be summoned manually via their buttons in Publish.

2. Currently there are small differences in user experience between Facebook accessed via a browser and via their app:
 - Within the Facebook app the correct answer is indicated in green and in case the user had chosen an incorrect answer, their choice is shown in red and all remaining options are display in grey. If no correct answer has been assigned, the users own score is shown in blue and all others in grey. When the stream is watched via the desktop, the correct option is not indicated, the user's own choice is always shown in blue and all other are always shown in grey.
 - Within the Facebook app voting for a Poll is closed irreversibly once the results have been summoned or the Poll is hidden. On the desktop, Polls are merely hidden and never truly closed. Every time the voting is shown again, each user is allowed to change their vote again at will.

These differences are caused by differences in implementation details of both Facebook platforms.

Facebook Recorded Video Polls

Viz Social also supports the possibility to read standings from an existing Facebook Live Video Poll that was not initiated by Viz Social itself but set-up via the App/browser/other interface of the owner. The **Facebook Live Video Poll** option among the list of Poll types enables this. It works exactly like above, except:

- The only input is the Facebook Page (not the questions/alternatives).
- The Poll cannot be managed via Publish because it is not owned by Viz Social.

Twitter Polls

This poll type monitors an existing Twitter poll, by periodically harvesting results (every 60 seconds by default). At setup time, it also automatically inputs the question and alternatives into Viz Social. Input parameter is the poll's URL from Twitter. The poll can be published just like any other kind of Poll running on Viz Social.

Question: FAN FAVOURITE POLL - The Big Four ❤️ #Federer #Murray #Djokovic #Nadal

Original: <https://twitter.com/drivevolleys/status/925848139021594632>

Poll was created at: 22:12:52 1 Nov 2017

Poll was closed at: 22:12:51 3 Nov 2017

Originator: @drivevolleys

Displayed alternative	Votes	Moderator votes	Total	Percentage
Roger Federer	451	0	451	48 %
Andy Murray	90	0	90	10 %
Novak Djokovic	88	0	88	9 %
Rafael Nadal	309	0	309	33 %
Total	938	0	938	100 %

It is important to be aware of the following:

- Twitter Polls must be set-up on www.twitter.com or via the Twitter app first before they can be tracked via Viz Social. See [Twitter](#) for a tutorial.
- There can be a delay between the casting of a vote and the moment its result becomes visible.
- The default monitoring interval is 60 seconds. This suffices for most situations and should only be changed if there is a specific reason to do so.

Apester Polls

Access to pre-aggregated Apester Polls is disabled by default but can be enabled on request. Please contact Support for this.

Crowdsignal Polls

Access to pre-aggregated Crowdsignal Polls is disabled by default but can be enabled on request. Please contact Support for this.

Monterosa Polls

Access to pre-aggregated Monterosa Polls is disabled by default but can be enabled on request. Please contact Support for this.

Viz Social Pre-aggregated Polls

Pre-aggregated feeds in Viz Social's own native JSON poll format can be added by copy/pasting the JSON URL. Access can be enabled on request. Please contact Support for this.

4.2.3 Grouping of Polls

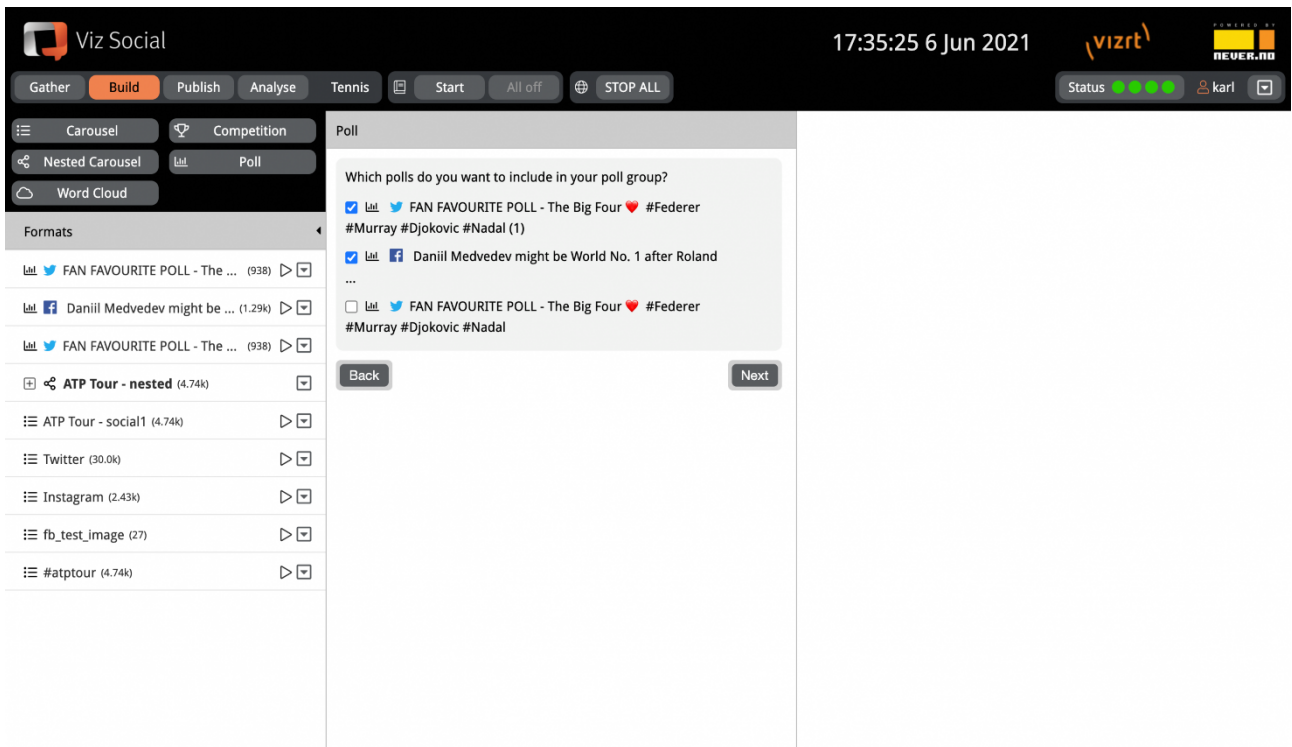
The outcomes of various Polls can be aggregated, and the results can be published as a single Poll.

Merging Polls

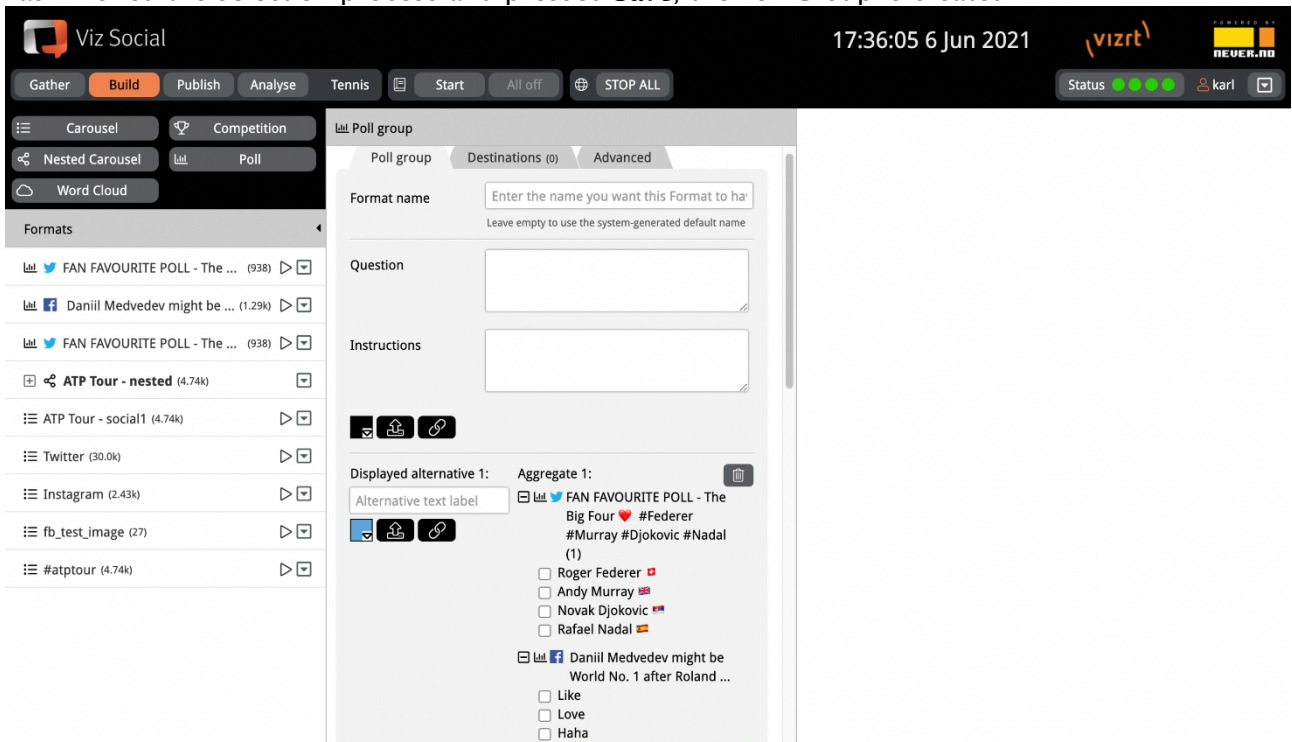
A poll Group is created via the **Group...** option in the context menu of an ordinary Poll. Once selected, the user receives an overview of the other Polls that can be used to form a Group. You must have at least two polls running for this option to be active.

The screenshot shows the Viz Social interface at 17:31:31 on 6 Jun 2021. The user 'karl' is logged in. The main area displays a poll configuration for 'FAN FAVOURITE POLL - The Big Four'. A context menu is open over the poll, with the 'Group...' option selected. The poll details on the right include the question, original URL, creation time, and a table of displayed alternatives.

Displayed alternative	Votes	Moderator votes	Total	Percentage
Roger Federer	451	0	451	48 %
Andy Murray	90	0	90	10 %
Novak Djokovic	88	0	88	9 %
Rafael Nadal	309	0	309	33 %
Total	938	0	938	100 %



After combining two Polls, the option is provided to add more Polls to the Group. When the user has finished the selection process and pressed **Save**, the Poll Group is created.



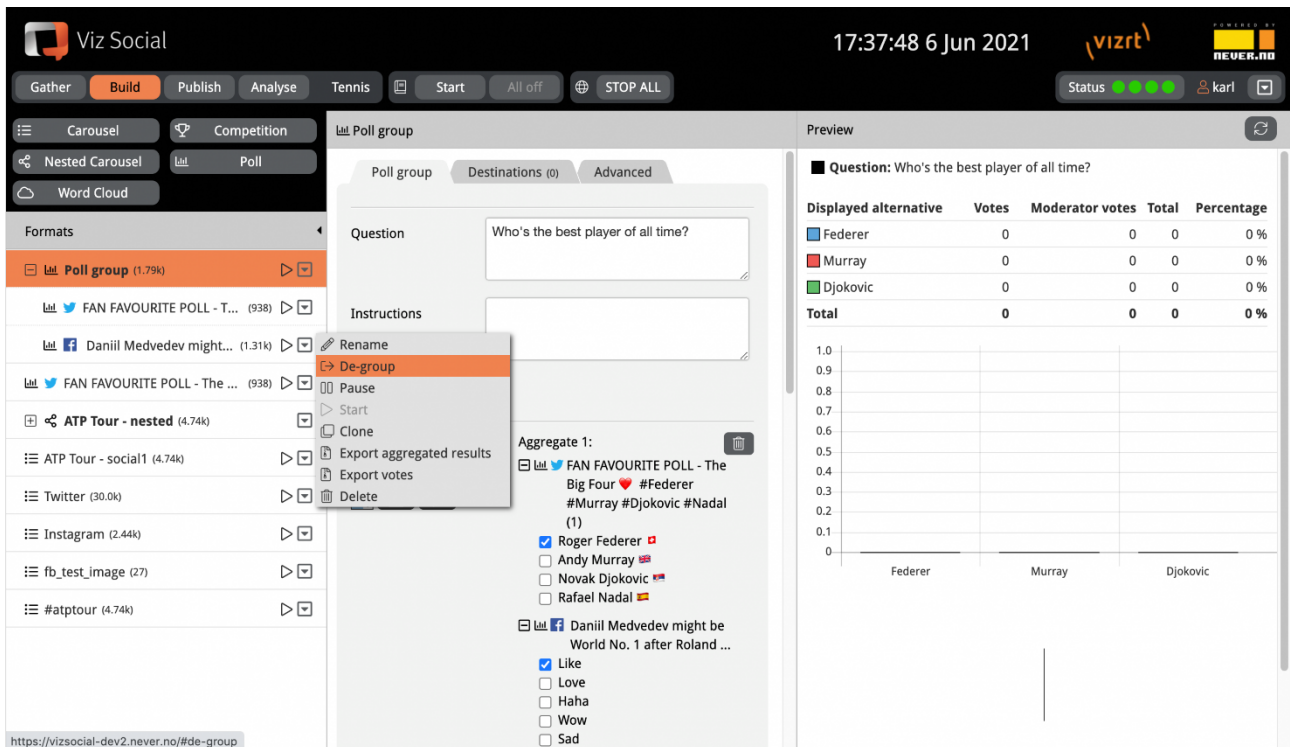
More Group members can be always be added at a later stage via the **Add...** option in the Poll Group's context menu. Group members can be removed via the member's **De-group** action of each member's own context menu.

Note: When a Poll Group is deleted, its Poll members continue to exist as normal, ungrouped Polls.

The screenshot displays the Viz Social interface for configuring a poll. The top navigation bar includes 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', 'Start', 'All off', and 'STOP ALL'. The current time is 17:37:19 on 6 Jun 2021. The user is logged in as 'karl'.

The main interface is divided into three sections:

- Left Sidebar (Formats):** Lists various poll formats such as 'Poll group (0)', 'FAN FAVOURITE POLL - T...', 'Daniil Medvedev might...', 'FAN FAVOURITE POLL - The ...', 'ATP Tour - nested (4.74k)', 'ATP Tour - social1 (4.74k)', 'Twitter (30.0k)', 'Instagram (2.43k)', 'fb_test_image (27)', and '#atptour (4.74k)'.
- Central Configuration Area:**
 - Question:** 'Who's the best player of all time?'
 - Context Menu:** A menu is open over the 'Poll group' header, showing options: 'Rename', 'Add...', 'Pause', 'Start', 'Export aggregated results', 'Export votes', and 'Delete'.
 - Displayed alternative 1:** 'Federer'.
 - Aggregate 1:** A list of social media posts related to the poll, including 'FAN FAVOURITE POLL - The Big Four #Federer #Murray #Djokovic #Nadal (1)' and 'Daniil Medvedev might be World No. 1 after Roland ...'.
- Right Sidebar (Preview):**
 - Question:** 'Who's the best player of all time?'
 - Table:** A table showing poll results for Federer, Murray, and Djokovic. All values are currently 0.
 - Bar Chart:** A chart showing the percentage of votes for each player, with the y-axis ranging from 0 to 1.0.



There are no restrictions on the types or the number of Poll that can be grouped.

Mapping Poll Alternatives

Poll Groups are regular Polls by themselves and have all attributes, parameters and advanced setting that regular Polls have as well. The only significant difference with regular Polls is that Poll Groups use the aggregated data from other Polls as source. All members of a Poll Group can contribute to its standings, and since Polls of different types, different number of alternatives and different orderings of alternatives can be combined into the same Poll Group, a mapping is necessary to determine which responses of the members must be combined.

This mapping is available in the Build section for Poll Groups. For each Group alternative it offers the possibility to select which alternative scores from which Polls should be aggregated. Combinations use bare counts, so any additions from moderators to member scores are ignored (although moderator counts can still be added on Group level).

Displayed alternative	Votes	Moderator votes	Total	Percentage
Federer	0	0	0	0 %
Murray	0	0	0	0 %
Djokovic	0	0	0	0 %
Total	0	0	0	0 %

There is no business logic that prevents alternatives from being used more than once.

By default, Poll Groups have three alternatives and alternatives can be added/removed in the same way as is done for regular Polls. The question and each alternative of a Poll Group can have its own color and image but by default, the question and alternative labels/images/colors are empty and mandatory element like question and alternative label have to be filled in manually before the Poll Group can be saved.

There's one exception to the above: when all Poll Group members are Facebook Reaction Polls, then the six alternative labels, colors and icons are pre-filled in.

4.3 Competitions

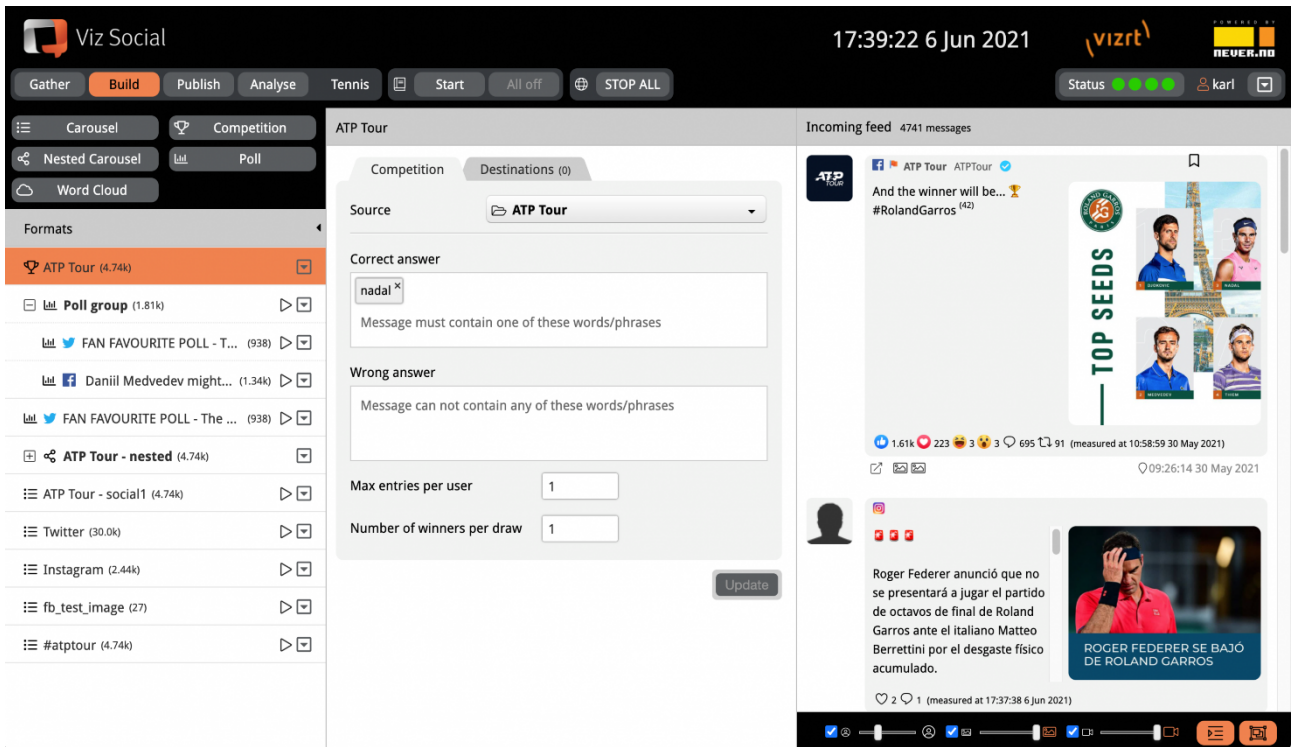
The Competition Format allows Viz Social users to collect answers to a publicly announced question, to select the users that responded with the correct answer and among these, to draw one or multiple random winners (in a reliable and legally sound way).

Like other Formats, the Competition is based on an incoming stream that can either be a Search or a Group of Searches. Competition destinations are similar to Carousel destinations and Viz Social uses the destinations to publish the winning posts. The Competition's most important parameters are:

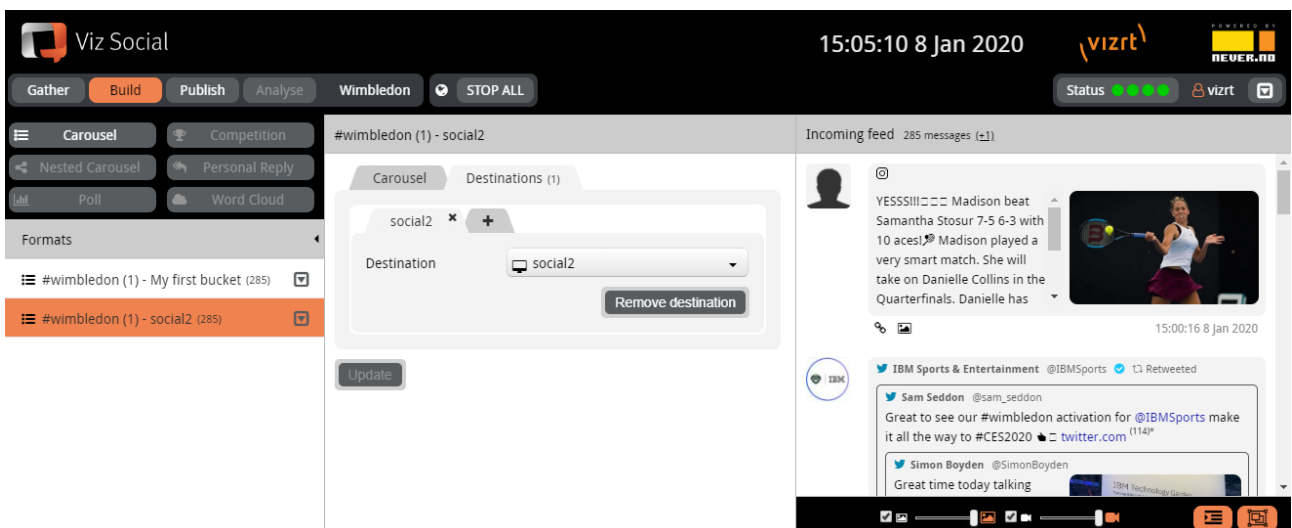
- A list of correct answers. The text of the incoming posts is scanned for presence of these words or phrases. Posts that do not contain either of them are not eligible. When left empty no scanning is done and everyone participates.
- A list of false answers. The text of the incoming posts is scanned for the absence of these words or phrases. Posts that contain at least one of them are not eligible. When left empty no scanning is done and everyone participates. Please note that the false list has priority

over the correct list, so if someone mentions a correct and a false answer, the user is considered not eligible.

- The maximum number of entries per users (irrespective whether they are false or correct).
- The number of winners per draw.



4.4 Viz Social Carousel Set-Up

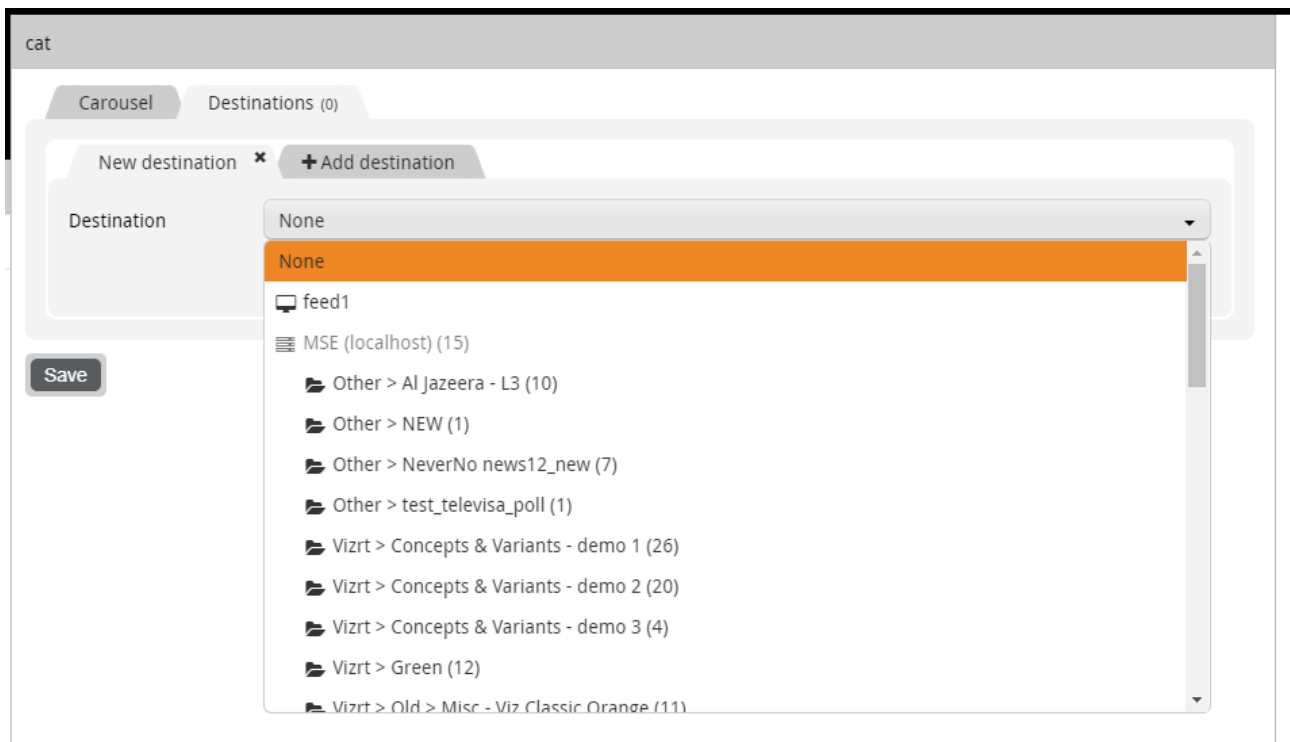


This section contains information on the following topics and procedures:

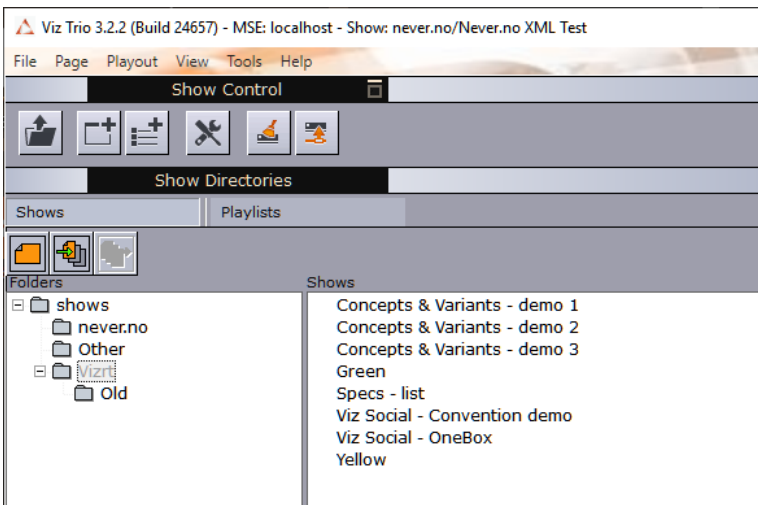
- [Destination Template Mapping](#)
- [Template Selection](#)
- [Field Mapping](#)
- [Output Channel and Format Outputs](#)

4.4.1 Destination Template Mapping

Viz Social can be configured to control one or more Viz Trio/MSE devices, which will appear as possible destinations under Formats in Build. In the example below “MSE (localhost)” is a configured MSE (Trio) device:



The show hierarchy is mapped into a flattened list, so the structure above represents the equivalent MSE folder structure as shown below. Folder names receive a “Vizrt > “ prefix on the Viz Social side above:



Viz Social abstracts various third party data models and maps them into a common structure which it exposes to Viz Social. In the case of MSE, the mapping is:

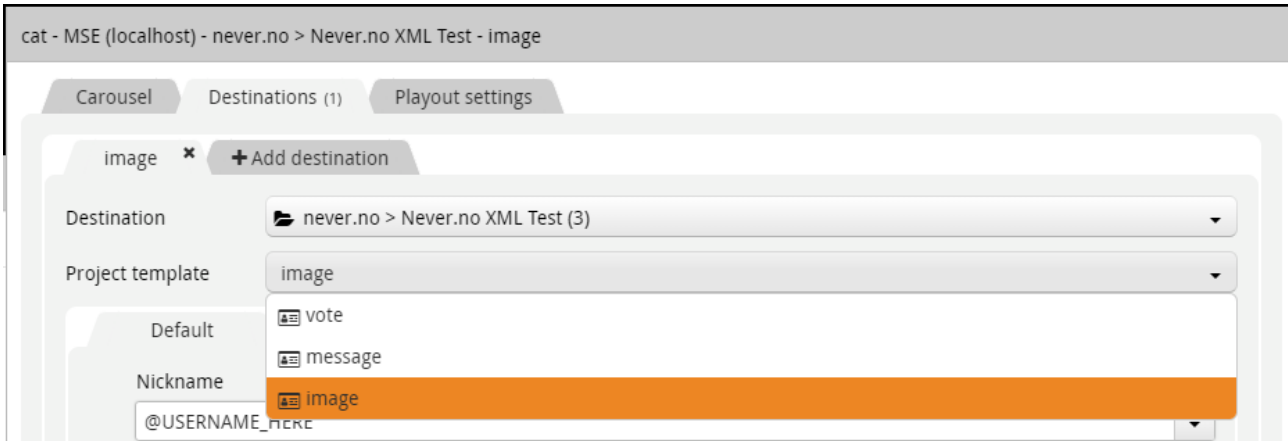
MSE	Viz Social
MSE installation	Device
Profile	Channel
Show	Project
Template	Template
Field	Field
Playlist	(Format output)
Page	(Format output)
Profile action	Action button

⚠ Note: Viz Social retrieves the list of shows and templates when you log in. If you modify or create/delete shows you must log out and in again to see the changes. If you've already set up a Format mapping (see below) and change the field layout of the template, you must log out of and in again to Viz Social (to refresh the list of shows), then edit your format and add a new destination and set up parameter mapping again, then remove the old destination.

Carousel content can be exported into a selected MSE show and template, which is then used to create pages based on the Carousel content + the selected template + a configured field mapping.

4.4.2 Template Selection

When you select a Trio show as a destination, you must choose the template for which to generate pages:



This is a 1:1 mapping of the templates available in the show in Viz Trio, but templates with no fields are filtered out:

Thumbnail	Name	Variant	Description	Layer(s)
	default			[MAIN]
	vote		"Vote question"	RightSideLayer
	message		message	BottomLayer
	image		Image	RightSideLayer

4.4.3 Field Mapping

Below the template selection you will find the fields that are available in the show, and that will have to be mapped to the components of social messages:



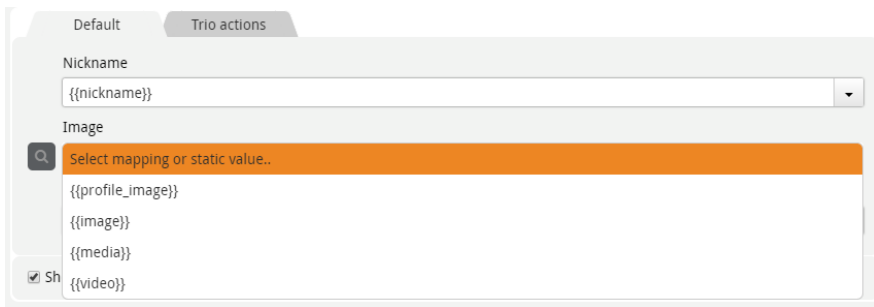
These are the same as the fields in the template in Trio:

Tab Fields	
Description	Value
001 (Nickname)	@USERNAME_HERE
002 (Image)	IMAGE*Viz_2x/image/0000saddam3
003 (Message)	Here's a picture of something random so that I can have it shown on TV!

The default values are just the values from the fields, and you can use the dropdown menus to choose to “map” or “route” content into them:

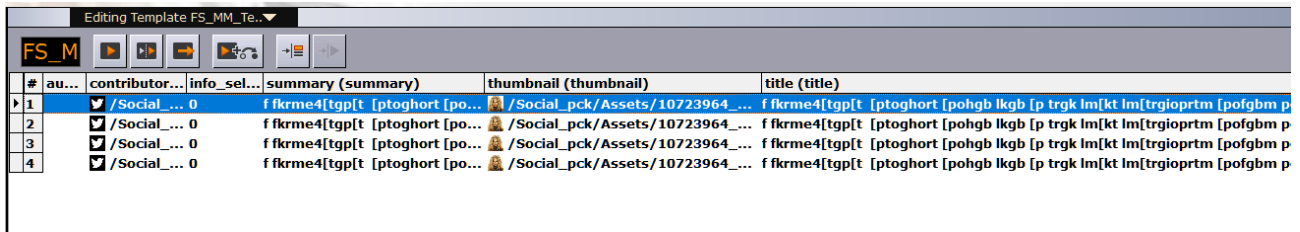


These mappings can contain both regular text or dynamic macros such as {{nickname}}. Based on the field types they may limit the mappable macros by the matching types, e.g. the “Image” field only lists image and video properties of the social message:

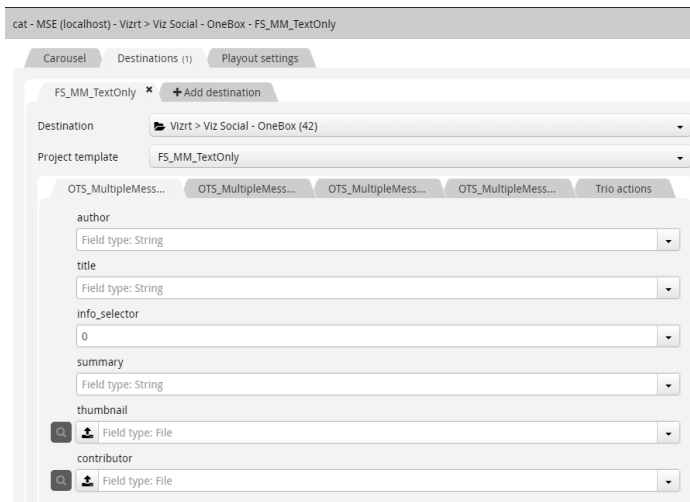


VDF Models With Lists and Other Complex Structures

If a template has a list structure (e.g. table), then instead of the “Default” field group you will get a separate field group (tab) per row, e.g.



This maps into the following layout:



In this case you can suffix the field mappings with 1, 2 etc to indicate which source message you are mapping, e.g. {{nickname1}} or {{message2}}.

When working with multiple messages mapped into the same template at once, you will have to set this up in the “Playout settings” tab of the Format, where you in this case should set the “Number of items” to for instance 4:

cat - MSE (localhost) - Vizrt > Viz Social - OneBox - FS_MM_TextOnly

Carousel Destinations (1) Playout settings

Master output module MSE (localhost) » Vizrt > Viz Social - OneBox » FS_MM_TextOnly » default » MSE show: export as group

When playing out content on devices, one device has to be assigned as the master output that controls the progression/timing of elements

Drive mode Automatic Manual

Carousels can either progress automatically after displaying each carousel item for a specified duration of time, or be fully manual where an operator controls progression (presses 'next')

Number of items

Some templates support more than one message

Trio Actions Tab

The *Trio actions* field group is a virtual group that does not map to any fields of the template, but rather is a workaround for the lack of other customizable options per template. In the case of MSE templates, you have the option of specifying which profile actions you want to expose as buttons in the UI:

Default Trio actions

Initialize

Clean up

Continue

Continue reverse

Initialize and *Clean up* are the equivalents of the similar Trio buttons and affect the show pages, while *Continue* and *Continue reverse* can be used for templates that have stop points once played in (see “play out” below).

To leave a button out, just leave the field blank. To rename a button you can type the name you want the button to have.

4.4.4 Output Channel and Format Outputs

Format outputs depend on the device and Format being set up, but basically implement the Format output on the device. The output channel is the target on the device that should be used for play-out.

In the case of Viz Trio, output channels are mapped to Profiles set up in Trio. Format outputs are presented as follows:

Output channel	default
Output module	<input checked="" type="radio"/> MSE show: export as group <small>Items exported as a group in a show</small> <input type="radio"/> MSE show: export as playlist <small>Items exported as a playlist in a show</small> <input type="radio"/> MSE show: export as page range <small>Items exported as page range in a show</small>

Group and Playlist Naming

Currently the name used for the groups and playlists will be the same as the Format name in Viz Social. For instance, when you create a new Format mapped from the Search “Cat” to the destination device “MSE (localhost)”, project (show) “*never.no* > never.no XML Test”, template “image”, Viz Social will automatically name the Format “cat - MSE (localhost) - *never.no* > never.no XML Test - image”, and the group/playlist will be given the same name.

The group/playlist is only created when the Format is started (“Start” button), so it will not be visible before that time.

⚠ Note: If you want to rename the group/playlist then currently the following has to be done.

1. Rename the Format in Viz Social
2. Go into Build > destinations and change something in e.g. the mappings, and revert the change (e.g. add a space and remove it from one of the field mappings)
3. “Update”

4.5 Word Cloud Format

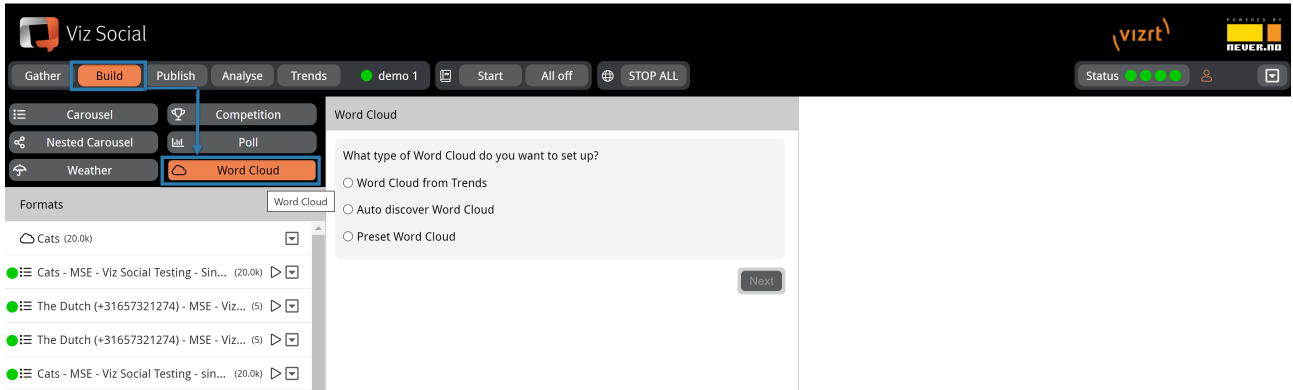
WordCloud plugin reads an XML file to create word cloud type visualizations to measure the popularity of particular terms in an incoming feed. It can also be used for dynamic trend detection, which involves monitoring the popularity of terms to see what is trending.

4.5.1 Build a Word Cloud

To build a new word cloud, Click on **Build > Word Cloud**. Word clouds come in three types:

- **Word Cloud from Trends:** The social trends will be used as a source for creating the Word Cloud.
- **Auto-discover:** The most common terms in the feed are automatically discovered for which no input limits are established in advance.
- **Preset:** For which a collection of relevant terms is pre-configured and the counts for these terms only will be tracked. The list of relevant terms can again be saved, edited, and uploaded.

Note: Word Cloud type can only be set when creating a Word Cloud and can no longer be changed once that Word Cloud has been saved.



The options for managing a word cloud are managed through four tabs:

- [Word Cloud](#)
- [Destination](#)
- [Lists](#)
- [Advanced](#)

Word Cloud

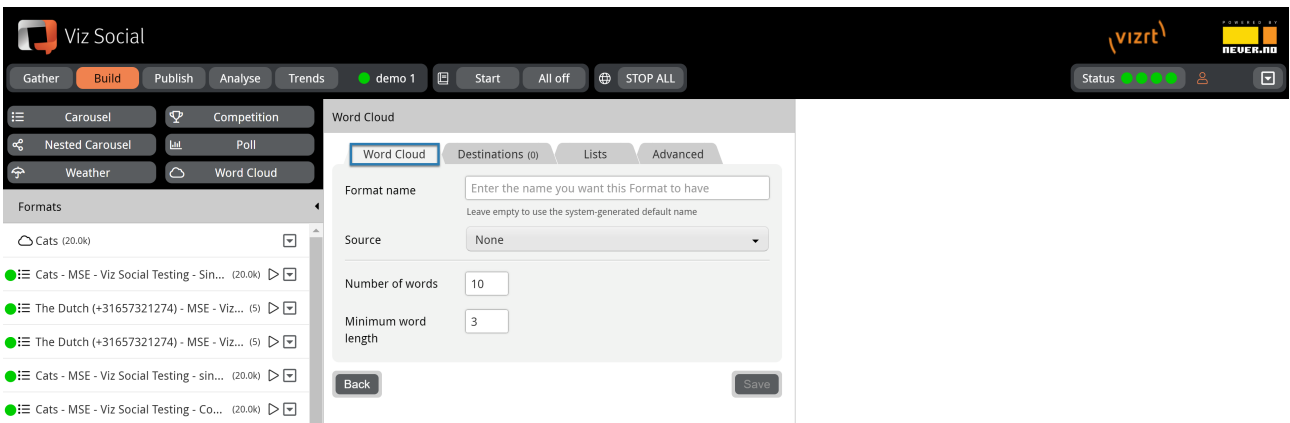
Source: select the source feed to be used in building the word cloud. Unlike Auto-discovery and Preset Word Clouds, the trends Word Cloud source is always "World".

Number of Words: To specify the number of words to be included in the word cloud.

Minimum word length: the minimum word size to be chosen. Word Clouds work towards ignoring URLs.

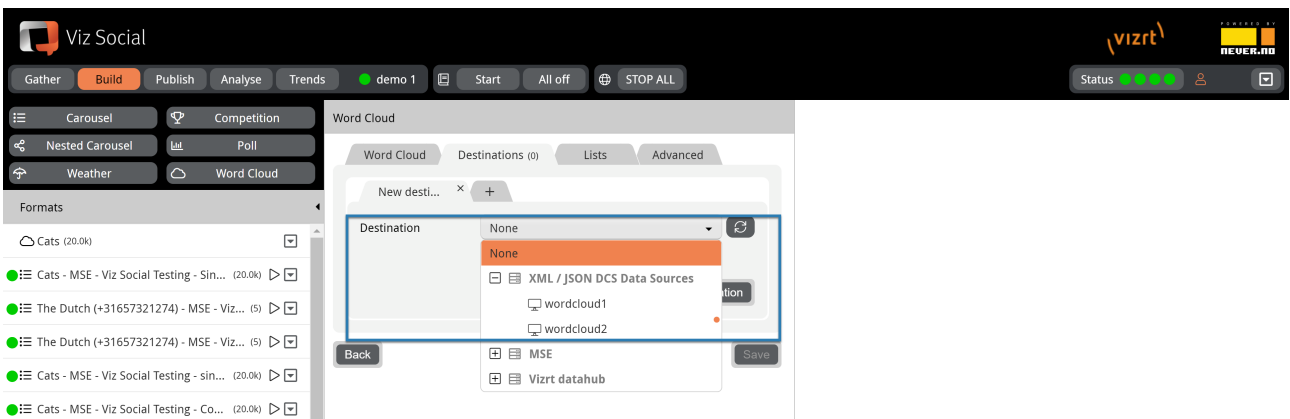
Note: Number of words and word length options are only available for the auto-discovery word clouds.

Number of trends: Indicate how many global trends should be included in the word cloud. This option is only required for Word cloud in trends type.



Destination

Select the XML file destination



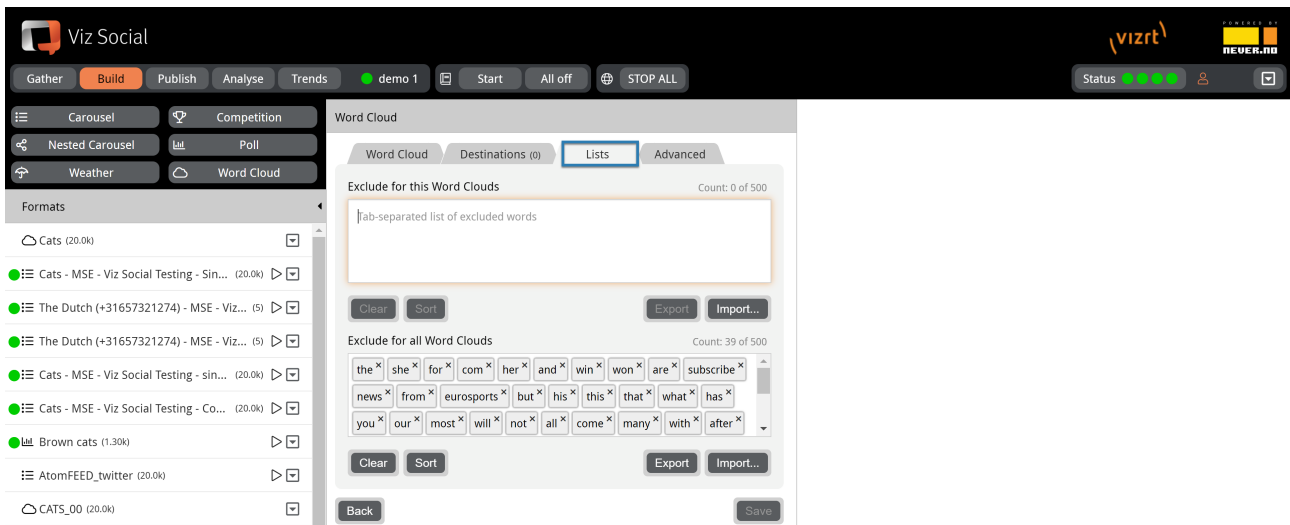
Lists

Many insignificant words like “and”, “the”, “you” will initially rule the top regions but are less meaningful for interpreting the chatter and discovering trends. The Lists tab gives access to two exclude lists:

- Format-specific exclude list
- System-wide exclude list that is shared with all Word Clouds on the platform.

Words on either one of these lists will not be considered for contribution to the Word Cloud. Both lists can be exported, edited, and imported. Terms can be added/removed in Build and also via the “Exclude” functions in Publish.

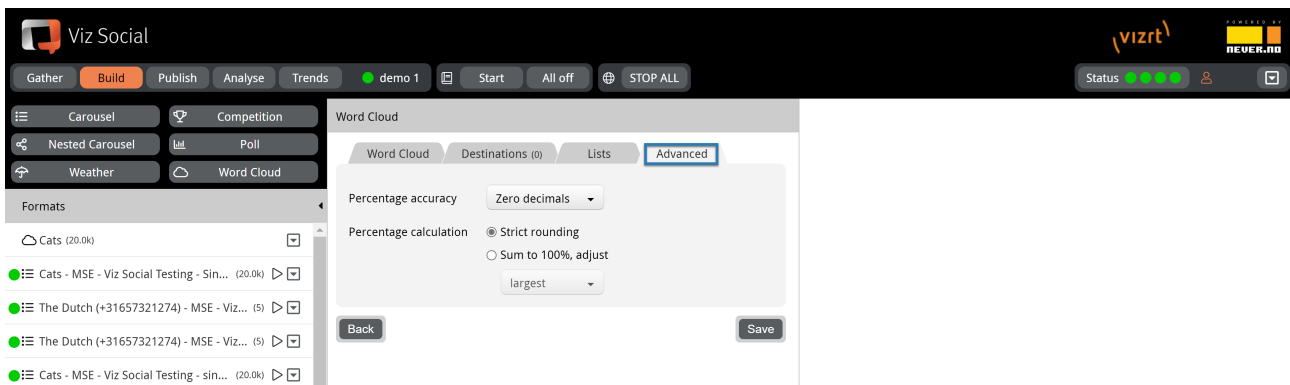
Note: The exclude lists only apply for auto-discovery Word Clouds.



Advanced

The advanced tab of Word Cloud gives access to more technical configuration parameters:

- **Percentage calculation:** percentages can be either rounded according to standard mathematical rules (which might cause them not to add up to 100%) or forced to sum up to 100% by adjusting either the smallest or the largest score.
- **Percentage accuracy:** percentages can be presented with 0, 1, 2, or 3 decimals.



The Publish Strategy for Word Clouds is always Manual. Please be aware that the calculation time for Word Clouds is proportional to the number of posts, and this might be of the order of minutes for Searches with 1.000.000 results or more.

The preview in the right column shows the top of the word list including a graphical Word Cloud-like preview to guide the eye and help interpretation. Word Clouds do not update automatically, so users must press the refresh button to refresh the numbers.

The screenshot displays the Viz Social software interface. At the top, there is a navigation bar with buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Trends', and a 'demo 1' indicator. On the right, there are status indicators and a 'STOP ALL' button. The main interface is divided into several sections:

- Left Panel (Formats):** A list of data sources including 'Cats (20.0k)', 'Cats - MSE - Viz Social Testing - Sin... (20.0k)', 'The Dutch (+31657321274) - MSE - Viz... (5)', 'Cats - MSE - Viz Social Testing - sin... (20.0k)', 'Cats - MSE - Viz Social Testing - Co... (20.0k)', 'Brown cats (1.30k)', 'AtomFEED_twitter (20.0k)', 'CATS_00 (20.0k)', 'CATS (20.0k)', and 'Vizrt (3.73k)'. The 'CATS_00' source is currently selected and highlighted in orange.
- Central Panel (Word Cloud Settings):**
 - Source: 'Cats' (with a Twitter icon)
 - Number of words: '10'
 - Minimum word length: '3 chars'
 - An 'Update' button is located at the bottom right of this panel.
- Right Panel (Word Cloud and Table):**
 - Word Cloud:** A visualization of words from the selected source. The most prominent words are 'cats', 'catsoftwitter', 'cat', 'adoptdontshop', 'pets', 'kittens', 'love', 'now', and 'nekoiroiro'.
 - Table:** A table summarizing the word cloud data.

Label	Count	Moderator count	Total	Percentage
1. cats	19998	0	19998	41 %
2. catsoftwitter	8423	0	8423	17 %
3. cat	5447	0	5447	11 %
4. adoptdontshop	2806	0	2806	6 %
5. pets	2366	0	2366	5 %
6. kittens	2231	0	2231	5 %
7. love	2025	0	2025	4 %
8. catsontwitter	2019	0	2019	4 %
9. now	1797	0	1797	4 %
10. nekoiroiro	1560	0	1560	3 %

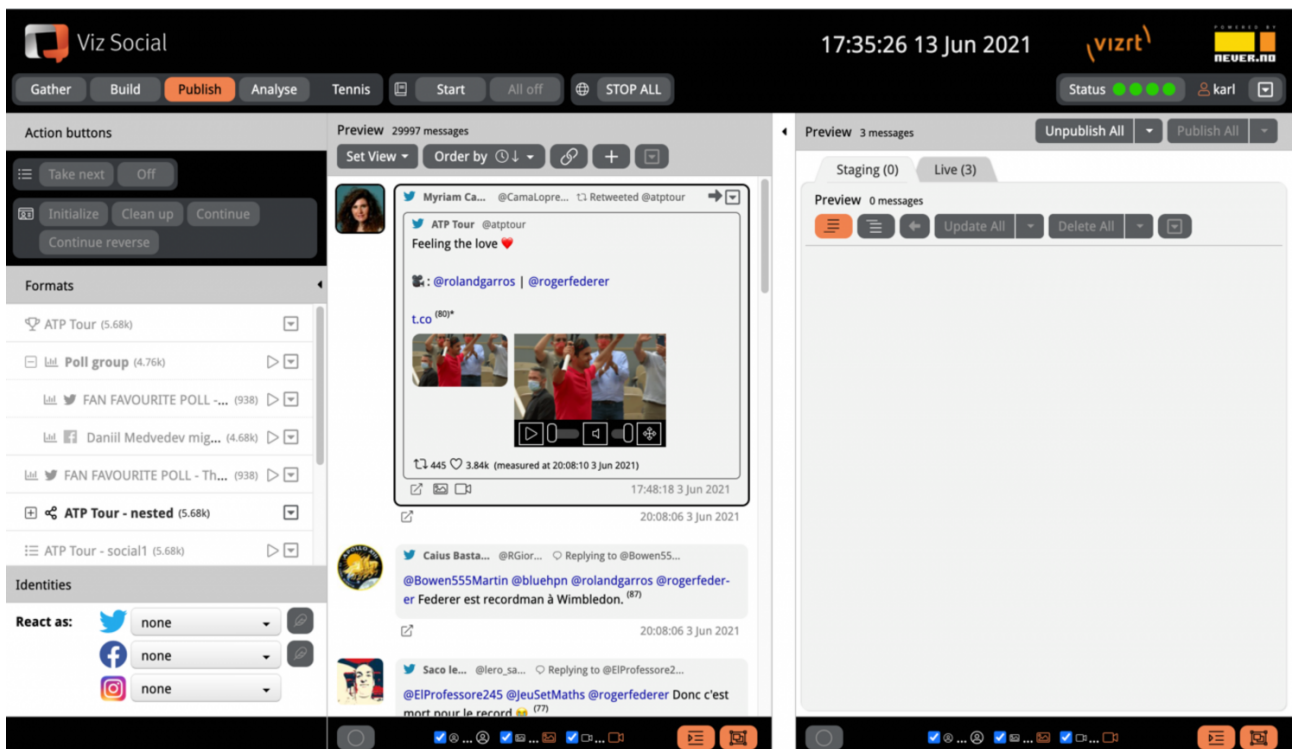
5 Publish

Publish is where all the action happens. Everything that affects the broadcast playout and/or associated second screens is managed from Publish in real-time. If all feeds have been set up correctly, then Publish is the only module that should be accessed during production.

When accessing Publish, the left column shows the set of active Carousels. Carousels in the left column can be re-ordered via drag and drop.

5.1 Buttons

If a Format was associated with a set of predefined buttons in Build and the Format destination is a scene element, then action buttons are shown. The buttons now directly manage the dynamic behavior of the associated destination scene elements. Each button is associated with a particular action (for example, load scene, take scene On Air, unload scene, take scene Off Air, load new post, clear, etc.). Associating buttons with actions requires a one-time set-up.



Button functionality is only available for integrations for which a dedicated DCS plug-in is used (e.g. Viz Trio/MSE), not for XML/JSON outputs.

5.2 Carousel

Using the Carousel Format one can take individual posts On Air. To be able to find and publish the most appropriate posts among the potentially large set of harvested posts, Publish offers two mechanisms: Views and moderation.

This section contains information on the following topics and procedures:

- [Views](#)
- [Manual Intervention](#)
- [Tagging](#)
- [Moderation, Ordering and Publication](#)
- [Synchronization](#)
- [Play-Out](#)
- [Pinning Posts](#)
- [Automation](#)
- [Exporting](#)
- [iPad Publishing](#)

5.2.1 Views

Views are smart elements that, once activated, make sure that only a subset of the data feeding the Carousel is visible. Views resemble the Filters from Gather in the sense that they limit data so that further tuning becomes possible. The essential difference between Views and Filters is that Views only temporarily tune the number of posts the user sees, but that they do not actually delete any posts from the collections. Hence, if a particular View is removed, all posts, including the ones that were not visible when the View was still active, are available again. When message parameters are manually edited (name, alias, text, ...) then the Views use the modified variables and no longer use the original ones (unless and until the message is reverted back to its original).

Just like Filters, Views always act cumulatively as a series of consecutive logical ANDs, effectively narrowing the results. Views apply to all posts in a Carousel:

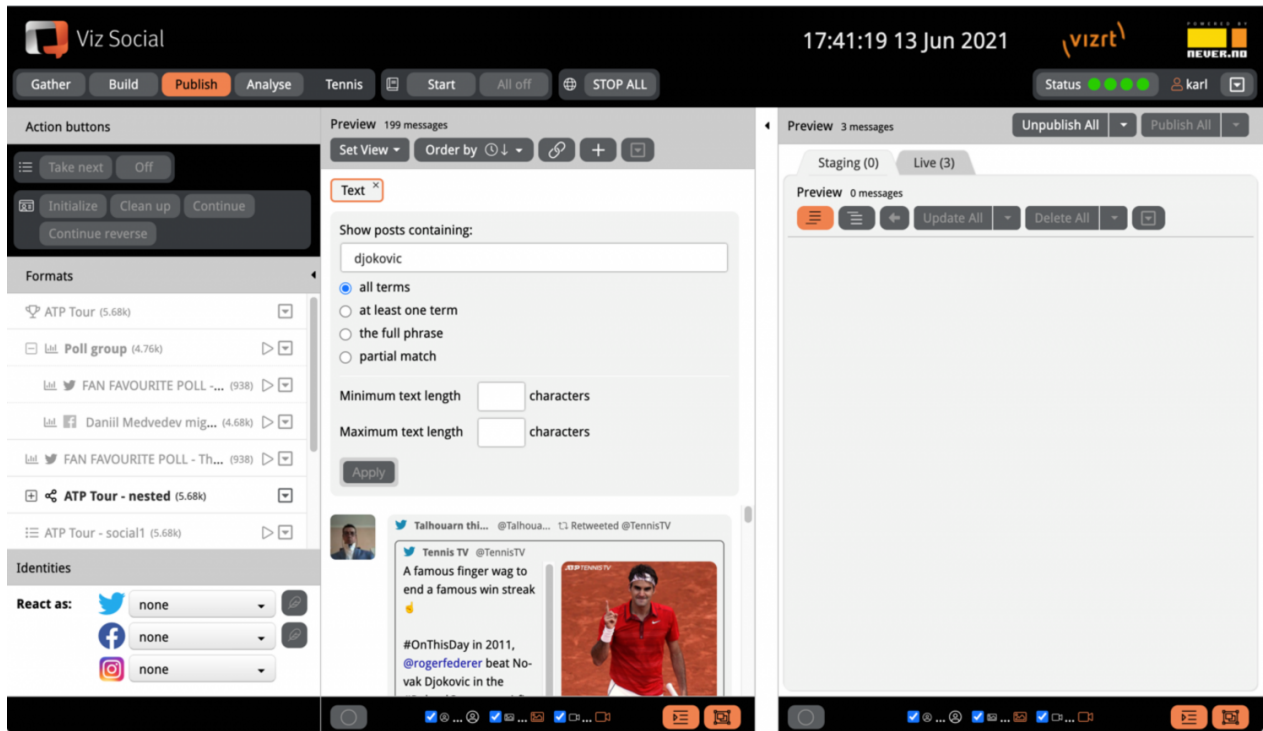
- Containing specific words/terms
- Message length (minimum/maximum length)
- Exclusion of specific words/terms
- Network specific parameters:
 - Twitter: Exclude retweets, quoted tweets, replies, likes and sensitive tweets
 - Facebook: Exclude comments and hidden comments
 - Instagram: Exclude comments
- Time range
- Media (type) presence
- Source Network
- Originator aliases (either a black or a white list)
- Tags

Finally, there is an option to order the results chronologically or anti-chronologically.

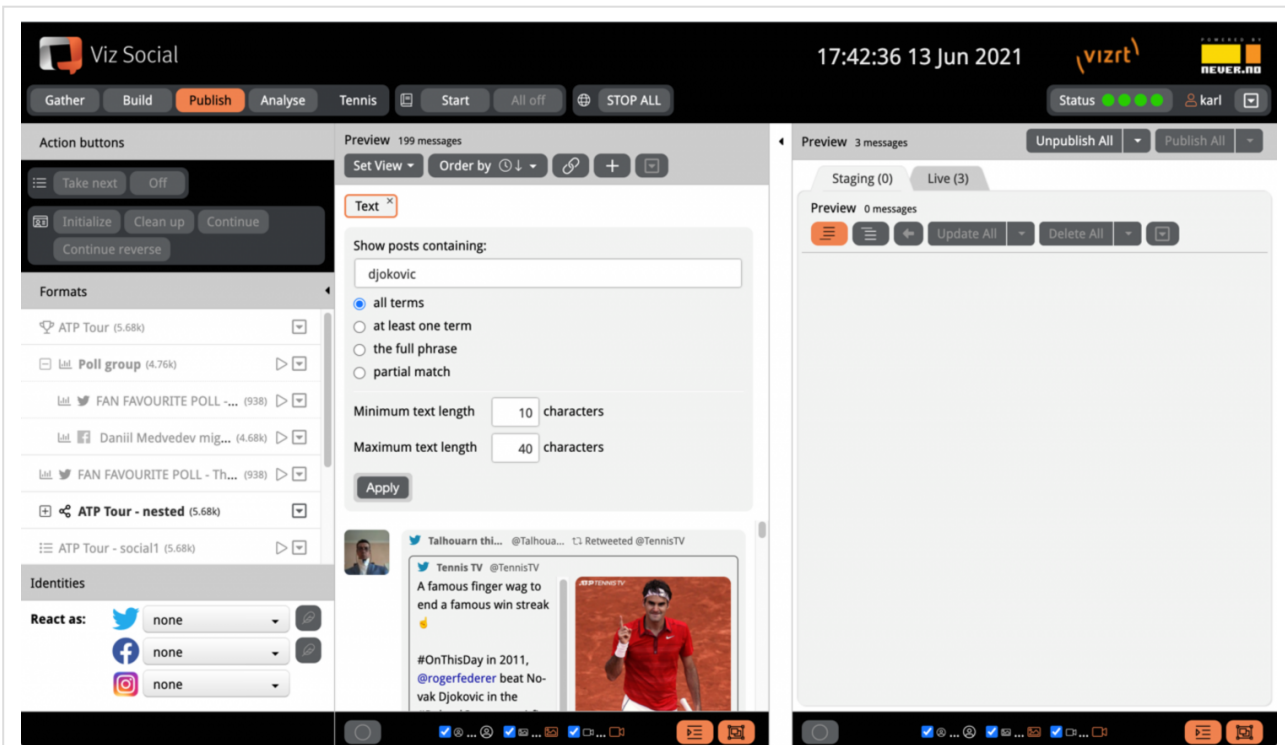
Views are added by choosing them from the dropdown **Set View** menu in the middle column of the Carousel. Active Views are shown as floating elements at the top of a column. The floating elements act as toggles: clicking them once expands the View, while clicking them again collapses it again (while remaining active). Views can be removed by clicking the delete symbol in their right top corner.

As an extra help, the originating Search for each post is shown when hovering over its social media icon.

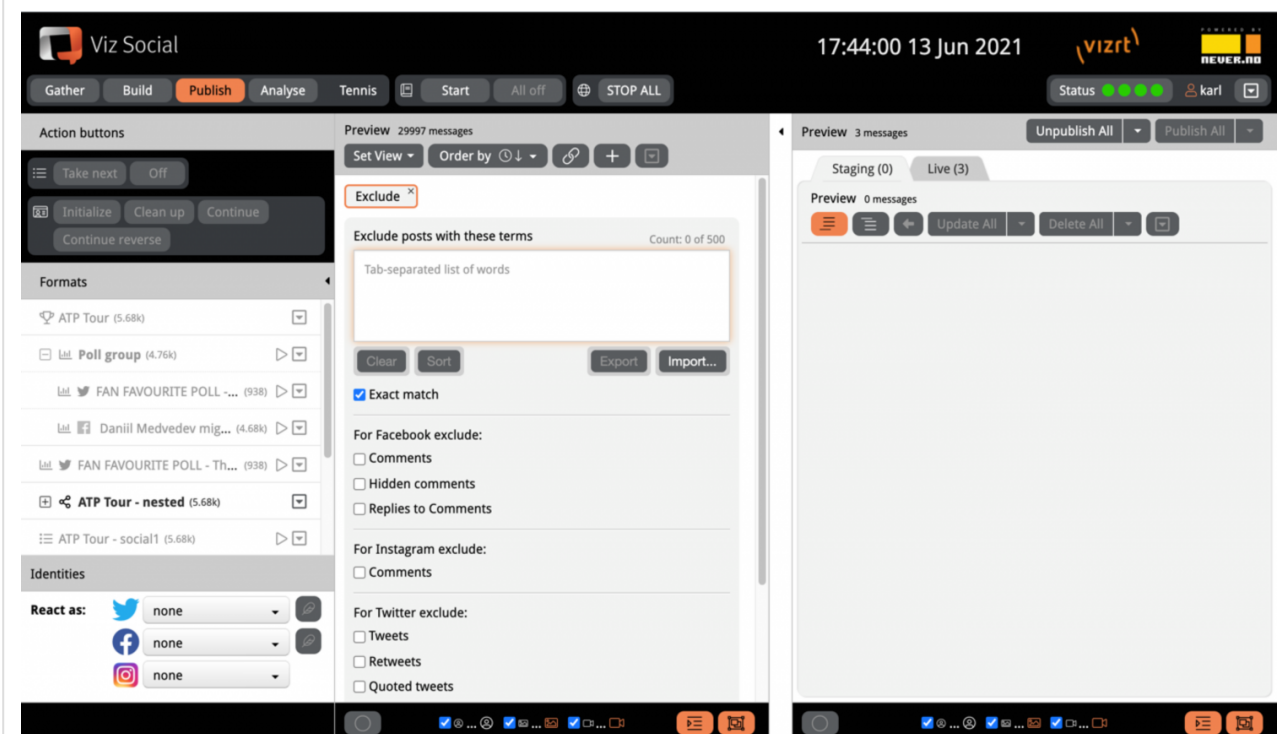
Publish Carousel Search View Set-up



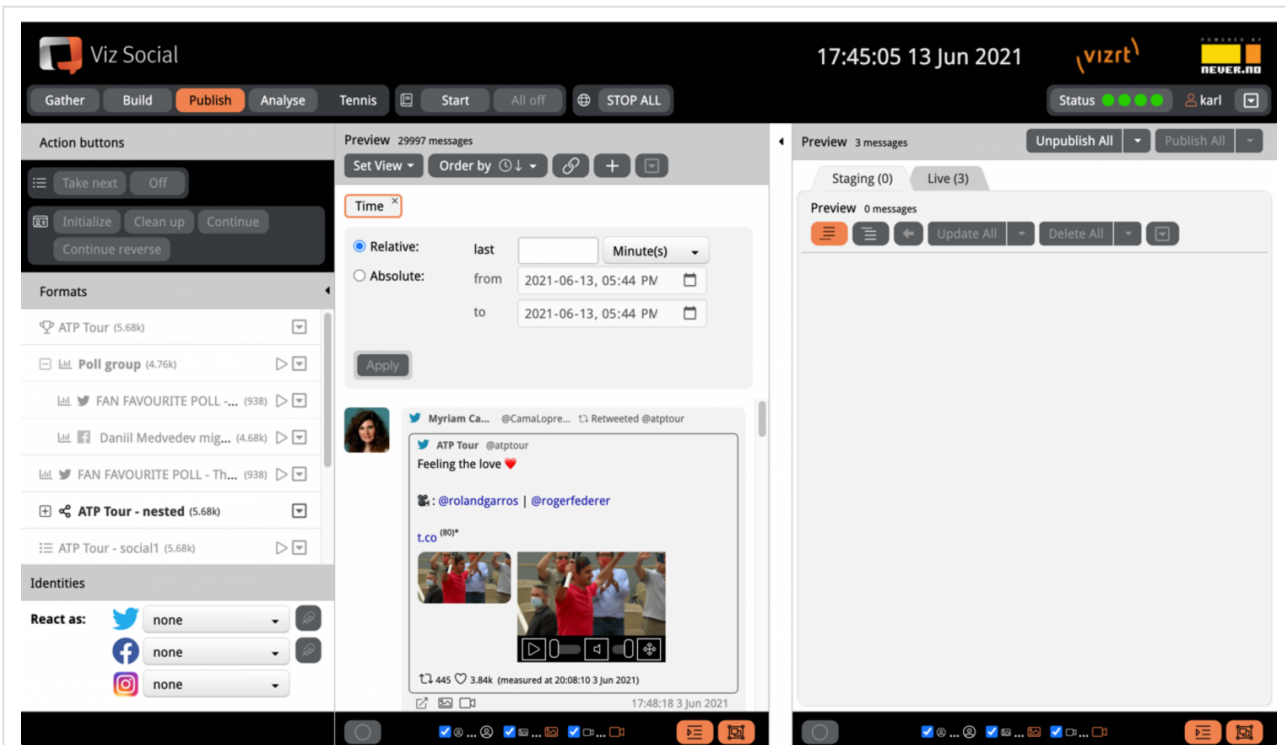
Message Length Filtering



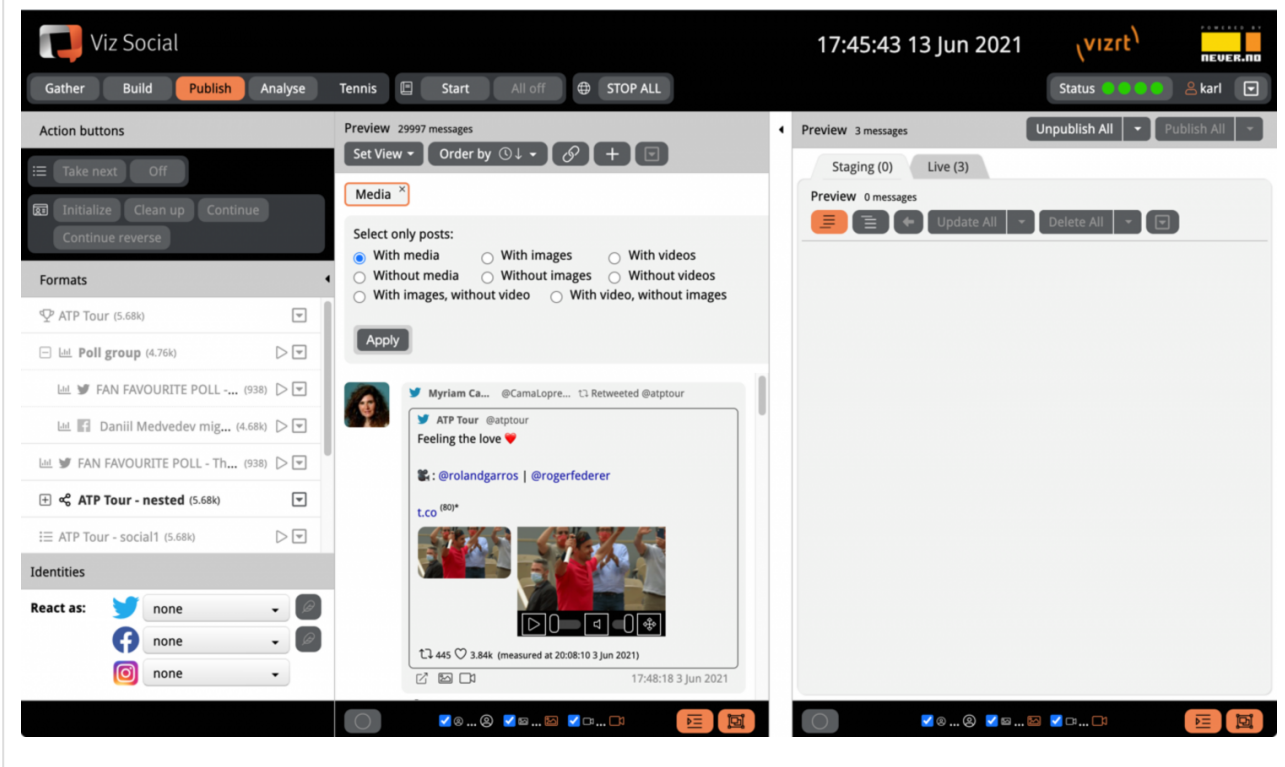
Publish Carousel Exclude View Set-up



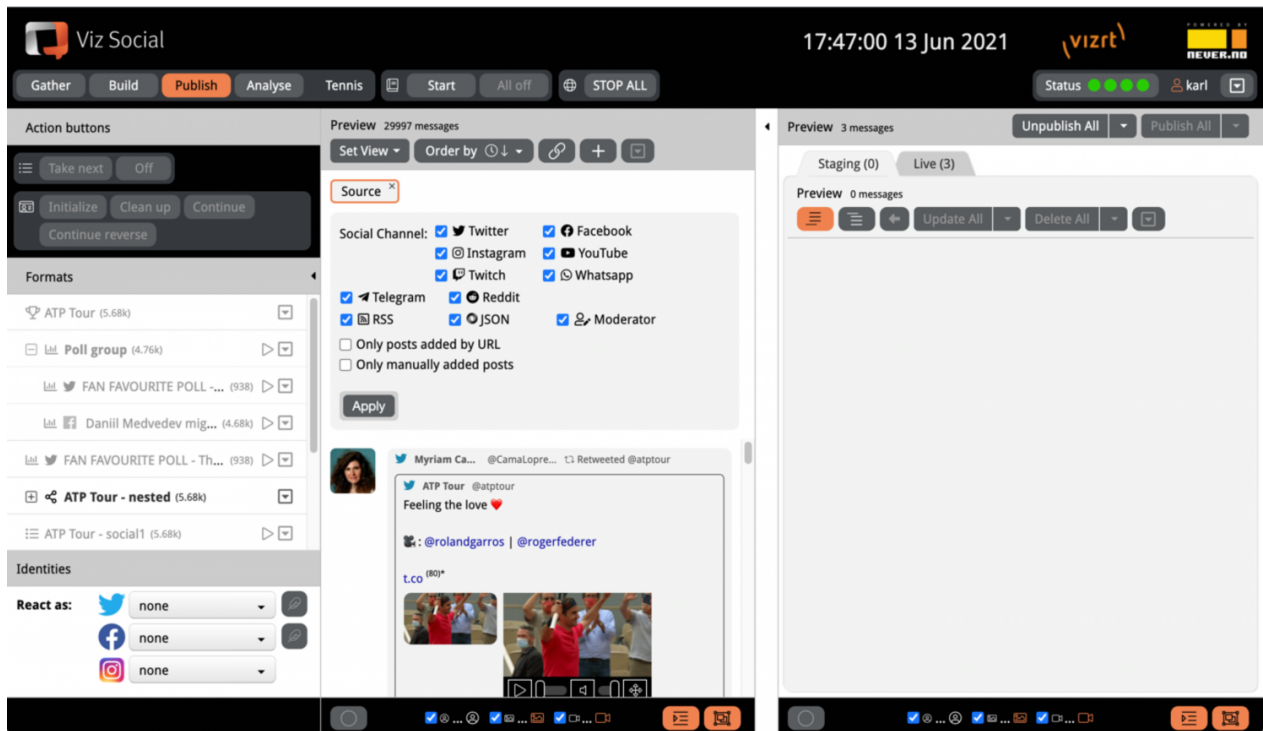
Publish Carousel Time View Set-up



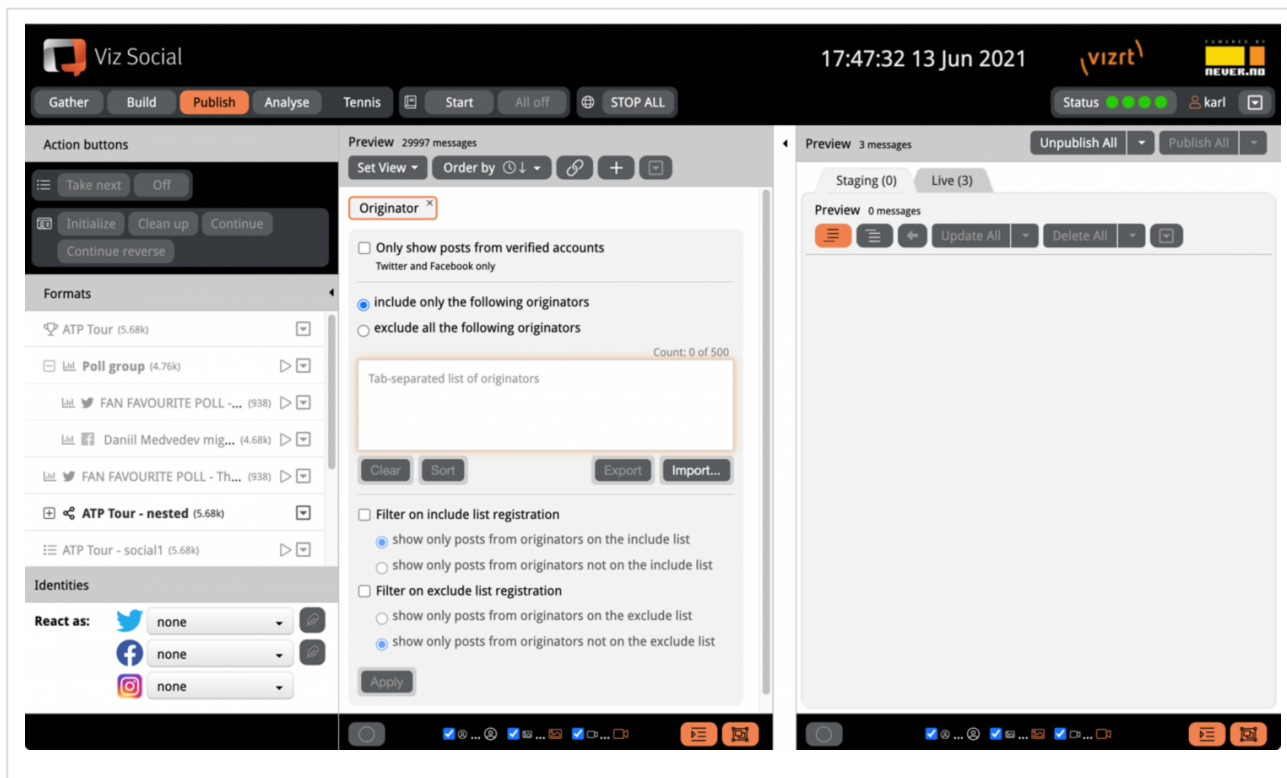
Publish Carousel Media View Set-up



Publish Carousel Source View Set-up



Publish Carousel Originator View Set-up



Views form a fast and flexible method for searching among enormous data sets and to find the most valuable posts. The Originator View in particular is very useful to isolate posts from categories of users registered by Gather [Originator Filters](#) in *soft mode*.

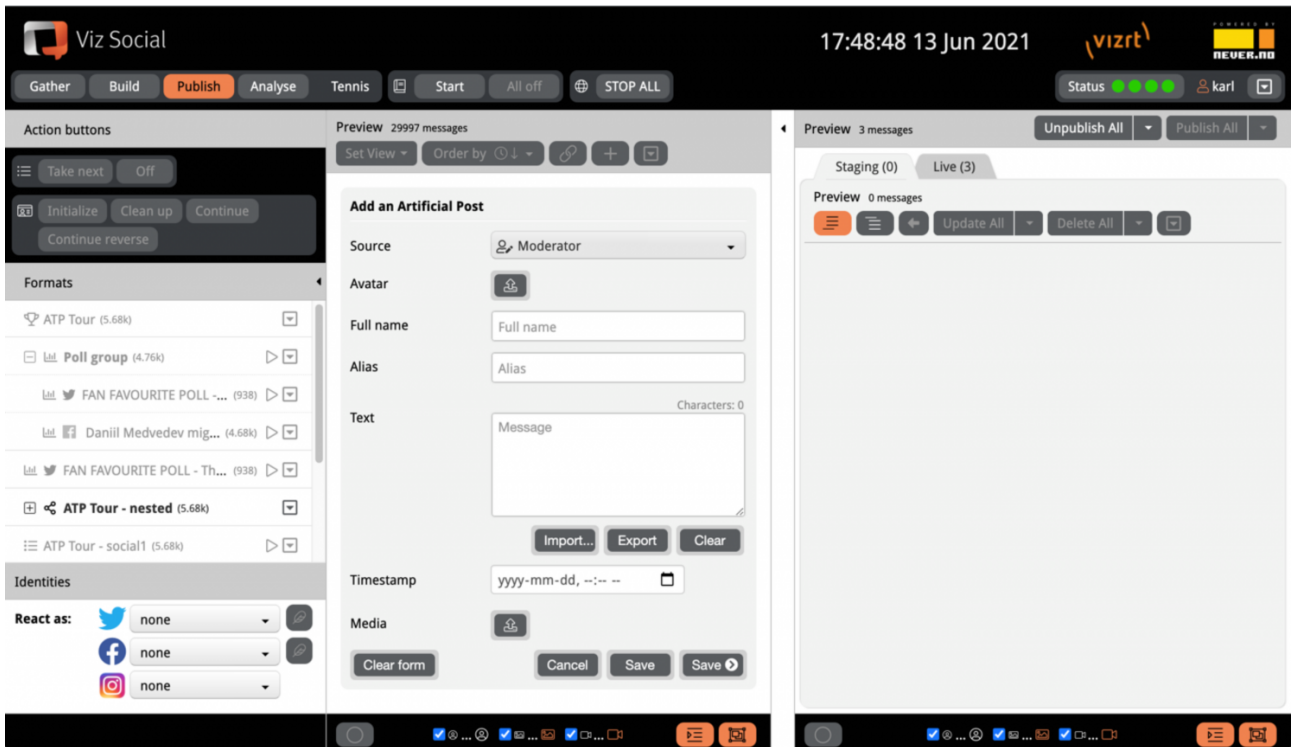
5.2.2 Manual Intervention

Posts in a Carousel originate from the configured source. However, Viz Social also offers the possibility to manually intervene by allowing manual insertion of artificial posts, insertion of additional posts via their URL, editing of posts and deletion of posts. It is important to realize that all these actions only apply to the posts in the active Carousel. Hence, if the same post (or even the same feed) occurs in other Carousels, they remain unaffected.

Manually Inserting Posts

A moderator can manually insert new posts by clicking the + sign in the header of the middle column. The user can select the type of post to insert: Twitter, Facebook, Instagram, YouTube, WhatsApp, or Moderator, which is a special type to allow identification of manually inserted posts. For each manually inserted message, the user can specify a name, a username/alias, timestamp, and the message text itself. Furthermore, it is possible to upload an avatar and to upload images, videos, and audio files and attach them to a post.

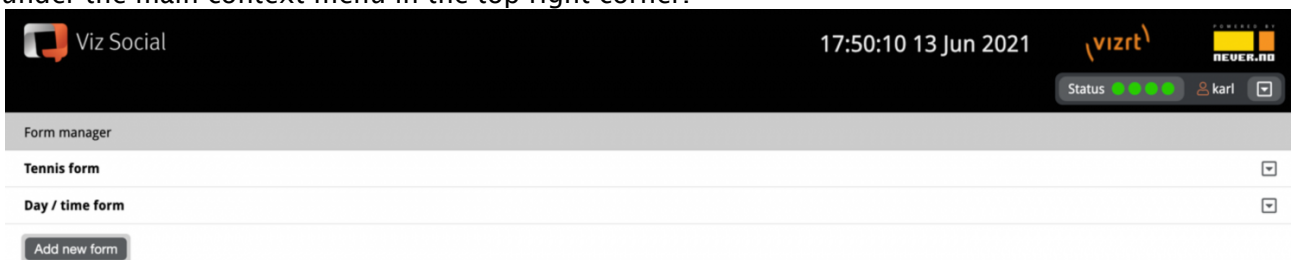
In case a post is inserted into a Format that is sourced by a Group, Viz Social allows the user to choose to which of its Group members the post are physically added. It is also possible to install a template so that each new post starts with the same default text (please contact support for this).

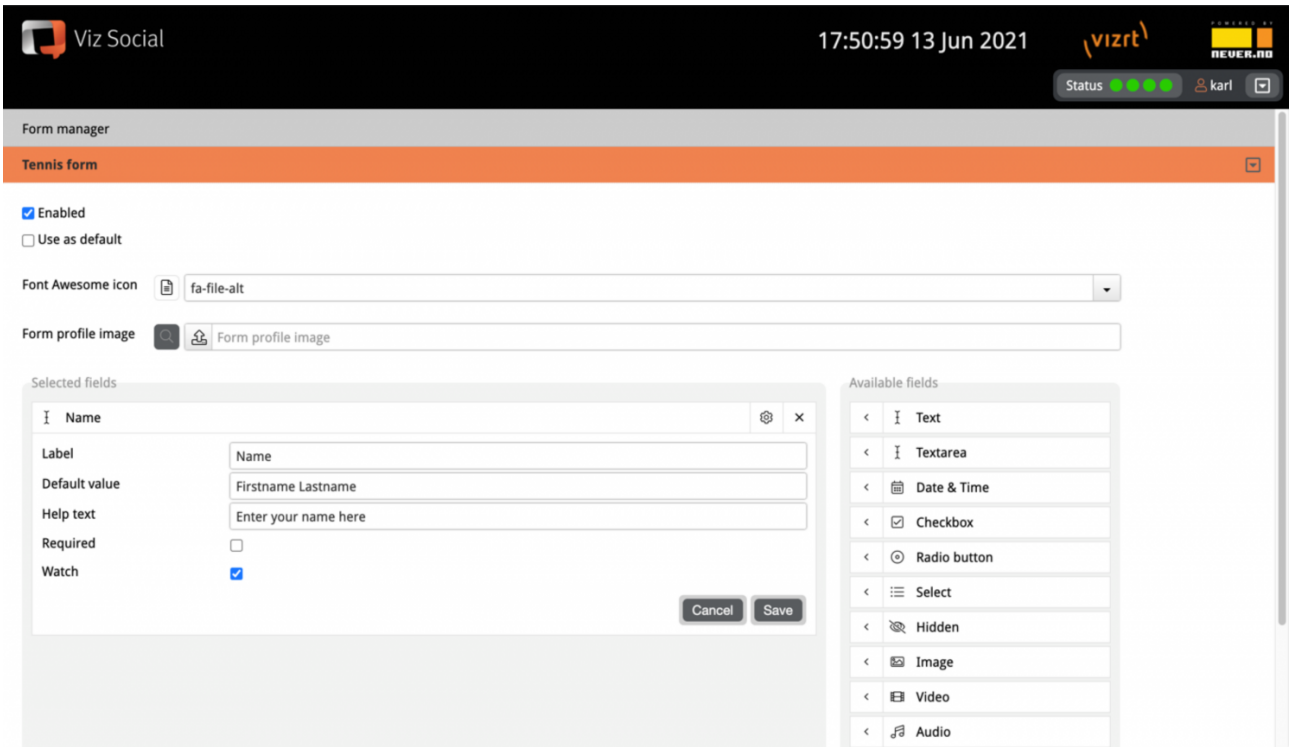


Manually Inserting Forms

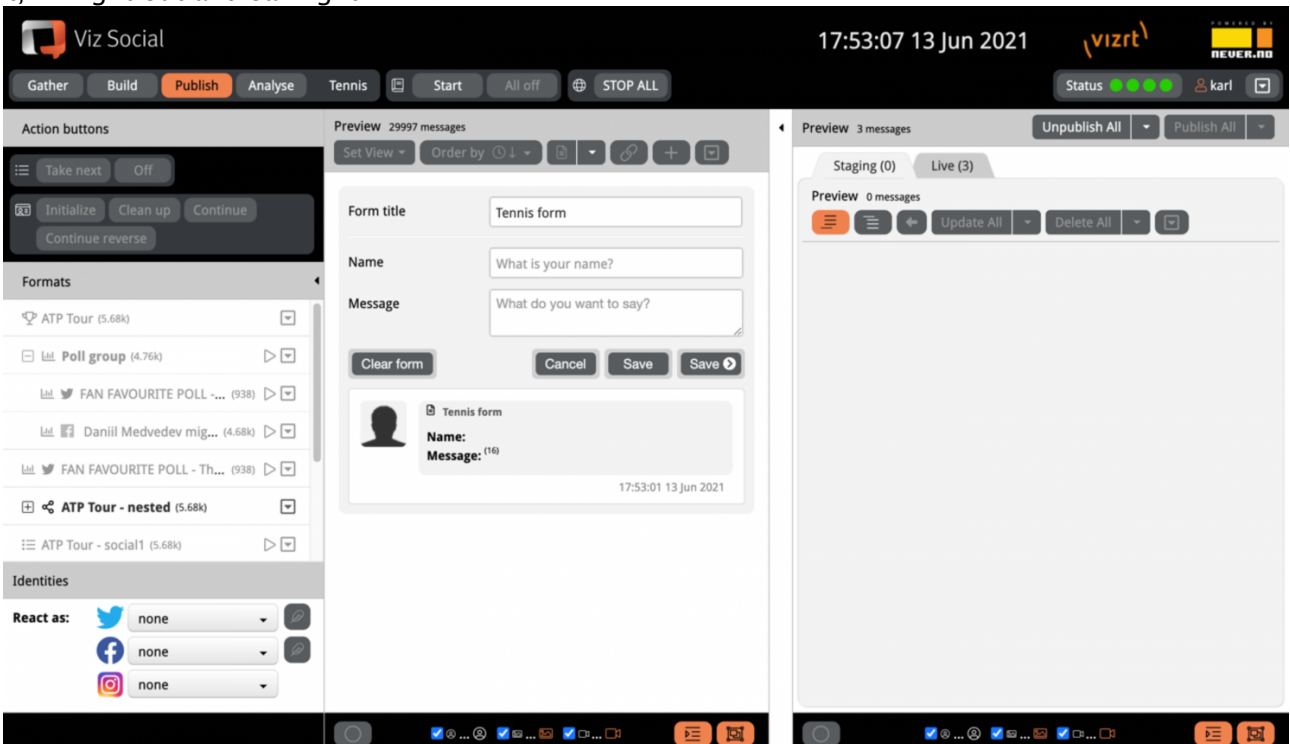
A moderator can also insert a new post based on a form. Forms are extremely useful when various posts with the same or similar data have to be created using the same syntax. A Form enforces a certain structure so that the risk of human error (and human boredom) is decreased significantly.

The structure of a Form can be configured via the Form Manager which is accessible for admins under the main context menu in the top right corner.





There is no limit to the amount of available Forms. Every Form can consist of various text fields, dropdowns, checkboxes, radio buttons, etc. The available Forms are shown in the Forms dropdown in the header of each Carousel's middle column. From there on it's a matter of selecting it, filling it out and saving it.

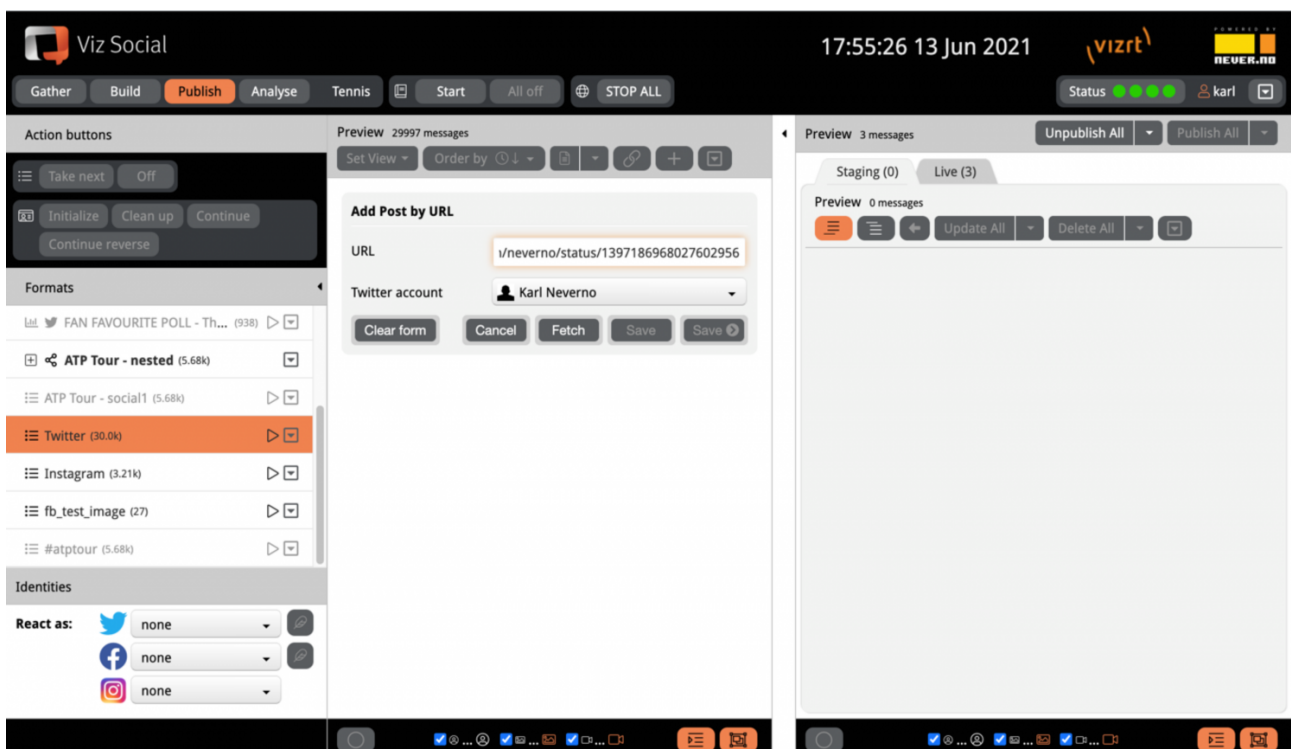


Inserting Posts by URL

In parallel to the manual insertion of artificial posts, Viz Social also supports the insertion of real Twitter, Facebook, and Instagram posts via their URL. To that end, click the link/chain button in the header of the middle column. Copy and paste the URL and press **Fetch** to see the linked post. If the post is approved, pressing **Save** adds it to the middle column.

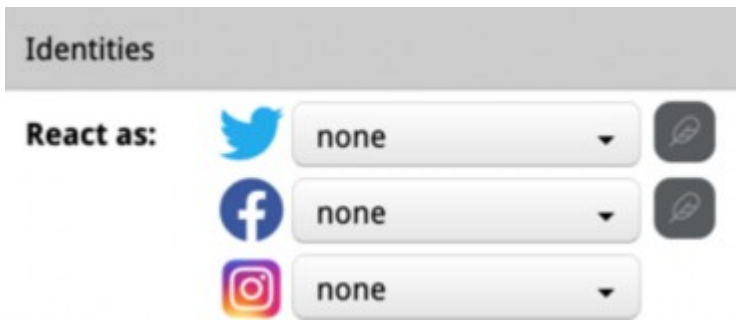
Warning: For Instagram, we add the message by reading the HTML of the published post from its URL as there is currently no API available for this. This means it's a best-effort search that could potentially stop working without prior announcement.

In case a post is inserted into a Format that is sourced by a Group, Viz Social allows the user to choose to which of its Group members the post is physically added.



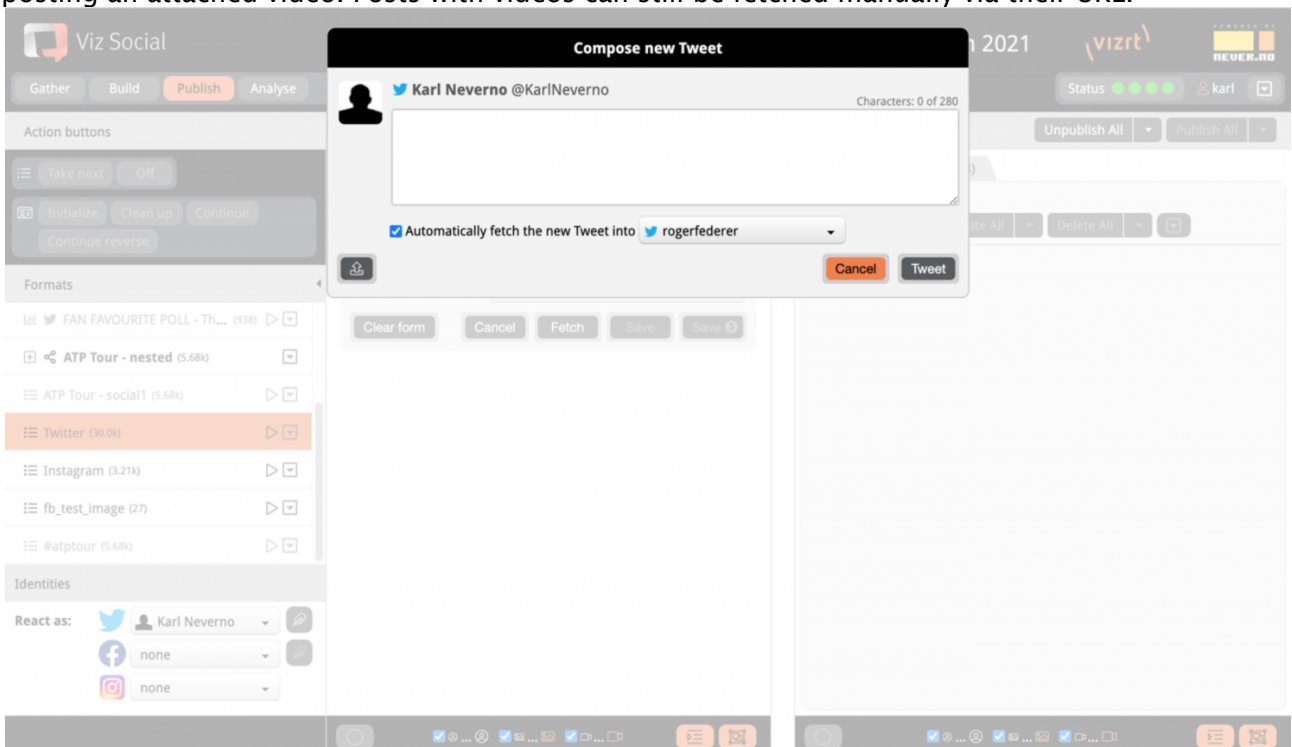
Posting from Viz Social

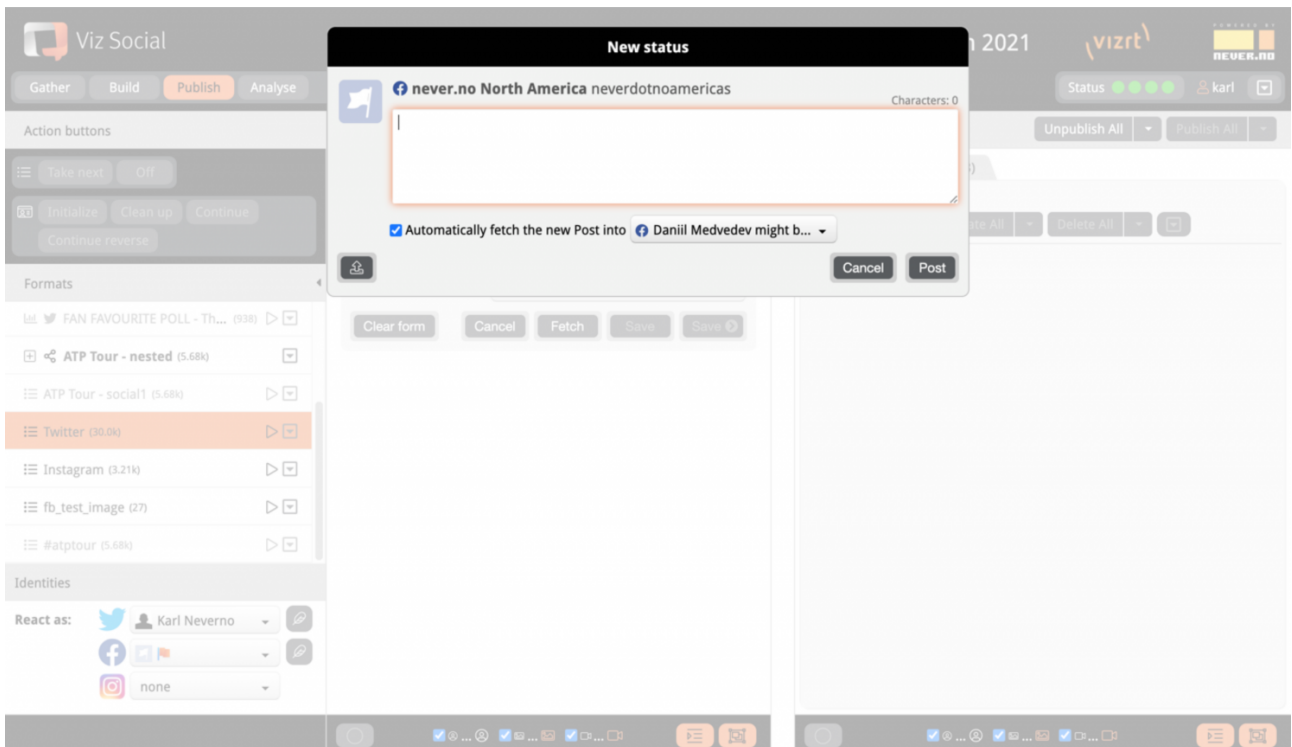
Viz Social offers the possibility to Tweet or Post independently from within its user interface. Since posting always requires an identity in the selected social network, using this feature requires users first to choose their identity. This can be set by selecting one of the preconfigured accounts at the bottom of the left column of Publish Carousel.



By clicking on the **New Tweet/Post** button just right of the identity (immediately right of the Twitter and Facebook persona dropdowns) a Create Tweet/Post dialogue is opened where a new Tweet/Facebook Posts can be composed, and an optional image/video can be attached. Video attachments must be *.mp4* or *.m4v* and not larger than 200 MB. You also have the option to automatically and immediately fetch your published Posts/Tweets/... back into Viz Social. Auto-fetching is enabled by default. The source of the active format is the default collection to which the fetched post is added, but another Search can be chosen via a dropdown menu that contains all Searches.

To prevent long waiting times for Viz Social users, the auto-fetch feature is not available when posting an attached video. Posts with videos can still be fetched manually via their URL.





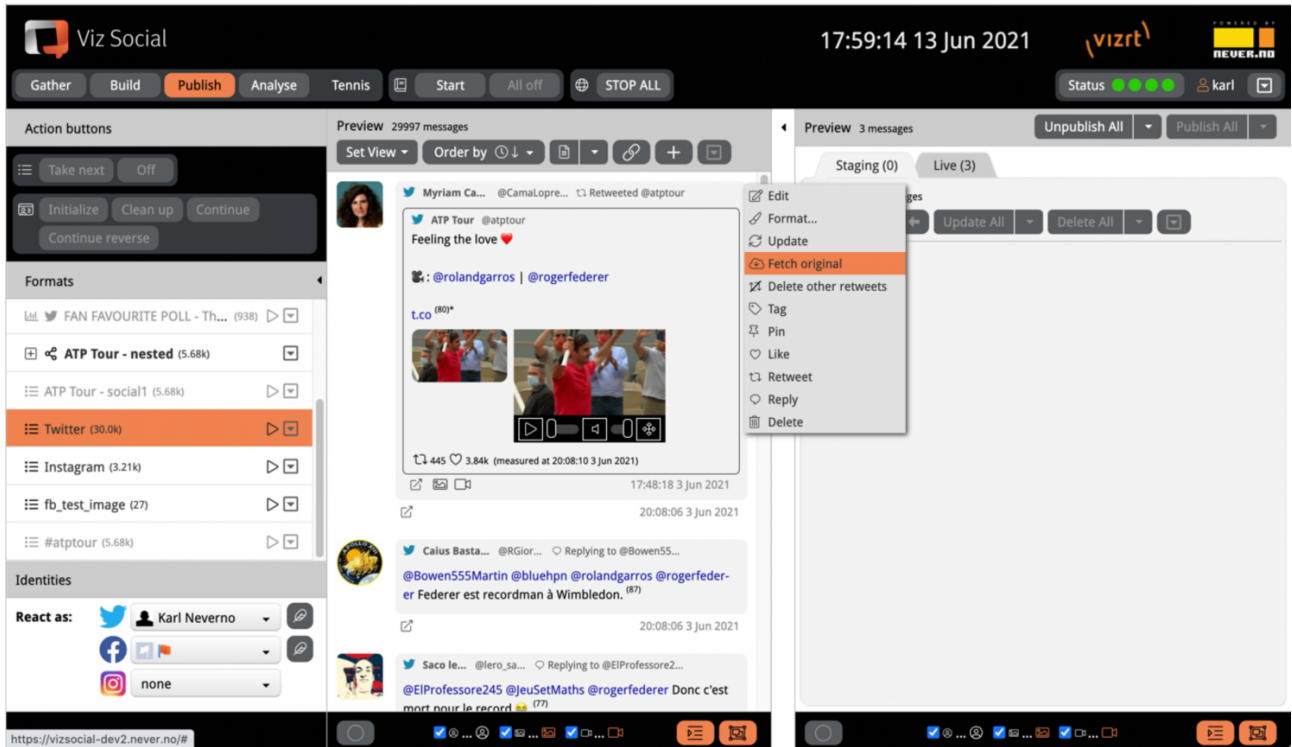
The right to create new posts can be granted on a user-by-user basis in the user profile. Constraints caused by limitations of current social APIs:

- It is not possible to submit posts to Instagram.
- If a Facebook persona is a Facebook page, it can only publish on that page itself.

Fetching the Original of a Tweet

On Twitter people frequently Retweet, Quote, or Reply (they Tweet within the context of another Tweet). Viz Social shows this nested structure and it is often interesting to find the origin of a Quote, Retweet, or Reply. For that reason, there is a **Fetch original** action in the context menu of Retweets, Quotes and Replies in Publish Carousel. It retrieves the original Tweet and immediately

adds it to the middle column.



Interacting with Posts

Viz Social also offers the on-board option for users to interact with posts they are harvesting. Users can:

- Retweet/Reply/Love (Twitter).
- Like/Comment/Reply/Share (Facebook (Pages)).
- Comment/Reply (Instagram).

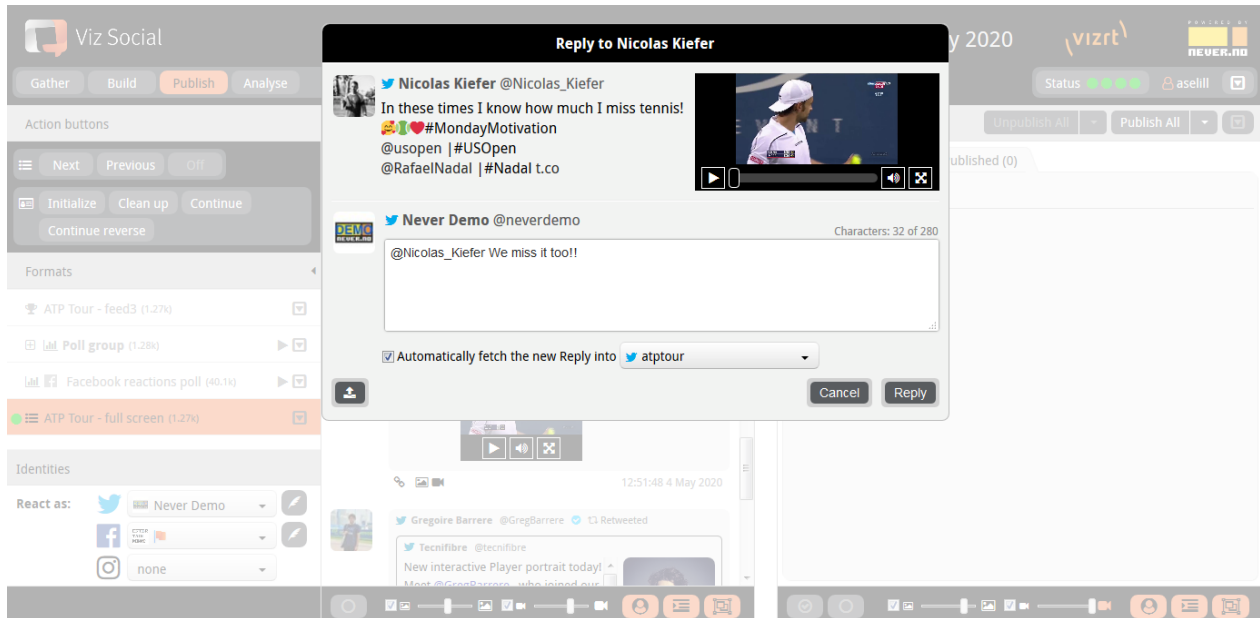
Similar to the composition of new posts, an identity in the selected social network is required before being able to interact with posts and this identity can be chosen by selecting one of the preconfigured accounts at the bottom of the left column of Publish Carousel.

After having chosen an identity, users can find the post they want to react on and choose the intended action from the context menu:

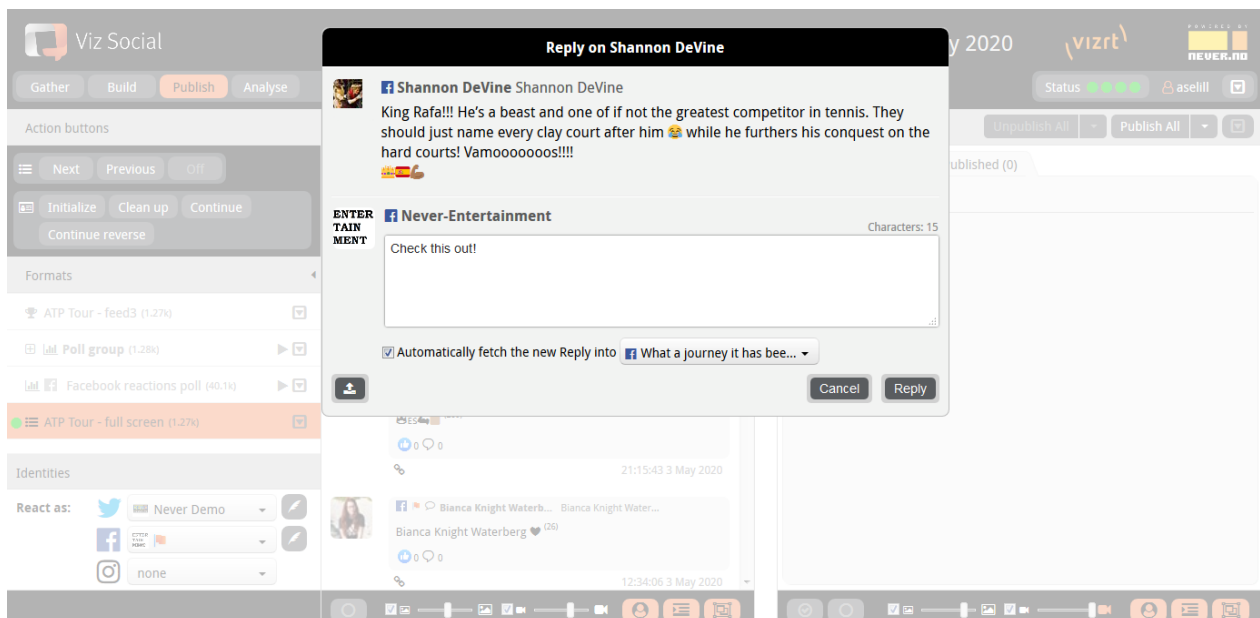
- On Twitter users can Love, Reply and Retweet and on Facebook users can Like, Comment and Share.
- When the Facebook persona is a Facebook Page, publication or sharing is restricted to that page itself and follows its configured privacy setting. In case the Facebook persona is a Facebook User, publication or sharing can be done on a page (if allowed by it and adhering to its privacy setting) or on the person's own wall with a privacy setting that is set from Viz Social.
- On Instagram users can Comment and Reply to others, as long as the original Instagram Post is owned by the selected Instagram identity.

If counts were retrieved earlier then actions can also be triggered by clicking on the icon associated with the intended action (for example, clicking on the Retweet count when trying to Retweet). The right to interact with existing posts and to create new posts can be granted on a user-by-user basis in the user profile.

Twitter Example



Facebook Example



Constraints caused by limitations of current social APIs:

- It is not possible to quote a Tweet.

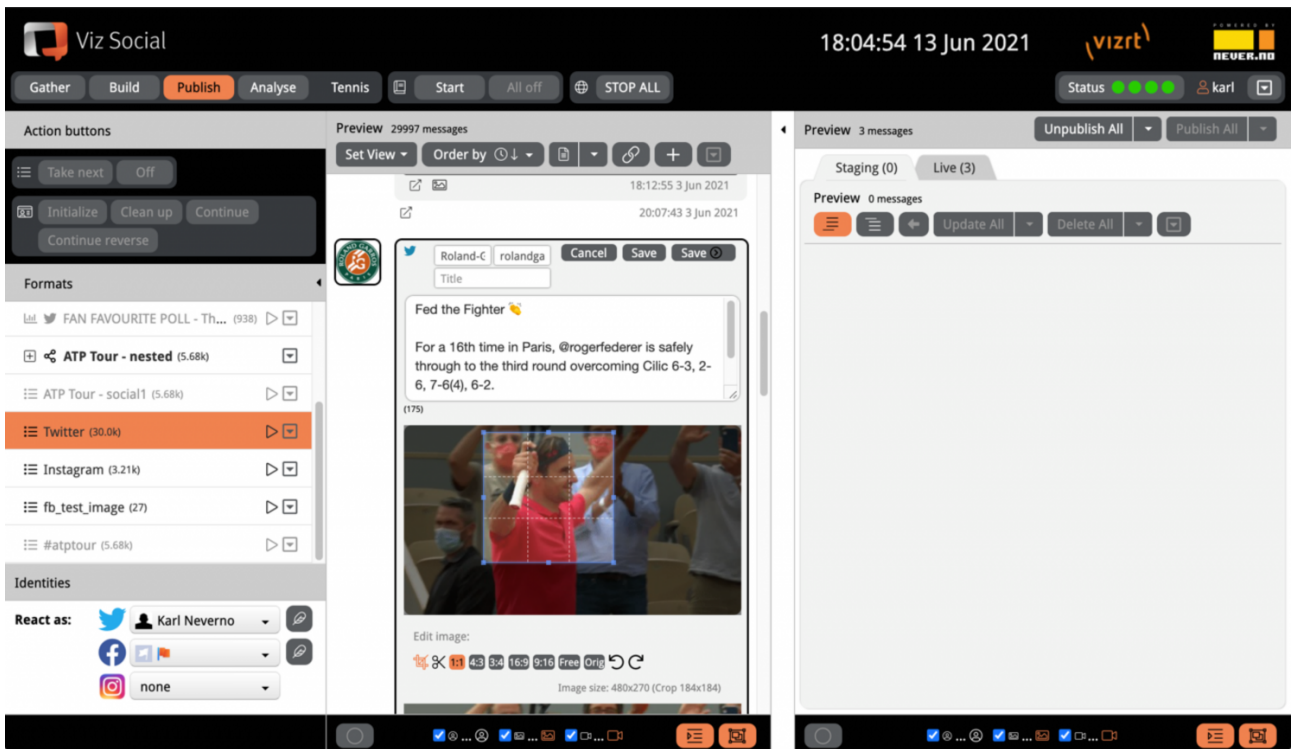
- It is not possible to get reply counts for Tweets.
- It is not possible to react on posts retrieved via Facebook keyword Searches.
- It is not possible to react on Facebook comments.
- It is only possible to *like* a post, but not to use any of the other Facebook reactions.
- If the selected identity is a Facebook page, it can only publish or share on that page itself.
- Interactions in Facebook Groups are not allowed / possible.
- On Instagram users can Comment and Reply to others, as long as the original Instagram Post is owned by the selected Instagram identity.
- On Instagram Viz Social initiated Replies can be fetched but Replies by other are currently not collected.

Editing Posts

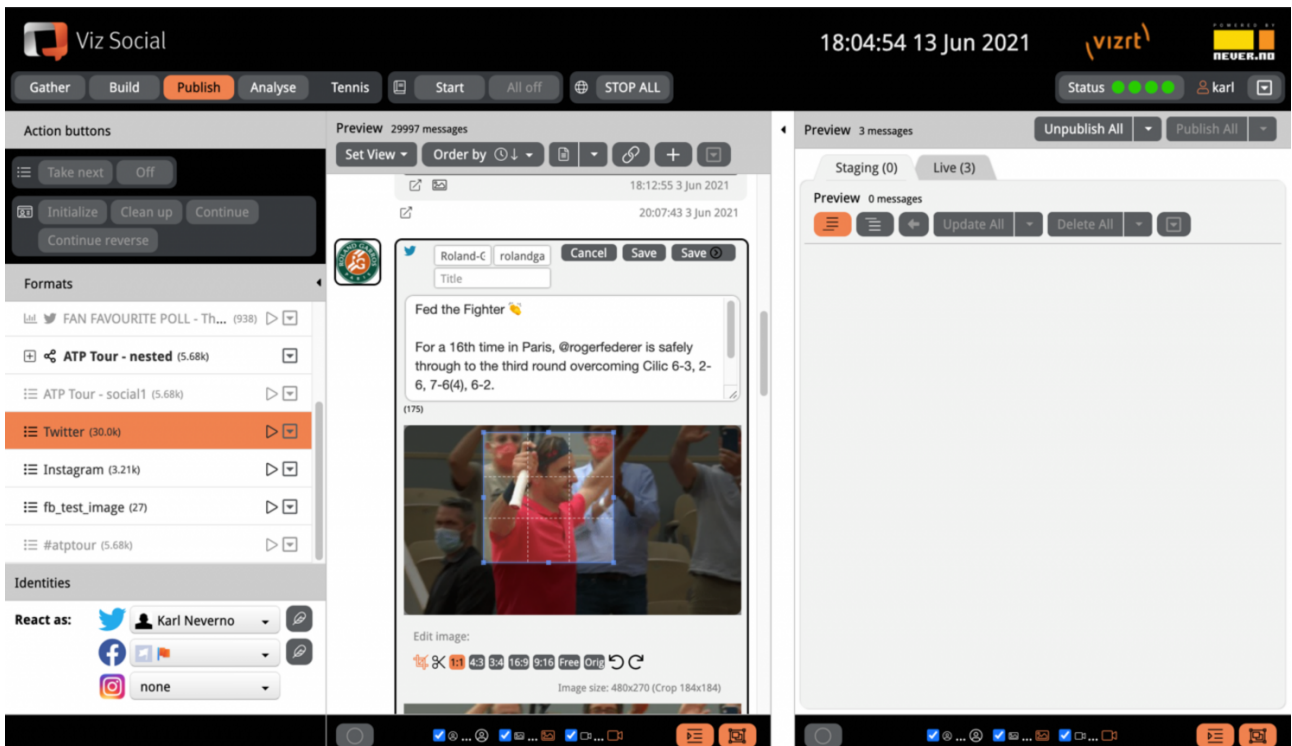
The content of posts in the middle column and Unpublished column can be edited by choosing **Edit** in the post context menu in the top right corner of each post. Besides the content, the alias and the real name of the post author can be edited too if there is a need to do so. Profile images can be deleted by clicking the x in their top right corner.

The screenshot displays the Viz Social application interface. At the top, there's a navigation bar with tabs for 'Gather', 'Build', 'Publish', 'Analyse', and 'Tennis'. The 'Publish' tab is active. Below the navigation bar, there are several panels. On the left, there's an 'Action buttons' panel with options like 'Take next', 'Off', 'Initialize', 'Clean up', 'Continue', and 'Continue reverse'. Below that is a 'Formats' panel with various social media formats like 'FAN FAVOURITE POLL', 'ATP Tour - nested', 'ATP Tour - social1', 'Twitter', 'Instagram', 'fb_test_image', and '#atptour'. At the bottom left is an 'Identities' panel with 'React as:' and dropdown menus for Twitter, Facebook, and Instagram. The central part of the interface is a 'Preview' pane showing a tweet from Roland-Garros (@rolandgarros) with the text 'Fed the Fighter' and a video thumbnail. The tweet is marked as an 'Edited post' with a blue tag in the footer. The right side of the interface shows another 'Preview' pane with 'Unpublish All' and 'Publish All' buttons.

Clicking the **Save** button saves the edited post so that another one can be edited (only one post can be edited at the same time). Edited posts are marked with a small blue tag in their footer and have an undo button in their header so that it is always possible to revert to the original post with a single click.



When the post that is being edited contains one or more images it becomes possible to edit those as well. At the bottom of each attached image, there's a small toolbox for cropping and rotating. For cropping, you can use a fixed aspect ratio (1:1, 4:3, 3:4, 16:9, 9:16 supported out of the box, others can be configured) or free cropping. In its right top corner, an x can be found that removes the image from the post altogether.



When the edited post also contains a video then users can take advantage of Viz Social’s on-board video editor, which is accessed via the **Edit Video** button at the bottom of the edited post.

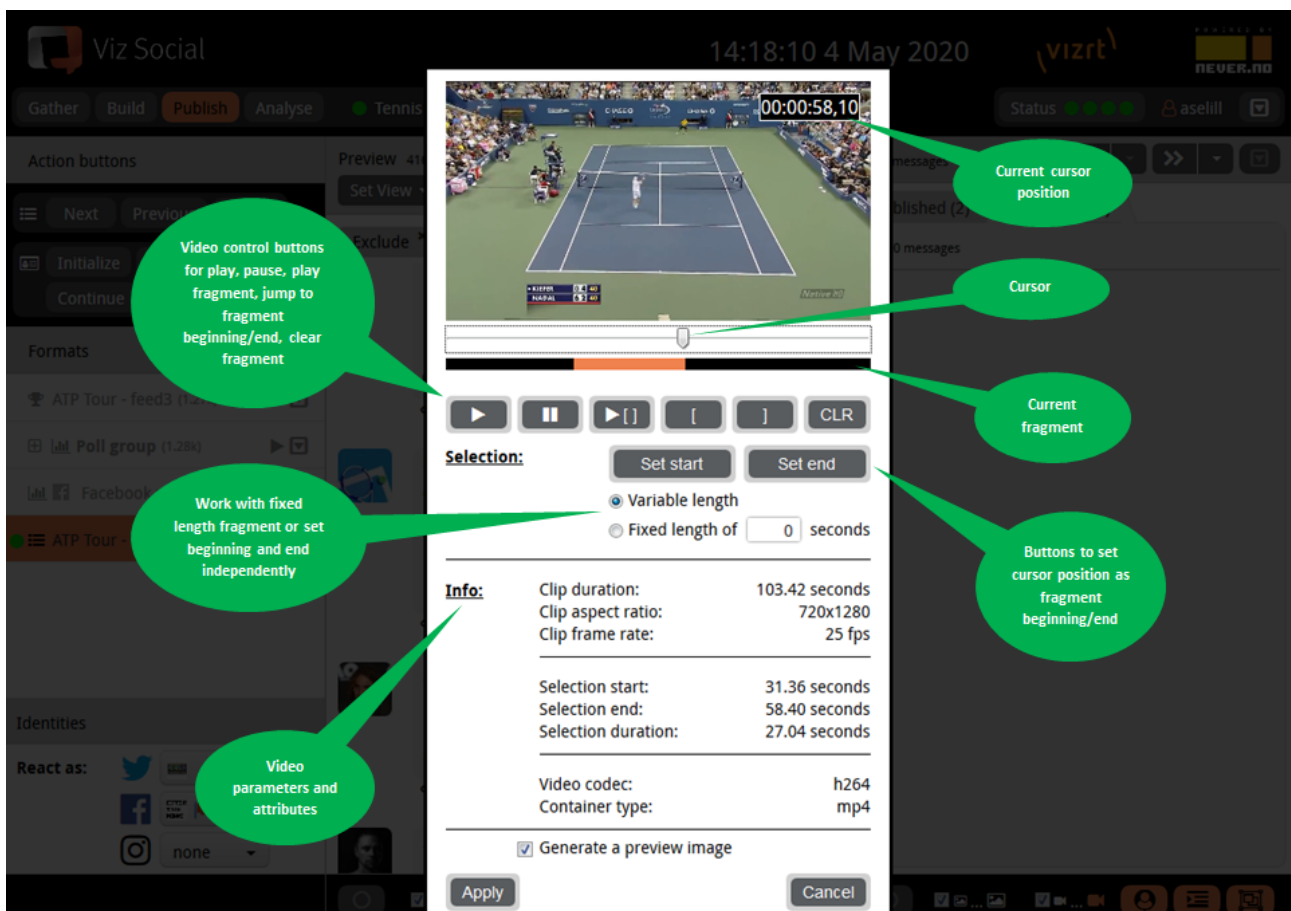
The video editor supports the following functions:

- Play/pause the whole clip or only the selected fragment.
- In variable-length mode: set fragment beginning and end independently.
- In fixed-length mode: the set fragment beginning and end is set accordingly, and vice versa.
- Frame-by-frame inspection is possible with LR arrow keys.
- Fragments can be set, played, and reset indefinitely until the fragment is finally cut out.
- Clip and fragment metadata is always shown.

After the fragment’s parameters have been set successfully and satisfactory, the fragment is cut out and re-encoded (processing time depends on the fragment size). The result is stored on the Viz Social server and linked by the original post, thereby replacing the link with the original content. The associated video image (usually its first frame) is updated automatically.

The editing of the video takes place in the background. As soon as the appropriate video chunk has been selected and the Save button of the video editor is pressed, the normal Viz Social UI becomes available again and normal operation can be resumed. Rendering status and progress are displayed under the post in question and a cancel button allows rendering to be stopped. Multiple posts can be rendered in parallel this way.

The video editor currently supports *.mp4* and *.mv4* containers with MPEG-4/H.264 video and AAC or MP3 audio. The standards adopted by Twitter, Facebook and Instagram are within this class.

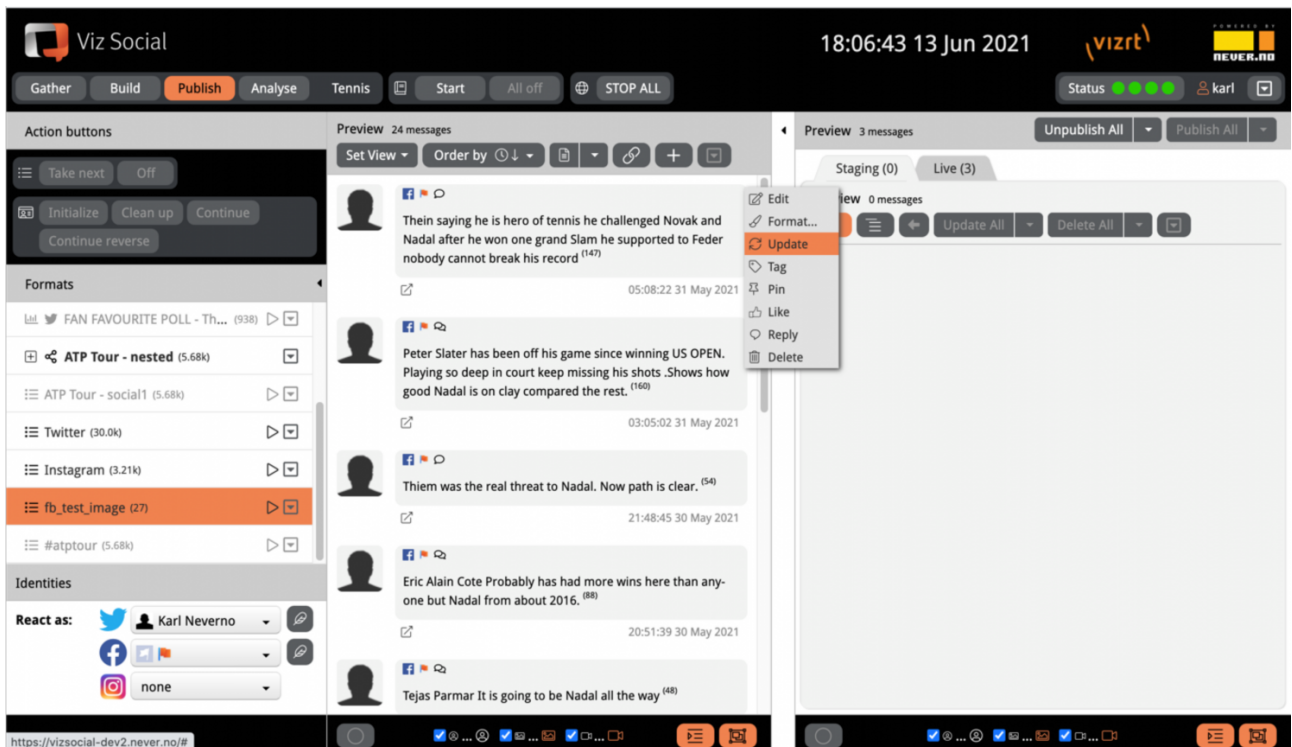


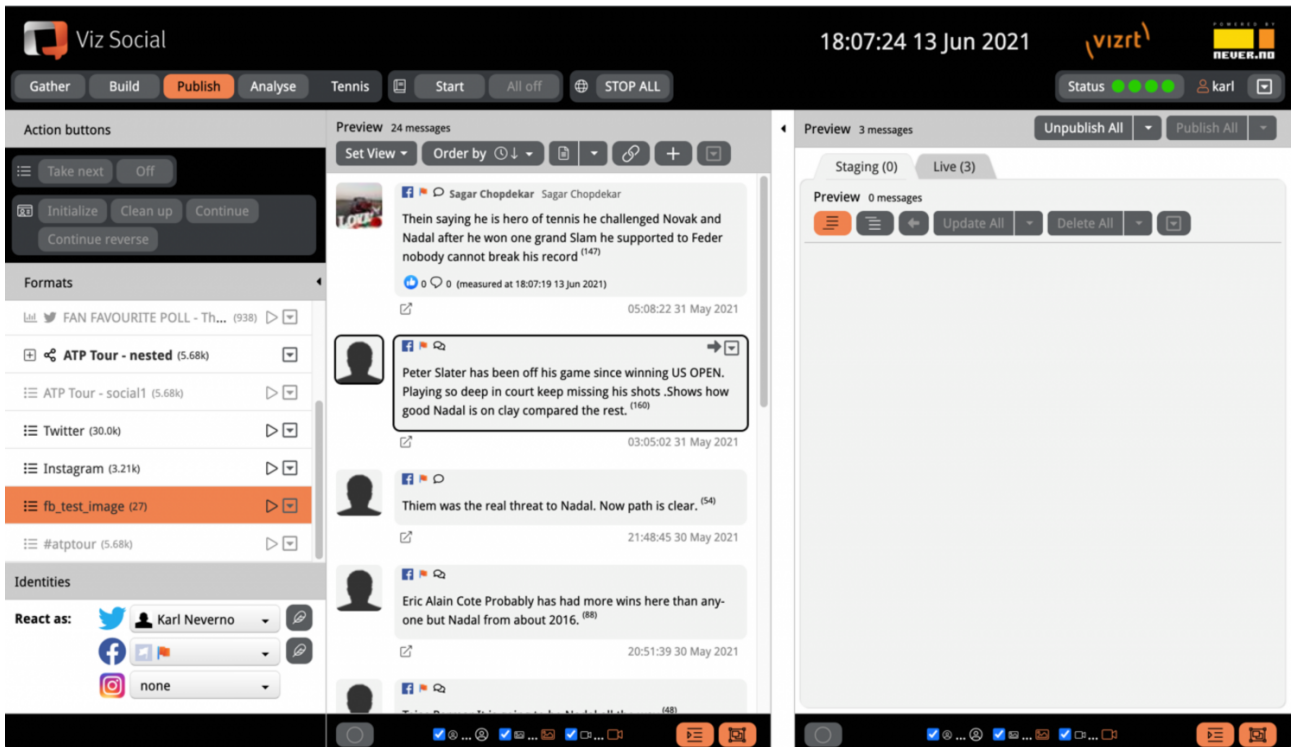
Updating Posts

Updating posts can be useful for different cases. Some posts arrive anonymously when harvested and in many cases, avatar and username can then be added on a post-by-post basis by updating. Social reaction counts can also be updated. To update multiple posts, use the refresh button in the middle column of a Carousel that updates the counts of all selected posts in that column. Similarly, the refresh button in the right column of a Carousel updates the counts of all selected posts in the active tab of that column.

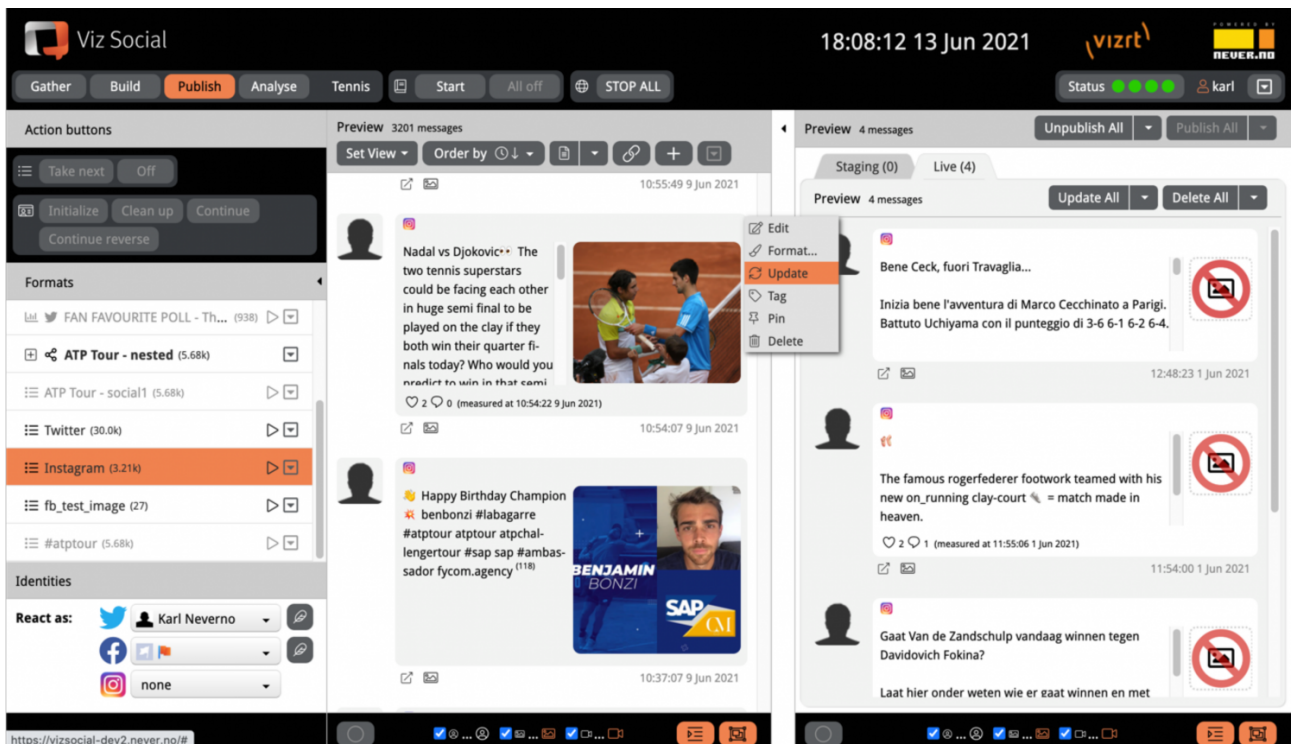
De-Anonymization

Facebook: In Gather it is possible to track Comments under Posts on Facebook Pages not owned by the authenticated Facebook User. Those Comments from other Pages are anonymized by Facebook, meaning that the avatar, name and alias are withheld. By using the **Update** function the originator's name and (low resolution) avatar is added to the post, in addition to the social reaction counts.





Instagram: In Gather it is possible to track Comments under Instagram Posts and on #hashtags being used to tag Instagram Posts. Most of the collected Posts of these Searches are partly or fully anonymized by Instagram, meaning that the avatar, name and alias are withheld. By using the **Update** function, the originator's name, alias and avatar are added to the post, besides the usual social reaction counts.



The screenshot displays the Viz Social interface. At the top, there's a navigation bar with buttons for 'Gather', 'Build', 'Publish', 'Analyse', 'Tennis', 'Start', 'All off', and 'STOP ALL'. The current time is 18:08:56 on 13 Jun 2021. The interface is divided into several sections:

- Action buttons:** Includes 'Take next', 'Off', 'Initialize', 'Clean up', 'Continue', and 'Continue reverse'.
- Formats:** Lists various social media formats like 'FAN FAVOURITE POLL - Th...', 'ATP Tour - nested', 'ATP Tour - social1', 'Twitter', 'Instagram', 'fb_test_image', and '#atptour'.
- Identities:** Shows 'React as:' with options for 'Karl Neverno' and 'none'.
- Preview pane (left):** Shows 3201 messages. The first post is an 'N's League Report' about Nadal vs Djokovic. The second is a 'Happy Birthday Champion' post for Benjamin Bonzi.
- Preview pane (right):** Shows 4 messages. The first is 'Bene Ceck, fuori Travaglia...'. The second is 'The famous rogerfederer footwork teamed with his new on_running clay-court = match made in heaven.'. The third is 'Gaat Van de Zandschulp vandaag winnen tegen Davidovich Fokina?'.

Note: For both Facebook and Instagram we read the post's HTML without any API available, meaning it's a best effort functionality that could potentially stop working without prior announcement.

If a user has updated the avatar/tweet after being harvested by Viz Social, the post updates with the new data.

Social Counts

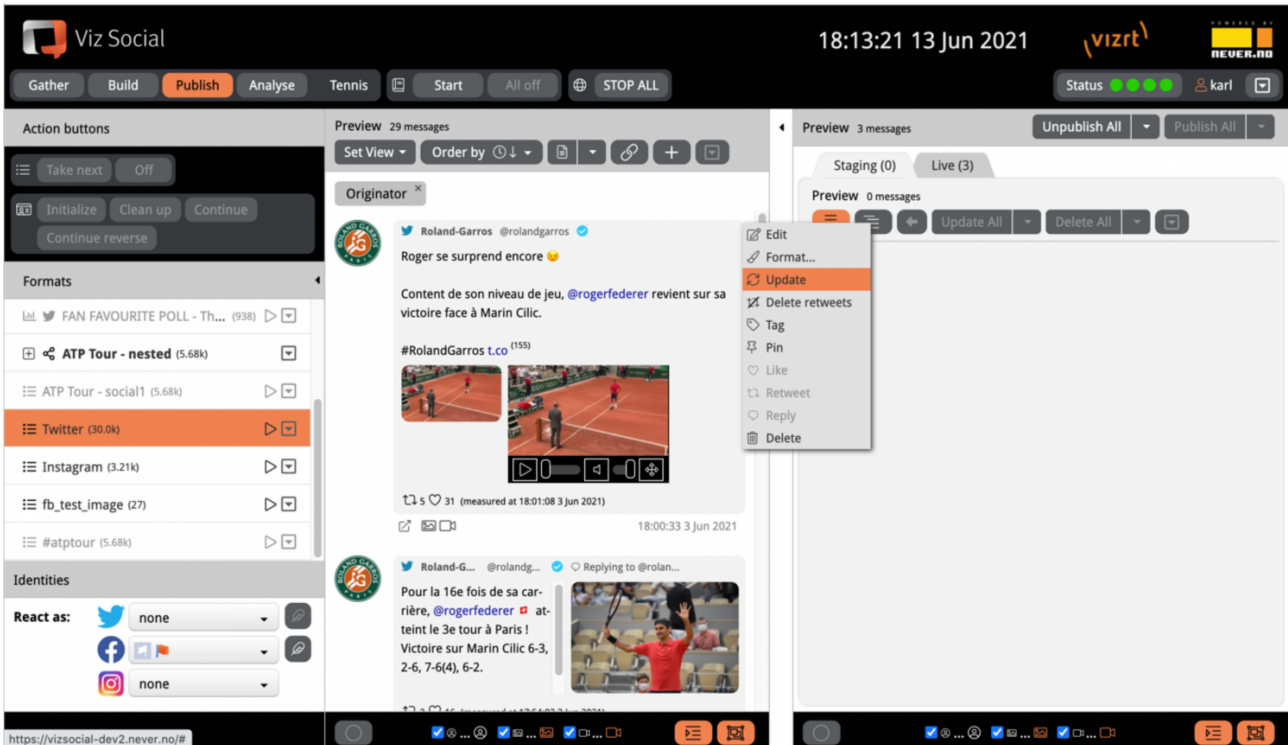
Viz Social Searches pull in posts from various social media, satisfying various search criteria. Usually, this happens in real-time, very quickly after the post/comment/reaction/share was published on the social medium. Low latency is in the advantage of the Viz Social user, as that implies that posts become available for processing as quickly as possible.

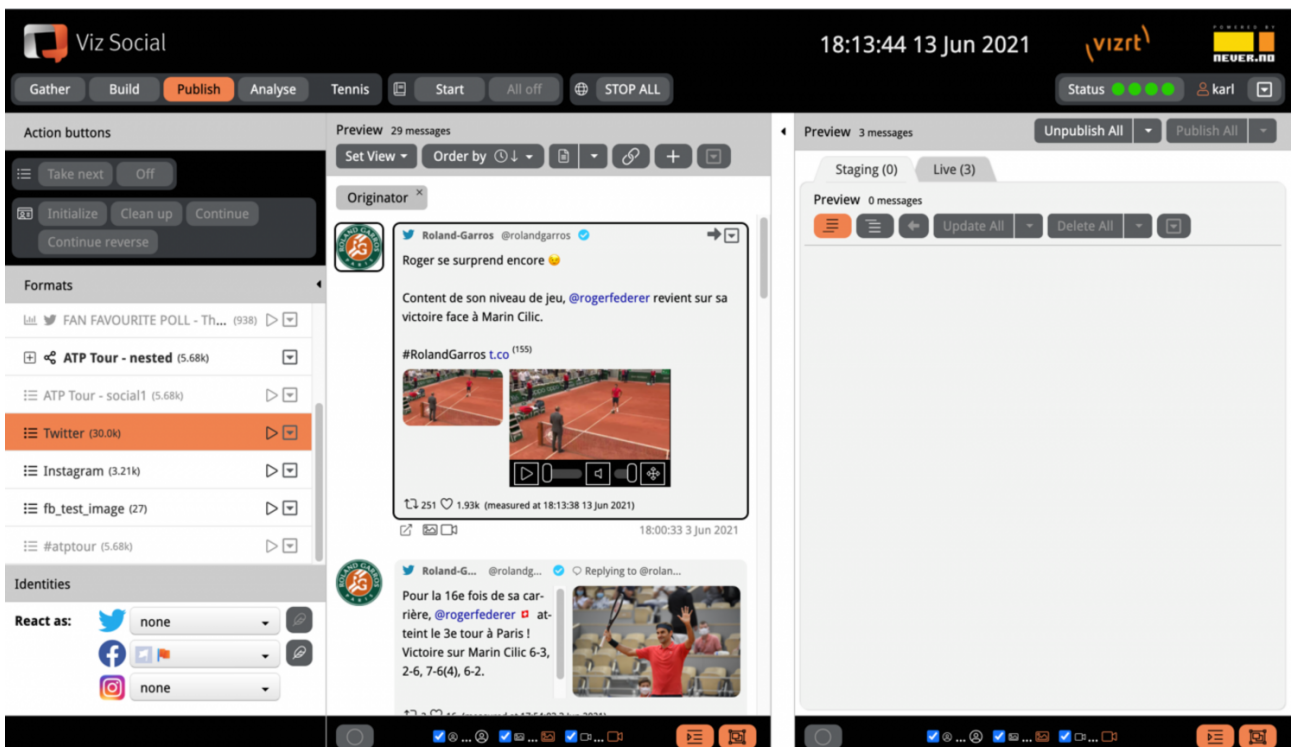
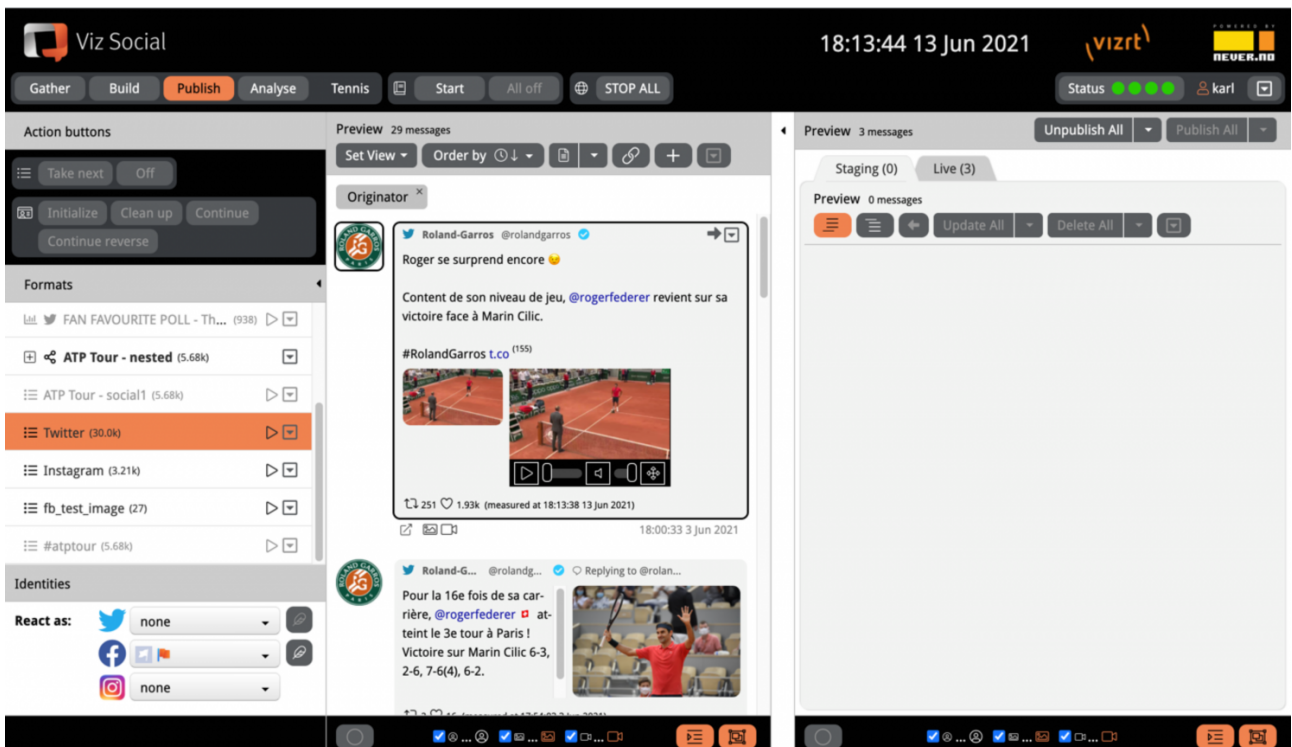
However, on a social medium, posts often undergo evolution after their publication. Other users react on them through likes, shares, replies, comments, etc. Automatically keeping track of all counts of all stored post on Viz Social is not feasible, but there is an update function available in the context menu of individual posts. When selected, the attribute counts for that post are updated and the values of all nonzero attributes are displayed at the bottom of the post in question. When that post is published, the last retrieved attributes are published along with it. When you update a post that is already published and the destination is a complete XML/JSON file, then the post in the file is updated, keeping the order intact.

For Facebook, this feature is available for Posts from Page Searches and Post Searches and for Posts that were pulled in manually via their URL and it updates the number of likes + all other reactions (love, haha, wow, sad, angry), the number of comments and the number of shares. For Instagram posts, the love and comment counts are retrieved, while for Twitter the same is done for love and retweet counts.

After the action has been executed all values are displayed at the bottom of the post in question and as soon as that post is published, the lastly retrieved attributes are published along with it. When a published post is updated and the destination is a complete XML/JSON file, then the post in the file is updated, while keeping the order intact. For feed-type destinations, the post is simply republished.

To prevent ambiguity, counts for posts for which counts were never received are not shown. Once counts have been received at least once, they are shown even when they are 0. In addition, the timestamp of the last fetch is available as a tooltip over the timestamp of the post itself.



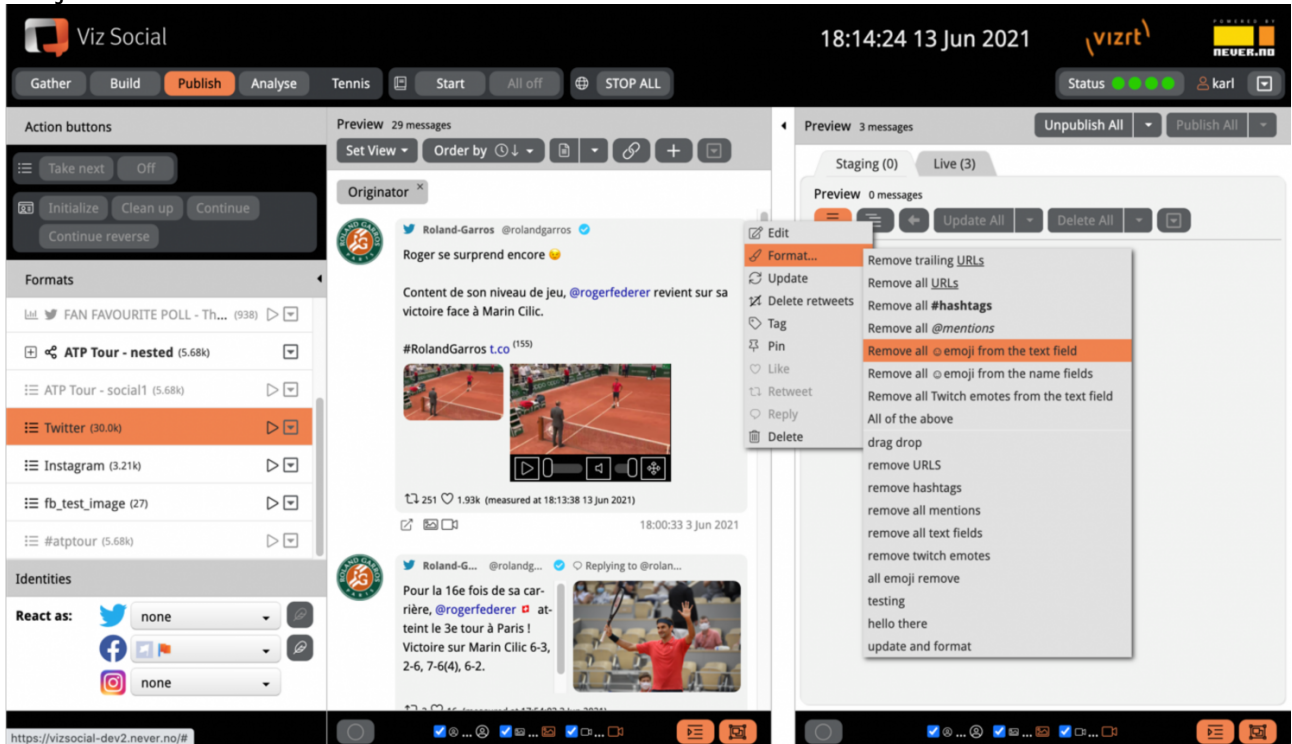


Constraints caused by limitations of current social APIs:

- It is not possible to get Reply counts for Tweets
- It is not possible to get counts for Facebook comments.

Text Trimming

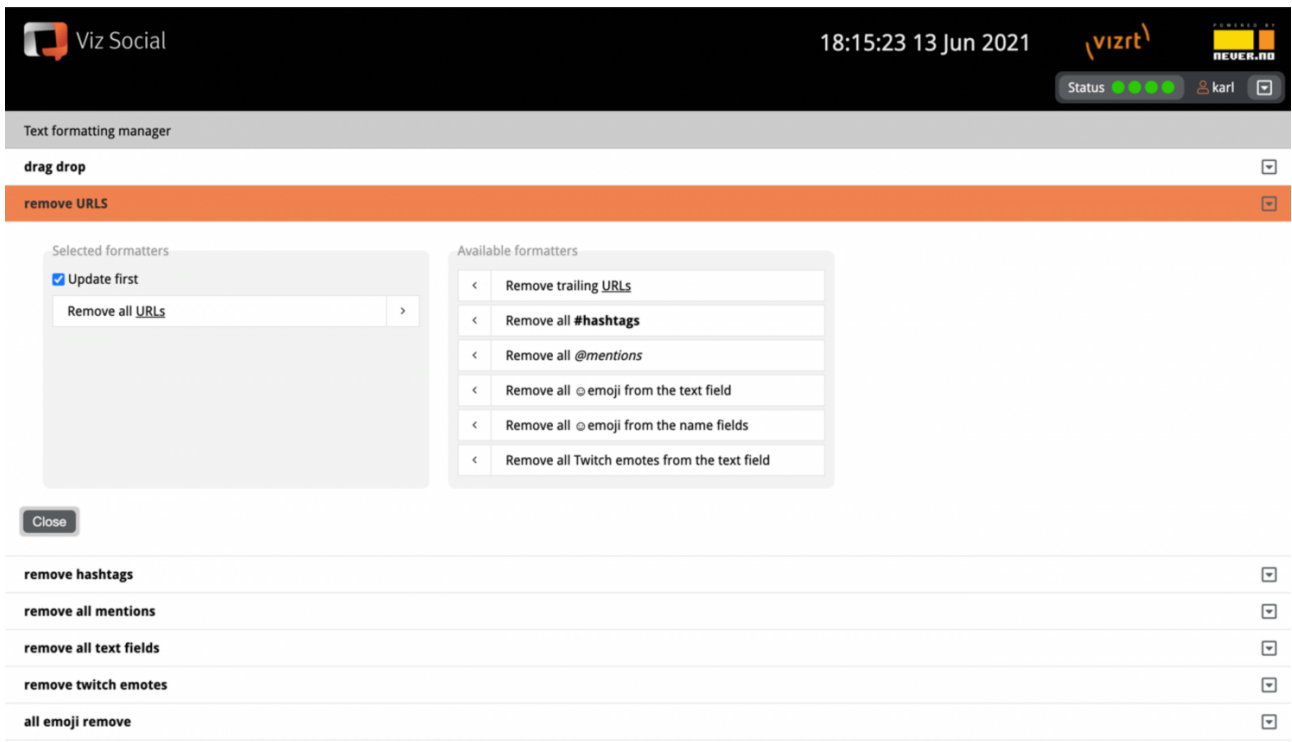
The **Format** option on the context menu offers a submenu of presets for quickly sanitizing texts of social Posts by trimming certain element categories from it, like URLs, mentions, hashtags or emoji.



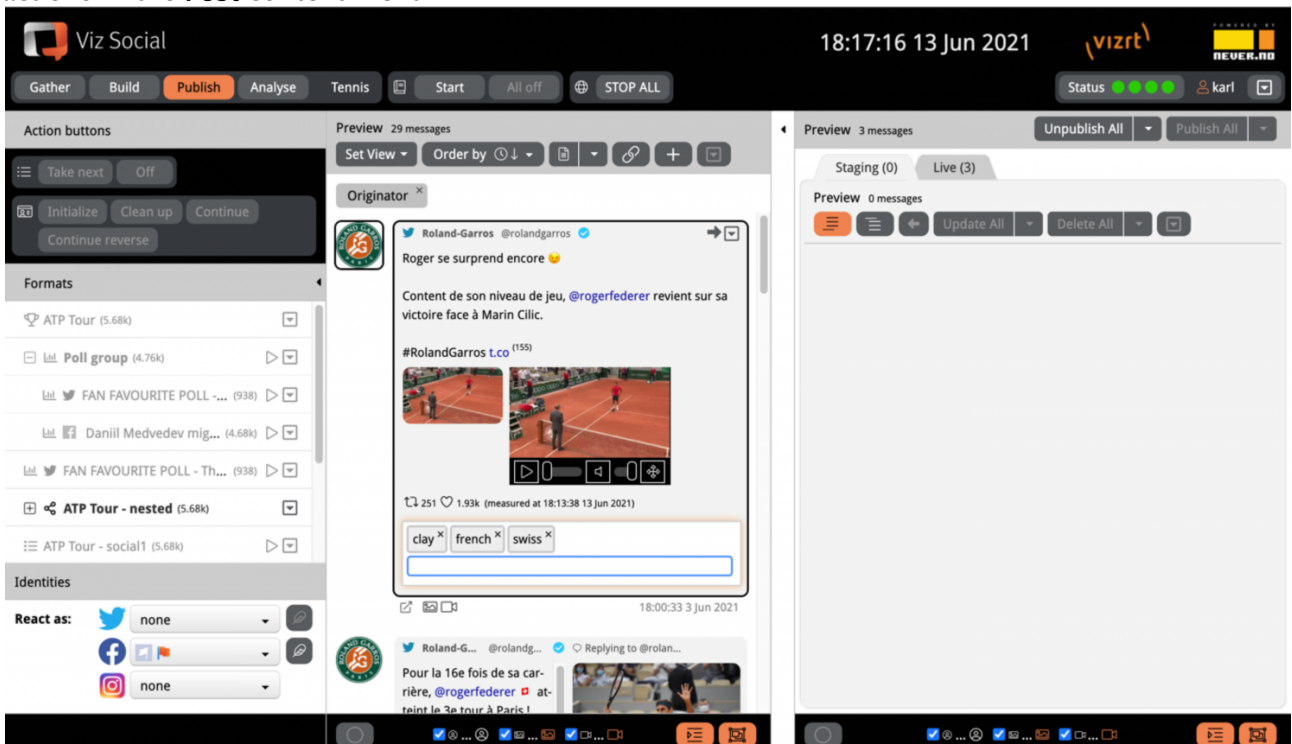
Note: Trimming is not available for Retweets, since Retweets are merely references to other Tweets and don't carry their own content.

Admin users can also set-up their own combinations of automatic edit actions in the **Format...** menu for Posts. The **Text Formatting Manager** in the main context menu of all administrators has been created for this.

In the Text Formatting Manager, arbitrary combinations of the five available atomic actions (to remove links, trailing links, emoji, hashtags or mentions) can be defined as new formatting actions. The order of the actions in a combination only matters if *remove trailing links* is among the chosen ones.



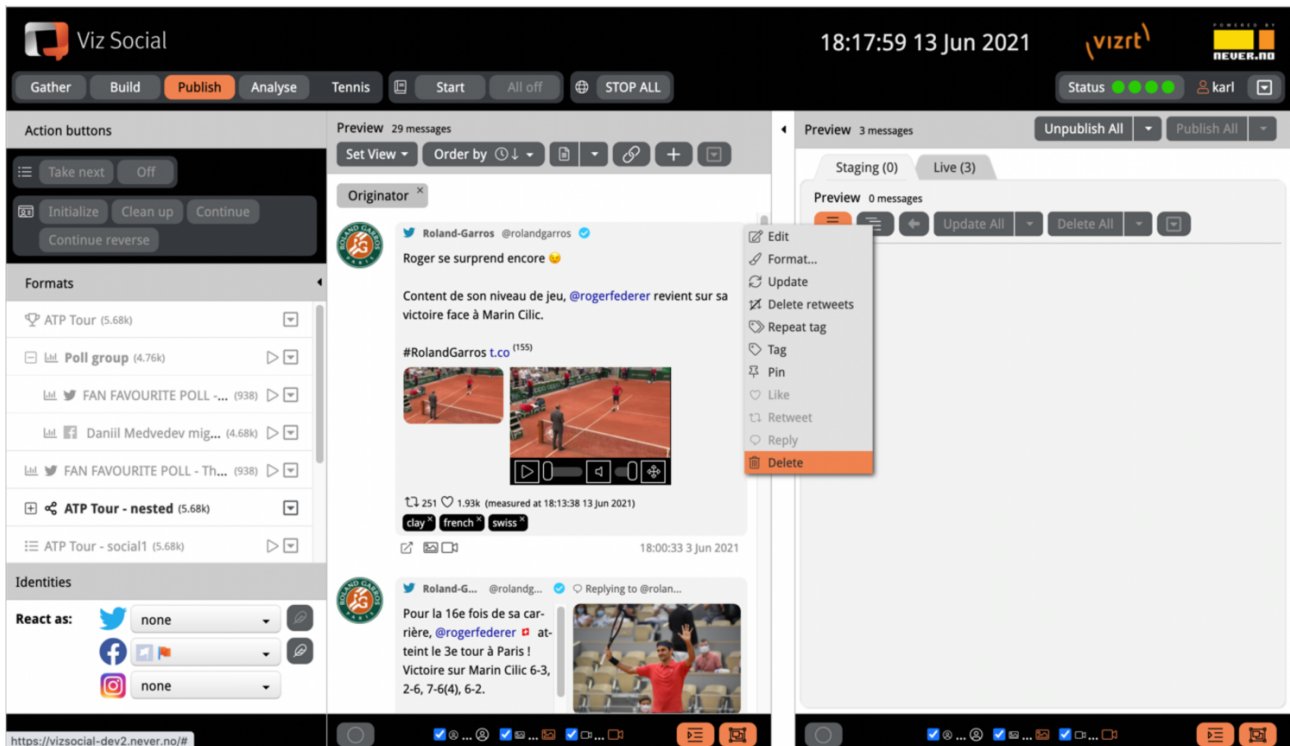
Existing combinations can be renamed, edited, reordered or deleted. All newly created combinations become available for all users of the platform as options under the five atomic actions in the **Post** context menu.



Deleting Posts

Posts can also be deleted from a Carousel. Select one or more posts in the middle column, press the **Delete** button in the footer of the column and the posts are deleted from this Carousel (not from other Carousels).

Individual posts can also be deleted via their context menu.

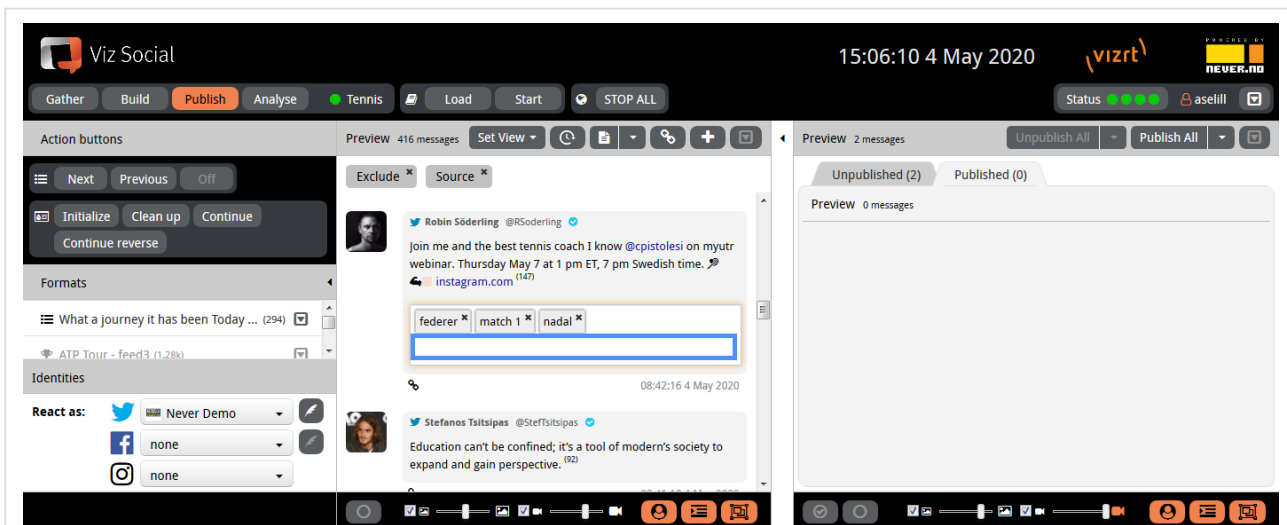


5.2.3 Tagging

When browsing through lists of posts looking for suitable material, it is often useful to be able to add markers to potential interesting posts and to use those markers for search actions. This is what Tagging functionality achieves.

In the context menu of each post, there's a tag option which opens a text field. Here any label can be added to a post. Labels/tags are TAB- and CR-separated and the **ESCAPE** key closes the text field altogether. There is no limit for the number of tags per post. Tags are shown under each post and can be removed via their individual delete buttons.

Tagging a Post



A Tagged Post



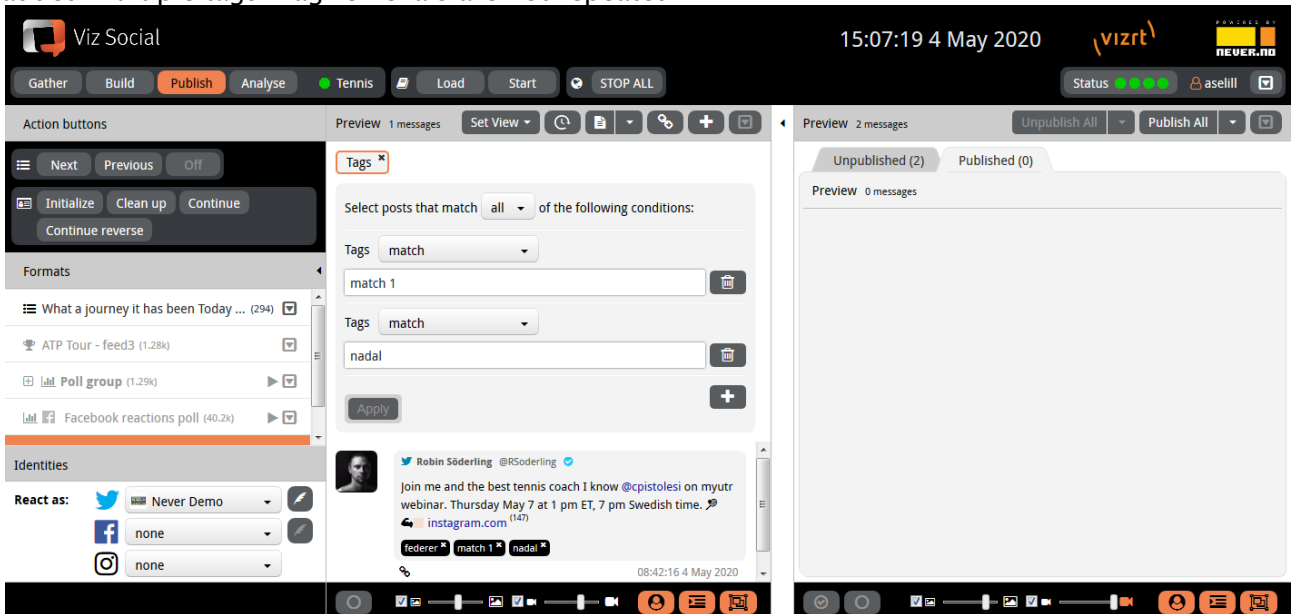
The **View** menu for Tags allows users to find particular posts that were tagged in certain way. One can check for the presence/absence of specific tags or for the presence/absence of certain tag patterns for which wildcarding is allowed:

- * = multi-character wildcard.
- ? = single-character wildcard.

Multiple wildcard conditions can be combined.

It is possible to specify multiple conditions at the same time and to choose whether all or just one of those conditions should be satisfied. After a Post has been tagged, the same tag can be repeated via the Repeat tag option in the Post's context menu. This also works when a tag action

added multiple tags. Tag removals are not repeated.



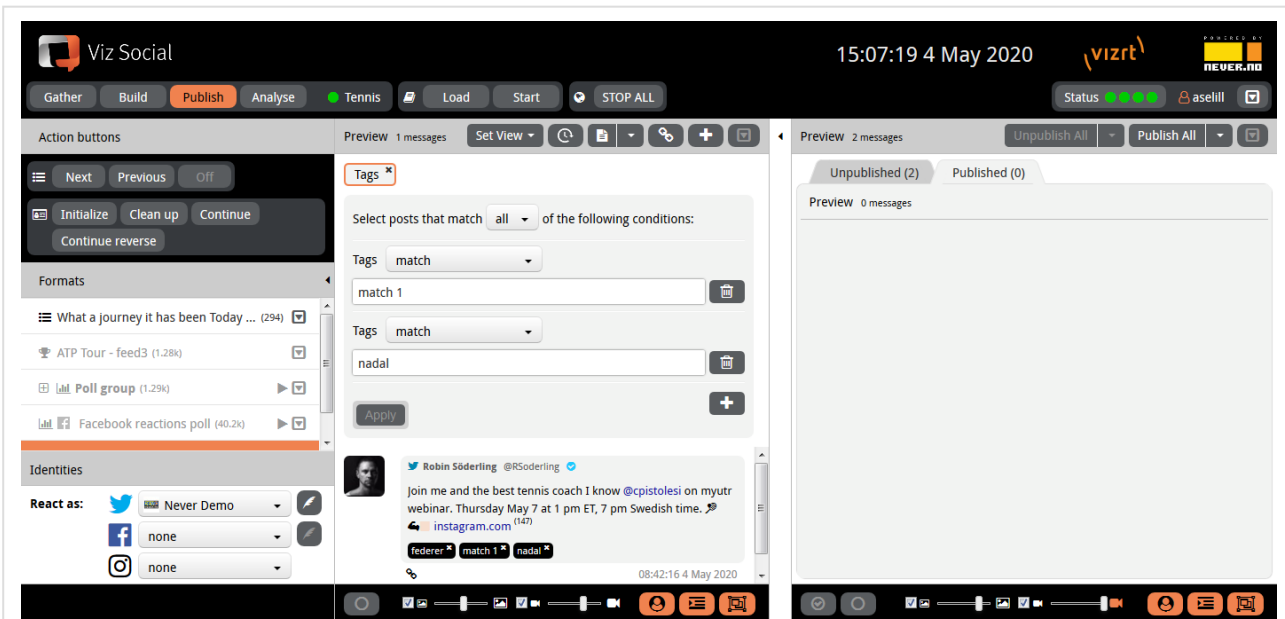
5.2.4 Moderation, Ordering and Publication

Once the appropriate Views have made it manageable to select the most valuable posts among the pile of harvested data, it becomes time to bring On Air. This is a three step process: Moderation, ordering and then publication. Publication transmits messages into the Viz environment where their playout can be managed by the control buttons of Viz Social.

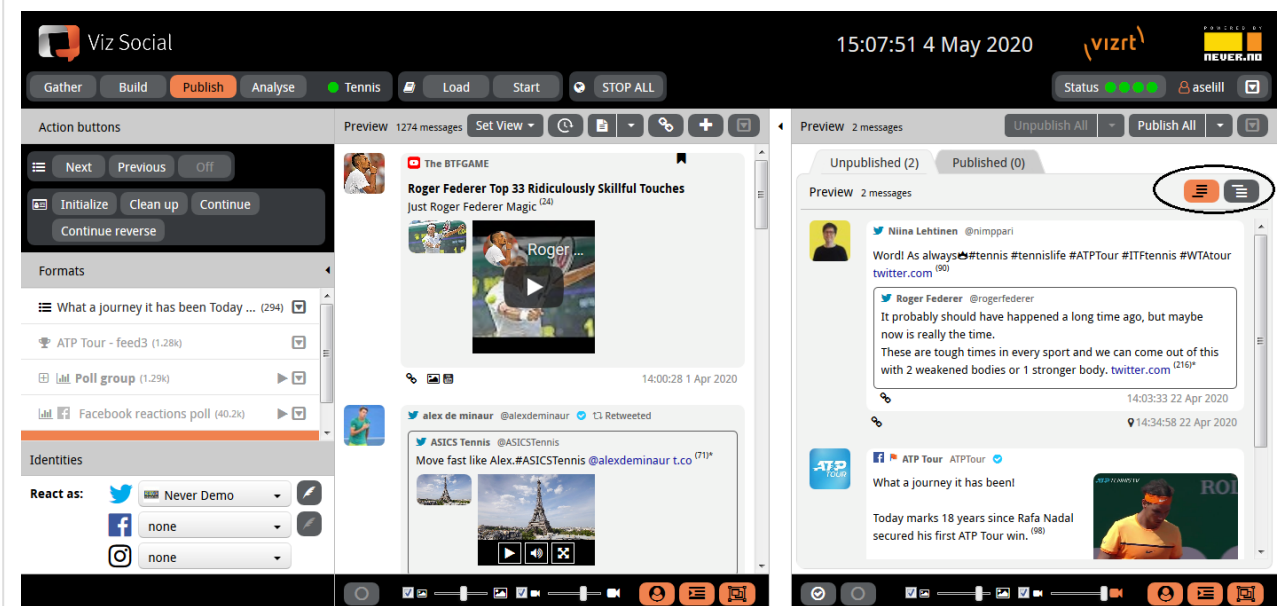
Moderation is the simple action of bringing a selected post from the middle column to the right column. This can be done by clicking the Right arrow that lives in the right top corner of each post in the middle column. Alternatively, multiple posts can be selected using the **CTRL + SHIFT** keys (**⌘ + SHIFT** keys on Mac) and then be transferred to the right column in one go using the Right arrow situated between the middle and the right column. Drag and drop is also available for moving posts to the right column. A selection can be cleared with the **Clear** button in the footer of the middle column and the data in the middle column can be refreshed with the **Refresh** button at the top of the column.

Moderated posts arrive in the UNPUBLISHED tab of the right column. Posts can be taken back into the middle column using the Left arrow in their right top corner or the one that lives between the middle and right columns. With the **insert at top/append at bottom** toggle at the top of the UNPUBLISHED tab users can control where new posts are added.

Moderation Top/Bottom Options



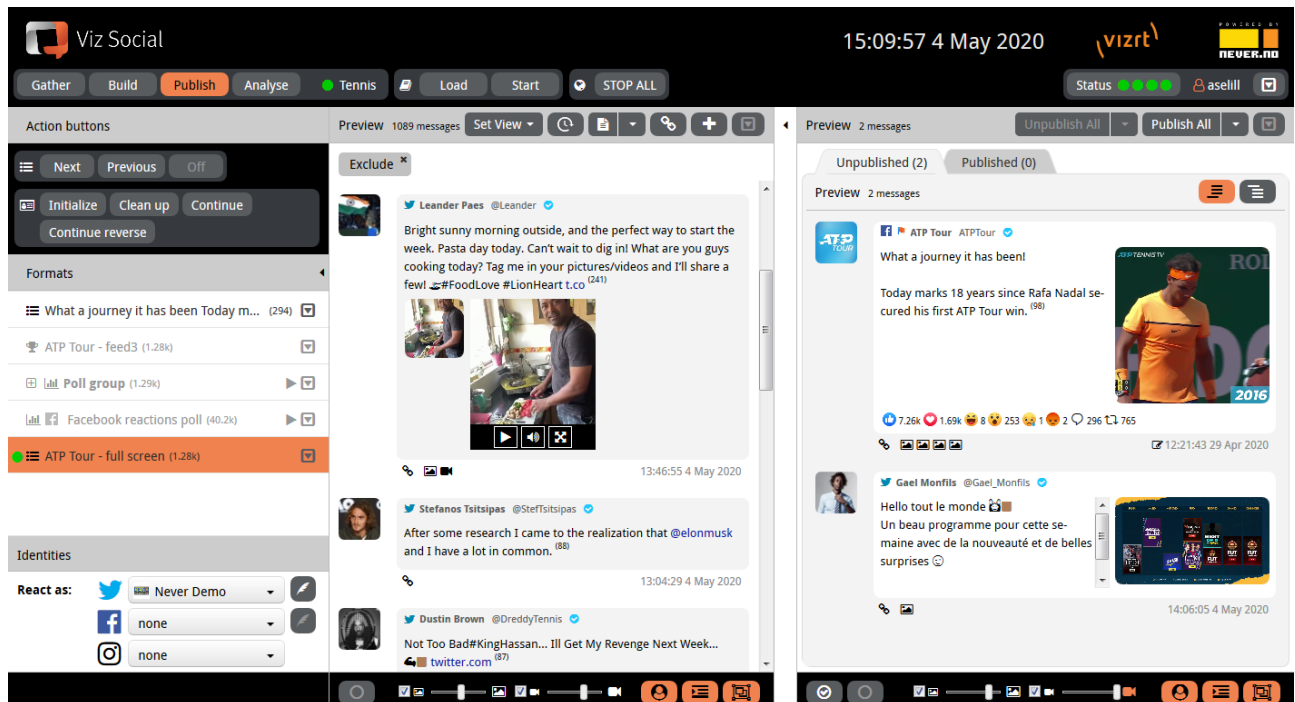
Publish Carousel Selected Posts



Publish Carousel Moved Posts



UNPUBLISHED posts can be ordered so that they play out in the scene in the intended sequence. The Up and Down arrows in the context menu of each UNPUBLISHED post can be used to change the order of UNPUBLISHED posts.

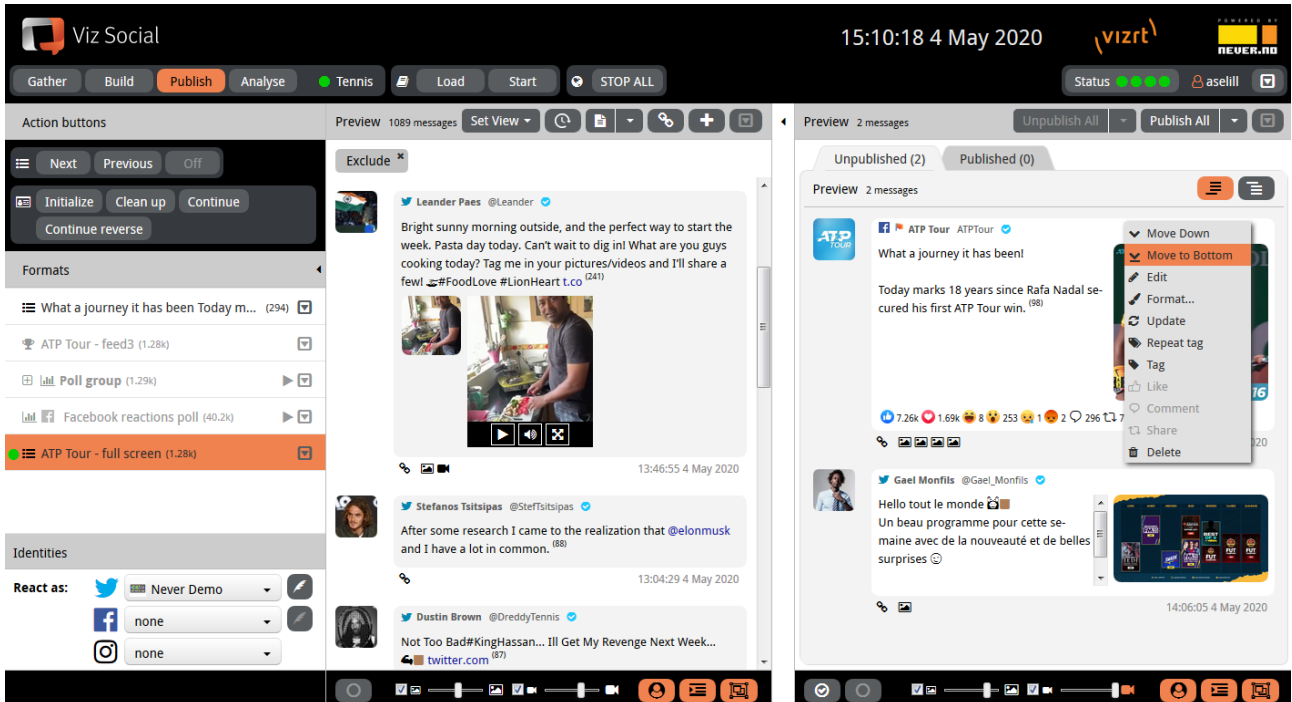


Once the correct order has been established, all selected UNPUBLISHED posts can now be taken On Air by pressing the **Publish** button at the top of the right column. All selected UNPUBLISHED posts

are then brought to the PUBLISHED tab. PUBLISHED posts have an orange indicator in their right top corner.

The **Publish** button can be turned into a **Publish All** button via its own little dropdown. When that function is activated, the button publishes all UNPUBLISHED posts in one go, irrespective whether they were selected or not.

Individual UNPUBLISHED posts can also be published via their own **Publish** button.



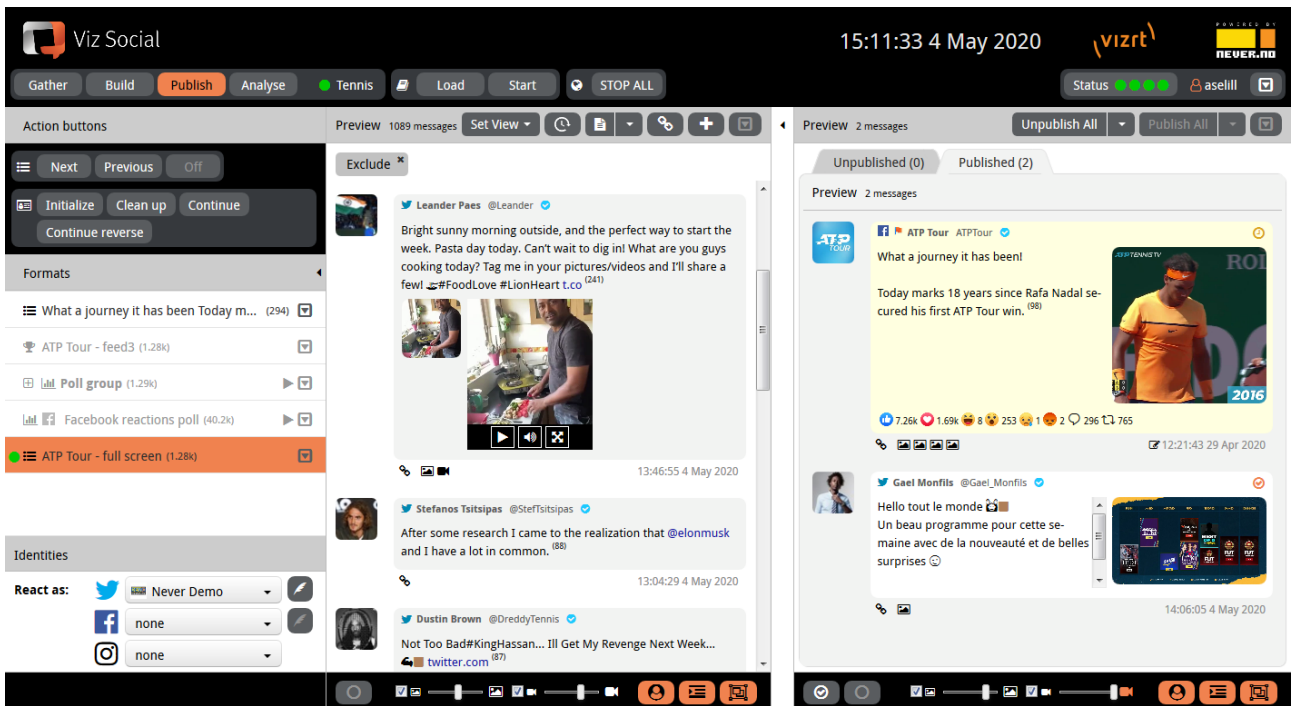
Selected PUBLISHED posts can be taken Off Air by pressing the **Unpublish** button. These posts are moved to the UNPUBLISHED tab again.

The **Unpublish** button can be turned into an **Unpublish All** button via its own little dropdown. When that function is activated the button unpublishes all PUBLISHED posts in one go, irrespective whether they were selected or not.

Individual PUBLISHED posts can also be unpublished via their own **Unpublish** button.

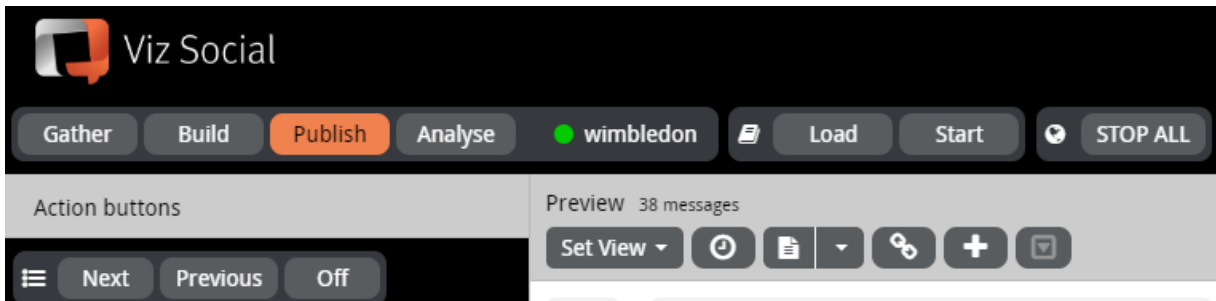
Alternatively, one can also select a single PUBLISHED post and press the Left arrow in its right top corner. This first unpublishes the post and immediately take it back to the middle column in a single action. The same can be done for multiple selected posts in one go by using the Left arrow in between both columns.

It might be useful to use the Select Published or Select Unpublished buttons at the bottom of the right column. Finally, when many posts contain graphics, ordering might become clumsy and for that reason there is a slider at the bottom of each column to allow users to temporarily decrease the graphics size of images and videos (in the UI).

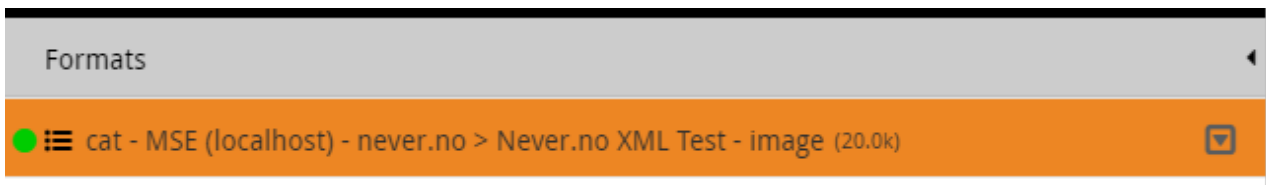


5.2.5 Synchronization

Press the **Start** button on the top row to start synchronization (exporting) of the published contents of the Carousel between Viz Social and the play-out Engine:



When you do this the Format should light up with a green indicator also:



If the Format is not active, then nothing will be synchronized. To stop synchronization, press the **Stop all** button on the top row.

Note: This stops all Formats, and that there currently is no way of individually starting and stopping single Formats.

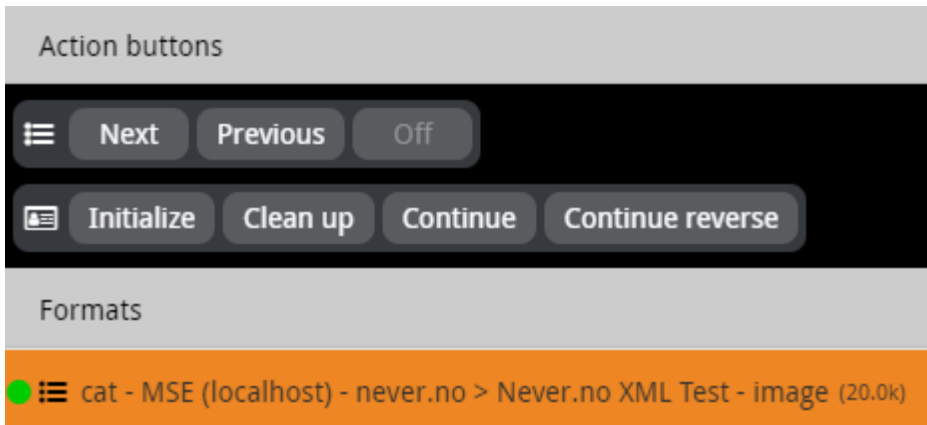
When synchronization starts, the system initially does an initial update that deletes all pages that were exported in previous sessions and that were unpublished later while the Format was not active. It also publishes all messages (pages) that were added while inactive. Once the initial update is done, the system continuously synchronizes and adds or removes messages/pages.

5.2.6 Play-Out

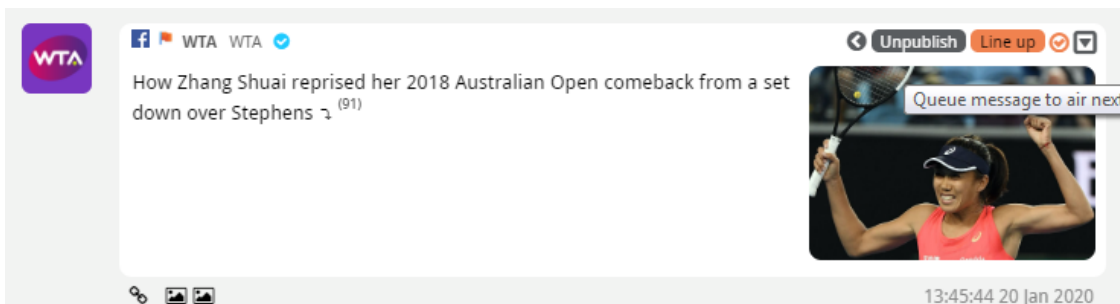
You can decide to only export pages into Viz Trio and have a Trio operator take them to air and use them within Trio, or whether to play out published pages natively via Viz Social.

Manual

By default, Carousels are created in “manual” mode, which means you get **Next**, **Previous** and **Off** buttons:



Next plays the next message out on the selected MSE profile. To select an arbitrary message to be played out next click the **Cue** button above the message in the Published tab of the Carousel:



This activates the *Next on air* flag for the message, set the clock icon to the right of the **Queue** button, and give the message a yellow background:



You can then press **Next** to play the message out. When you press **Next** without queuing a message, then the message below the last one played out is used. If you have not played out any messages earlier, then the first message of the Carousel is used.

Previous works the same, only the cursor is always moved upwards. **Off** takes out the currently played message.

Automatic

Alternatively, Carousels can be set-up to play out their content automatically (without manually triggering which post is played out next). In automatic drive mode, the inter-post interval can be set in Build and Publish now offers **Start**, **Pause**, **Continue** and **Off** buttons to control the payout.

Continue and Continue Reverse

The Viz Trio functionality for continuing payout of a scene that has stop-points does not have a default mapping in Viz Social, so you can set this up as separate action buttons (see 4.2.3.2) under the *Trio actions* field mapping tab.



5.2.7 Pinning Posts

Users can manually pin posts that they find important to the top of Carousels. Pinned posts are always shown at the top of their Carousel, so this is an easy way to put important posts aside for later use.

Pinning is only available for posts in the middle column of Carousels. The **Pin** action is available in the context menu of unpinned posts. Similarly, the **Unpin** action is available in the context menu of

pinned posts.



5.2.8 Automation

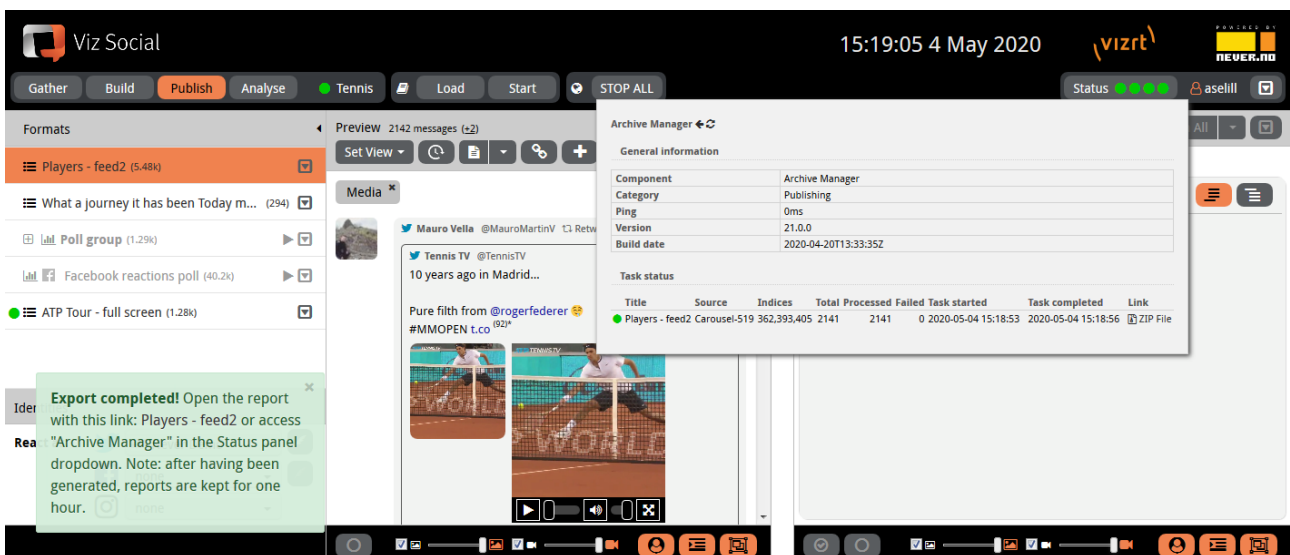
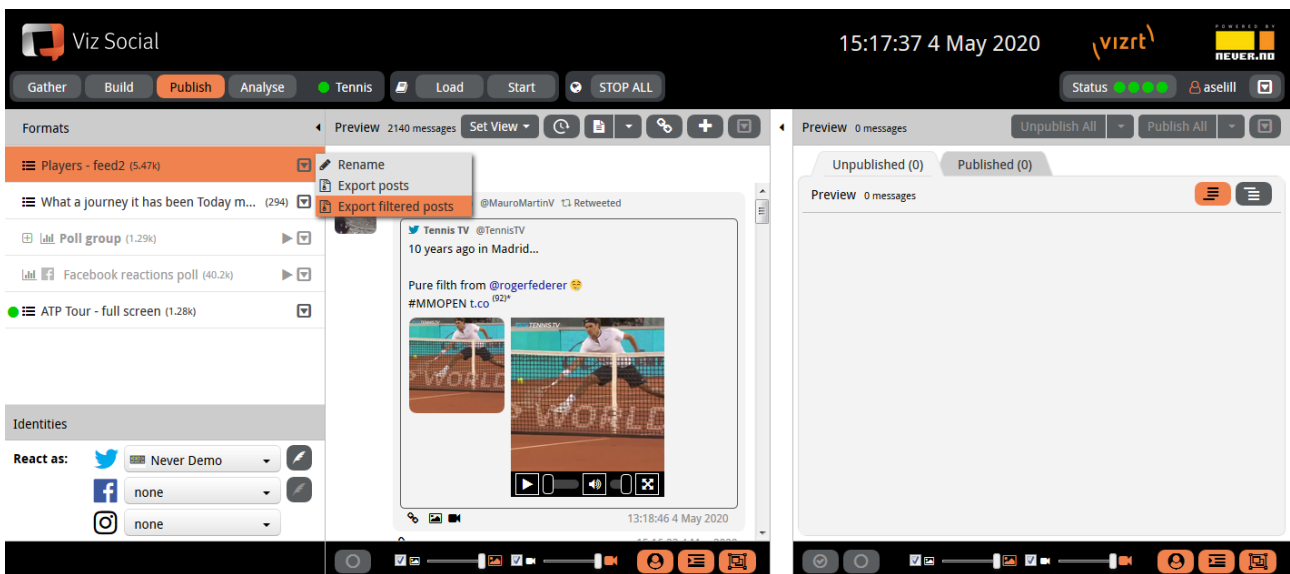
Post management in Carousels can be automated via two independent and complementary functions: Auto-moderate and auto-publish. Both are configured per Carousel in Build.

If auto-moderate is switched on, then all posts arriving in the middle column are immediately forwarded to the right column as UNPUBLISHED posts. If auto-publish is active, then every new UNPUBLISHED post is immediately published, bypassing ordering or other human intervention.

By default, only one of the options can be enabled at the time. Contact support if you need both enabled.

5.2.9 Exporting

The context menu of Carousels in Publish offers two export functions: One for everything in the Carousel and one only for those posts within the current View. When selected, the appropriate posts are exported on the Viz Social server and made available for download. This happens asynchronously so the user can continue working while this takes place and is notified when the material is ready for download. Links become available under the Viz Social Archive Manager in the Status menu and remain active for about an hour. Exported data consists of one or more *.csv* or *.json* files, zipped into a single archive.

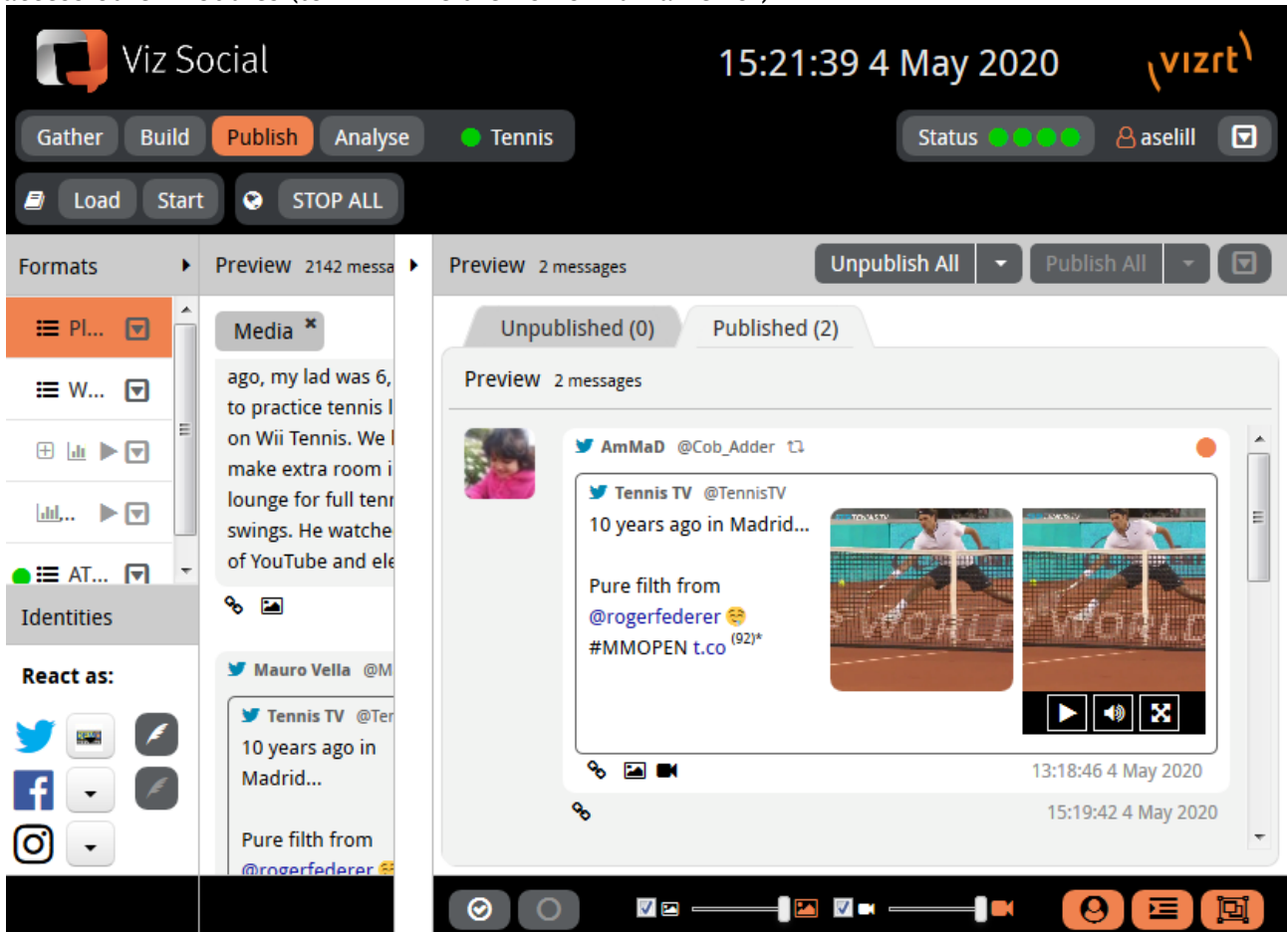


5.2.10 iPad Publishing

Viz Social's Publish module is available for iPads too. Besides being the most powerful application for producing and managing social media content for TV, Viz Social has now also become a very useful presenter's tool. They can be in full control of what goes On Air when by simply logging into Viz Social from an iPad in the studio. Access is via a mobile browser (Chrome or Firefox, and in almost all cases Safari too), so no dedicated app or configuration is needed for this. It often helps to create a Home Screen shortcut for easy access.

iPad access is currently limited to the Publish module only. The three Carousel columns can be collapsed to provide the best possible user experience and to use the available space as economically as possible. Content selection and publication become particularly simple in portrait mode when columns one and two are collapsed. This set-up combines very well with multiple (Nested) Carousels in sequence (pre-)moderating and publishing into each other sequentially. Since iPad access is only supported for Publish, it is advised to make sure the presenter has no rights to

access other modules (to minimize the risk of human error).



5.3 Nested Carousel

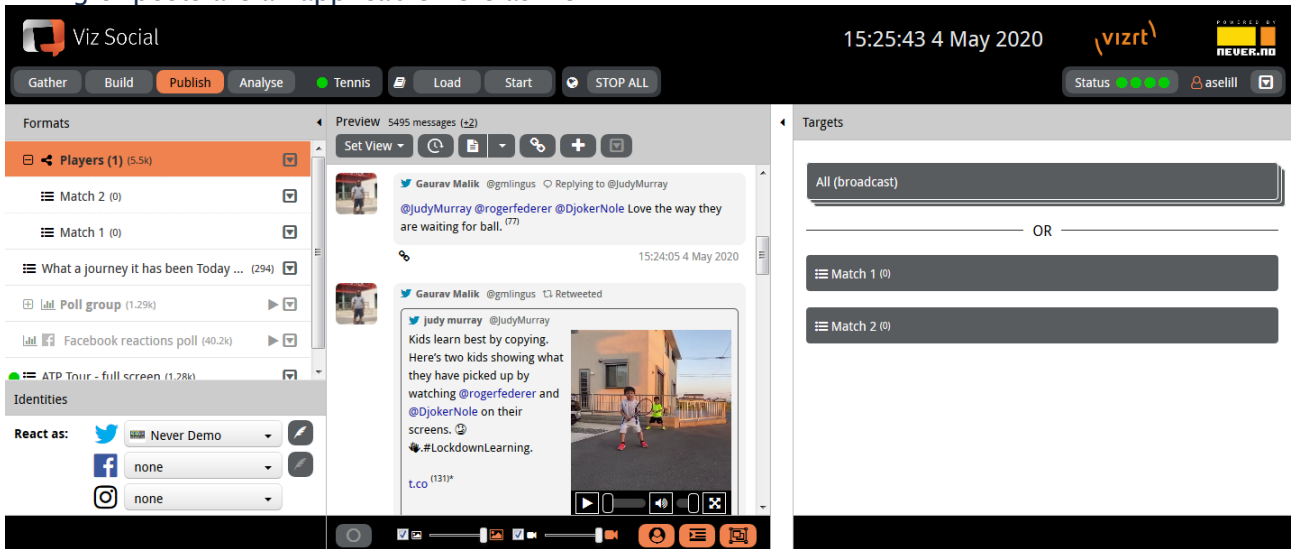
The functionality of the Nested Carousel is divided over the parent Carousel and its child Carousels.

5.3.1 Parent Carousel

The parent Carousel is where the incoming feed is handled. In the parent Carousel, the child Carousels are visible as targets in the right column. Initially, the child Carousels are empty and all posts from the configured source are contained in parent Carousel. By selecting one or more posts in the middle column and clicking on one of the targets in the right column, the selected posts are routed towards this target. Alternatively, drag and drop can also be used to copy/move posts from parent Carousels into one or more child Carousels. The copy/move option in the right top corner determines whether posts continue to live in the middle column (copy) after this or not (move). In copy mode, the posts continue to be available for routing towards other targets.

The middle column of the parent Carousel supports the same auxiliary functionality as the middle column of a regular Carousel. Hence, filtering, exporting, editing, removal, manual insertion and

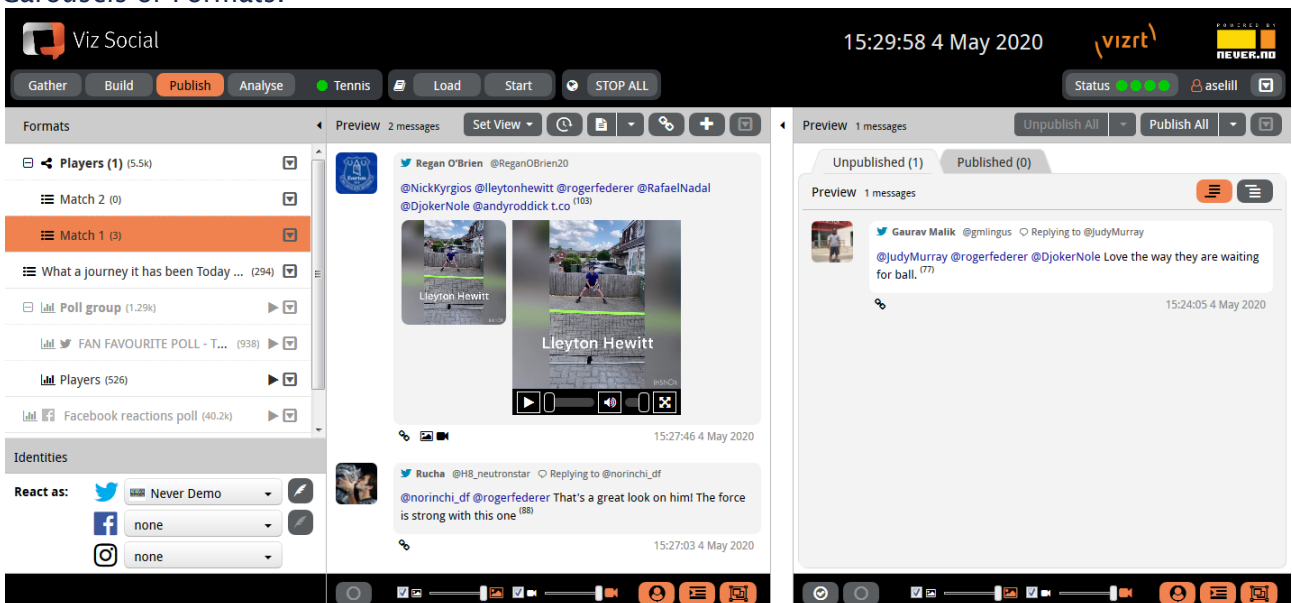
linking of posts are all applicable here as well.



5.3.2 Child Carousel

The child Carousels are connected to external destinations, and this is where the routed messages from the parent Carousel end up. The core task of the moderator here is to select which of the received posts should be published and in what order. This process is exactly the same as for a regular Carousel, including the possibility that the third column operates in auto-moderate and/or auto-publishing mode.

Just like the parent Carousel, the full set of auxiliary functions and View options can be used in the middle column to search economically for the best possible posts, and to edit them if needed. In case the same post was routed to multiple targets, it is important to know that when a post is edited in or deleted from a child Carousel, that same post remains unmodified in other child Carousels or Formats.



5.4 Poll

When selecting a Poll Format in Publish, you can immediately see the Poll characteristics as specified in Build, such as the questions and their responses. Next, the cumulative number of votes and a relative fraction (in the form of a percentage) is shown for each alternative. In the middle, there's a column that can be used for manipulating the outcome by manually adding votes to a certain alternative.

The screenshot shows the Viz Social interface for a poll. The top bar displays the time '15:28:35 4 May 2020' and the Vizrt logo. The main interface is divided into several sections:

- Formats:** A list of poll formats on the left, including 'Players (1) (5.5k)', 'Match 2 (0)', 'Match 1 (0)', 'What a journey it has been Today ma... (294)', 'Poll group (1.29k)', 'FAN FAVOURITE POLL - The ... (938)', 'Players (526)', 'Facebook reactions poll (40.2k)', and 'ATP Tour - full screen (1.28k)'. The 'Players (526)' format is selected.
- Question and Instructions:** The question is 'Who do you think will win today's match?' and the instruction is 'Vote by sending #atptourvote followed by your choice'.
- Table of Alternatives:**

Displayed alternative	Votes	Moderator votes	Total	Percentage
Roger Federer	283	0	283	54 %
Rafael Nadal	243	0	243	46 %
Total	526	0	526	100 %
- Visualizations:** A bar chart shows the vote counts for Roger Federer (red bar, 283) and Rafael Nadal (yellow bar, 243). A pie chart shows the percentage distribution: Roger Federer (54%) and Rafael Nadal (46%).
- Identities:** A section on the left allows users to 'React as' different identities, with options for 'Never Demo', 'none', and 'none'.

The **Refresh** button can be used to make sure that the latest standings are in sight. If the Poll was set-up as a Manual Publish one, then the **Publish** button allows the operator to choose the publication moment. Automatically publishing Polls publish periodically with the interval selected in the Build phase.

5.4.1 In-line Publishing of Facebook Live Video Polls

See [Polls](#) for the definition and set-up of Facebook Live Video Polls. Independently of Viz Social's own XML/graphics playout, the stream owner can manage the Poll state within the Live stream on Facebook from within Viz Social.

In Publish the Poll state can be managed with the three buttons shown in the left column: **Show voting**, **Show results** and **Hide poll**. These buttons act as follows:

- **Show voting:** Shows the voting options. This button is the default.
- **Show results:** Shows the current standings.
- **Hide poll:** Hides the poll from the viewers.

These buttons are commands and do not provide state information. Please be patient after pressing one of the buttons, as it may take up to 30 seconds before the viewers of the Live Stream

on Facebook see the effect of your action.

The screenshot shows the Viz Social interface for configuring a poll. The poll question is "Favourite player?". The interface includes a sidebar with various poll formats, a main configuration area with a table of alternatives, and two visualizations: a bar chart and a pie chart.

Displayed alternative	Votes	Moderator votes	Total	Percentage
Nadal	0	2	2	20 %
Federer	0	3	3	30 %
Djokovic	0	4	4	40 %
Becker	0	1	1	10 %
Total	0	10	10	100 %

The bar chart shows the total votes for each player: Nadal (2), Federer (3), Djokovic (4), and Becker (1). The pie chart shows the percentage distribution: Nadal (20%), Federer (30%), Djokovic (40%), and Becker (10%).

5.4.2 Views for Polls

Polls have the tendency to saturate over time. This is good for getting stable results, but in case circumstances change, or a correlation of the outcome with other parameters is needed, this is less fortunate and for that reasons Polls have been equipped with Filters/Views.

The View set available in Publish for Carousels and Competitions is also available for Polls. The most obvious added value here is the ability to define time slices to measure opinions and responses prevalent within a particular time frame. This can be either an absolute interval with well-defined start and stop moments, or a relative one measured backwards from the moment the View was applied (the last *N* minutes, hours, days or weeks). Time Views are available for native and for pre-aggregated Poll types.

For native Polls, where all votes are collected locally, other Views categories are available well: Text, Exclude, Source, Originator, Media, Tags.

Views can be set up in the same way as for Carousels and Competitions and are volatile (no data is removed or modified, and they can be removed at any time to return to the original unfiltered data

set).

Question: Who do you think will win today's match?
Instructions: Vote by sending #atptourvote followed by your choice

Displayed alternative	Votes	Moderator votes	Percentage
Roger Federer	283	0	54 %
Rafael Nadal	243	0	46 %
Total	526	0	100 %

Bar Chart Data:

Player	Votes
Roger Federer	283
Rafael Nadal	243

Pie Chart Data:

Player	Percentage
Roger Federer	54%
Rafael Nadal	46%

5.4.3 Publishing Poll Groups

In Publish Poll, Groups behave identical to regular Poll. Moderator counts can be added at will and the timing of publication can be triggered manually if necessary. Publishing data from the Poll Group does not affect publishing of its member Polls (both can be active simultaneously).

Question: Who is your favourite male player?
Instructions: Please vote with #atptourvote followed by alternative

Displayed alternative	Votes	Moderator votes	Total	Percentage
Roger Federer	734	0	734	57 %
Rafael Nadal	552	0	552	43 %
Total	1286	0	1286	100 %

Bar Chart Data:

Player	Votes
Roger Federer	734
Rafael Nadal	552

Pie Chart Data:

Player	Percentage
Roger Federer	57%
Rafael Nadal	43%

5.5 Competition

For Competitions, Publish is the module where the winner/winners is or are drawn. The module has some parallels with the Carousel Format and works as follows to make sure the selection of winners is random and honest.

To prevent tampering with the selection of candidates, the following Carousel features are disabled:

- Importing post by URL.
- Creating a post manually.
- Deleting/hiding a post.
- Editing or tagging an existing post.
- Moving a post from the right column back to the middle one.

When drawing one or more winners, the following logic is applied (in that order):

- Users can use [Views](#) to further narrow down the group of eligible contestants (for example, by setting up a time window). If Views are set-up only posts satisfying the View criteria are considered.
- If a maximum number of N entries per user was specified then from the remaining posts only the first N entries per user are eligible. All others are ignored.
- If one or more correct answers were specified in Build, then from the remaining posts only those with at least one correct answer are eligible. All others are ignored.
- If one or more false answers were specified in Build, then from the remaining posts only those without any false answers are eligible. All others are ignored.

When the **draw winner** button (the one with the cup in the header of the middle column) is selected, one or more posts are randomly drawn from the set of eligible posts. These posts are shown in a pop-up and the posts are moved to the right column as Unpublished, so that they can be published later on. The publication logic is exactly the same as for regular [Carousels](#).

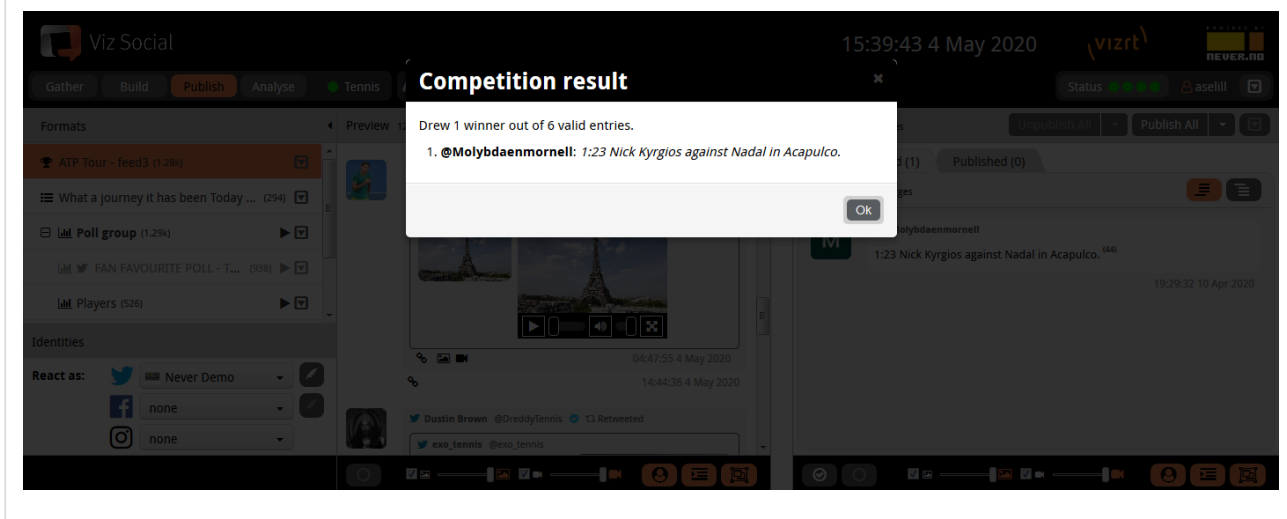
Winners do not participate in subsequent draws within the same Competition. It is not possible to move posts from the rightmost column back into the middle one.

A competition report in PDF format can be generated with the report button in the header of the rightmost column. This report can be used for administrative or legal matters. In addition, the full/filtered [Export Functions of Carousels](#) are available for Competitions as well, so that at the end of a draw all participants and their messages can be archived.

Publish Module of the Competition Format



Drawing a Winner in the Competition Format



5.6 Word Clouds

As described earlier in [Building Word Clouds](#), Word Clouds come in two types: Auto-discovery and Preset. Because of their different dynamics, the Publish options for both types of Word Cloud differ slightly.

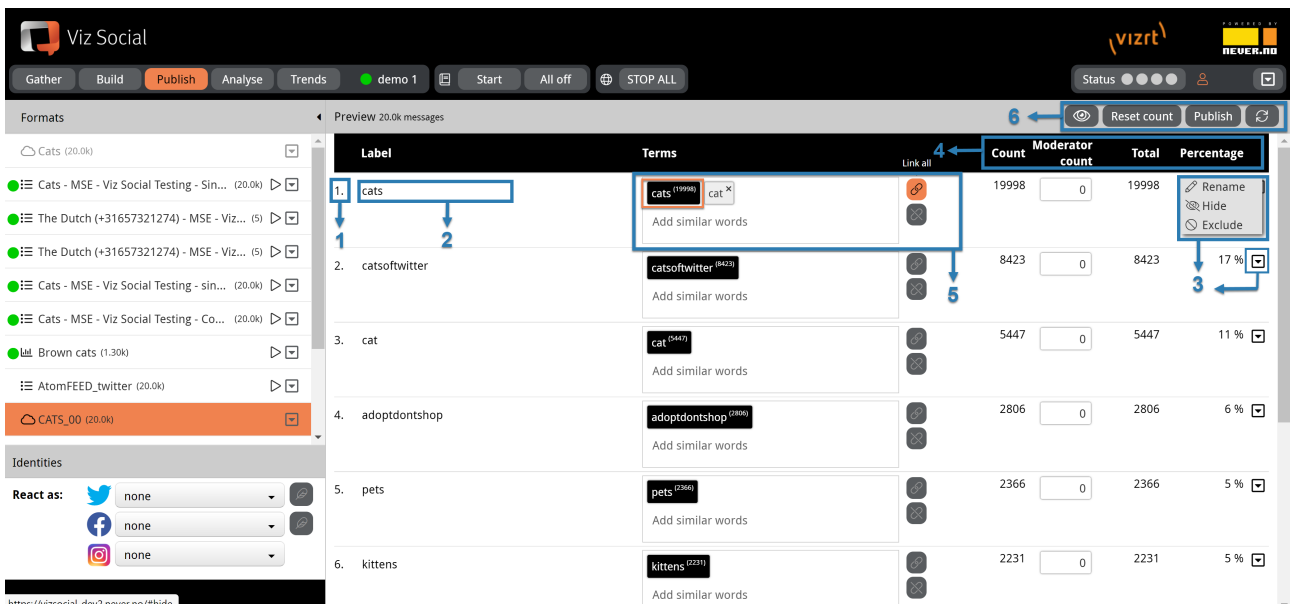
5.6.1 Auto-discovery Word Cloud

After an auto-discovery Word Cloud has been set up in Build the analysis to find the trending terms within the incoming feed can be started by clicking the refresh button. Later updates of the statistics are triggered via the same mechanism.

Each word in the generated word cloud is shown with a set of actions/fields:

1. **Index**
2. **Label:** The labels can be edited by clicking the pencil in the context menu.
3. **Context menu:** the context menu provides options to:
 - a. Rename the label.
 - b. Hide the entry. With the small “Eye” toggle at the top, all hidden terms are made visible/invisible, and hidden terms are greyed out and will no longer be published.
 - c. Exclude the entry. The effect of this button is that this term will be added to the Format-specific exclude list (see in **Build**). Removing it from this exclude list in **Build** makes it reappear.
4. **Counts:** The right side of the label displays the *Count*, which indicates how many times the word appears in the feed, the *Moderator count*, which allows to manually add/remove counts from the true count number, and the *Total*, which adds both true and moderator counts together.
5. **Merge list (Link words):** In this field, additional terms (shown in blue) can be added whose counts will be added to those of the master word (shown in orange). For instance, when counting the number of occurrences of “cats”, it might be useful to add the number of occurrences of “cats” and “kitten” as well. Once merged with another word, the added term will no longer be shown as a separate entry. By clicking the small unlink option, terms can be de-merged to become stand-alone again. The master word can never be deleted from its own list. If merge is applicable, the counts (including Moderator counts) and percentages will be updated.
6. **The right top corner:** It contains buttons for showing/not showing hidden terms, for resetting all counts, and for manually publishing towards the configured destination.

In the beginning, it will take some time to add all non-significant terms to the Formats specific or system-wide exclude list. However, once a suitable collection of unwanted terms has been collected, lists can be saved and reused for other Word Clouds to give them a warm start. This will significantly shorten the Word Cloud start-up time.



5.6.2 Preset Word Cloud

The Preset word cloud is simpler than the auto-discovery Word Cloud. As compared to that Publish page, there is no parameter to set up the list size because the number of monitored terms is identical to the size of the preset list set-up in Build. Also, the Exclude list button has been removed because the Word Cloud in preset mode does not have an exclude list. Other functions in the preset Word Cloud, like merging terms or hiding terms, work the same as those for the Auto-discovery Word Cloud.

6 Analyze

In Viz Social's Analyze module, users can investigate and analyse in detail how the Searches running on Viz Social are evolving or have evolved over time.

This section contains information on the following topics and procedures:

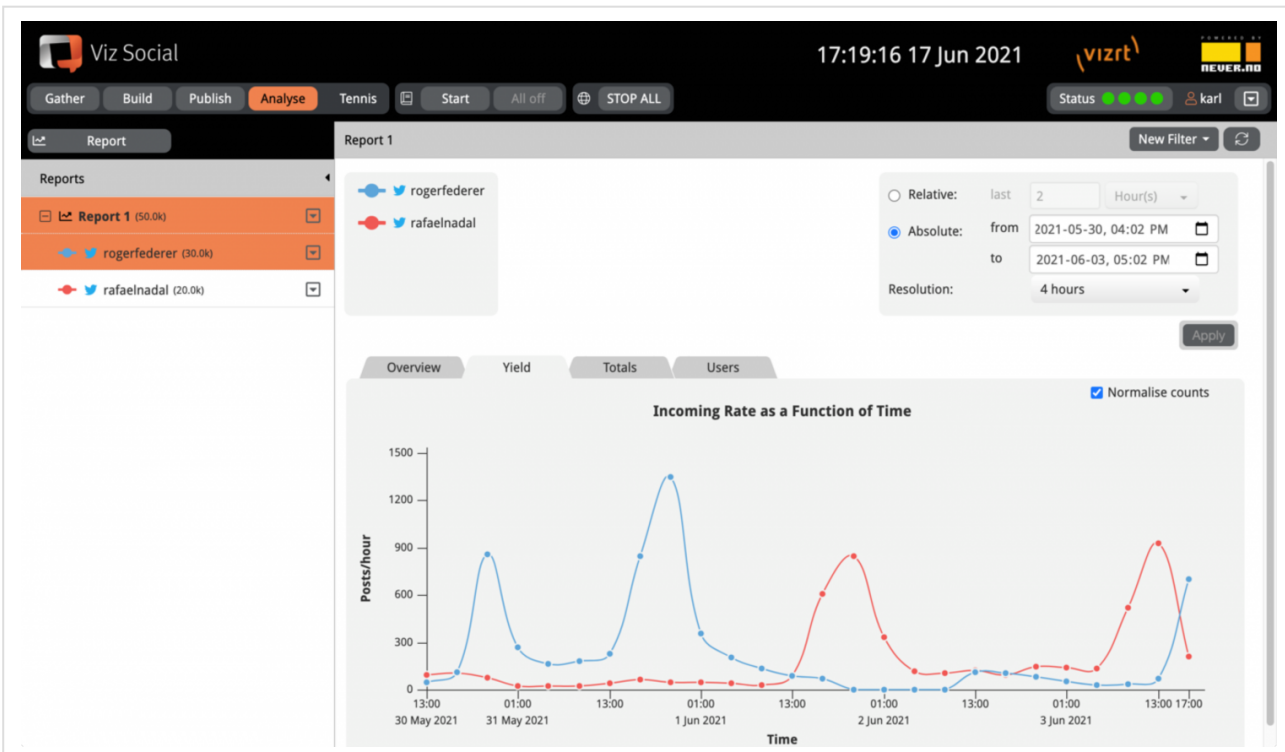
- [Report Setup](#)
- [Interval Configuration](#)
- [Interpreting Data in Reports](#)
- [Overlays](#)
- [Exporting Reports](#)

6.1 Report Setup

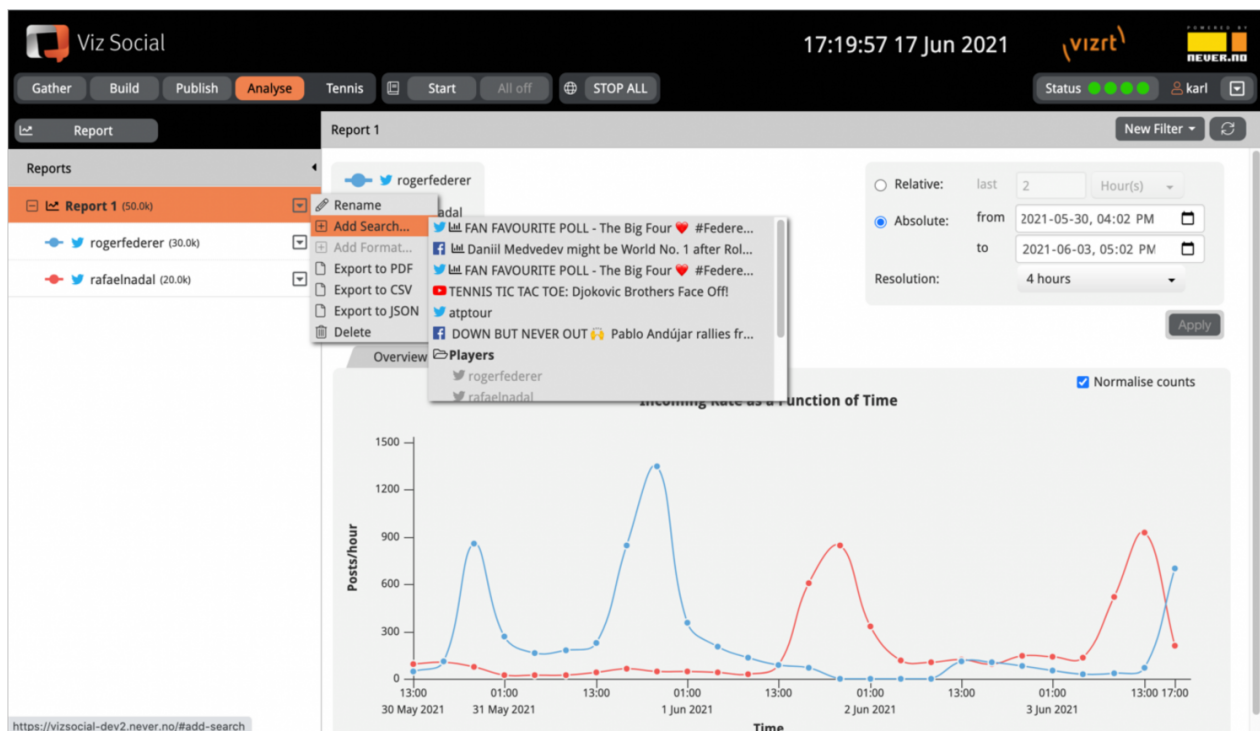
The basic building blocks in Analyze are Reports, so the module starts out empty with only an **Create Dynamic Report** button. Reports are created empty and users can add Searches and Groups as data sets within each Report. The addition is done via the context menu of each Report. The same context menu also gives users the possibility to rename and delete Reports. Each data set can be added to a Report only once and there is a maximum of eight data sets per Report. Data sets can be renamed and deleted via their individual context menus.

Data sets can be selected in the left column to make the visual representation of their data more pronounced as compared to other data sets. This is true within all tabs. Multiple Reports can coexist and are unrelated, so the same data set can be used in several Reports.

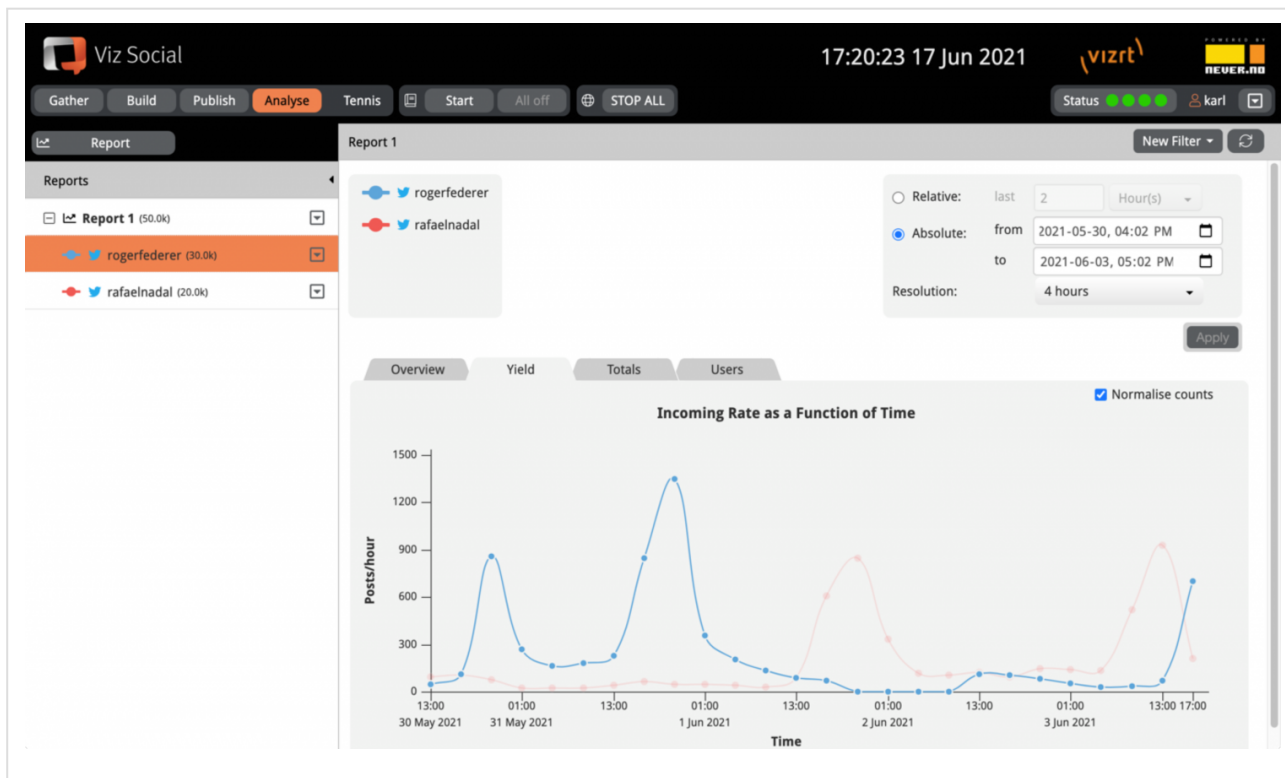
Reports



Adding Data Sets to Reports



Selecting Data Sets in Reports

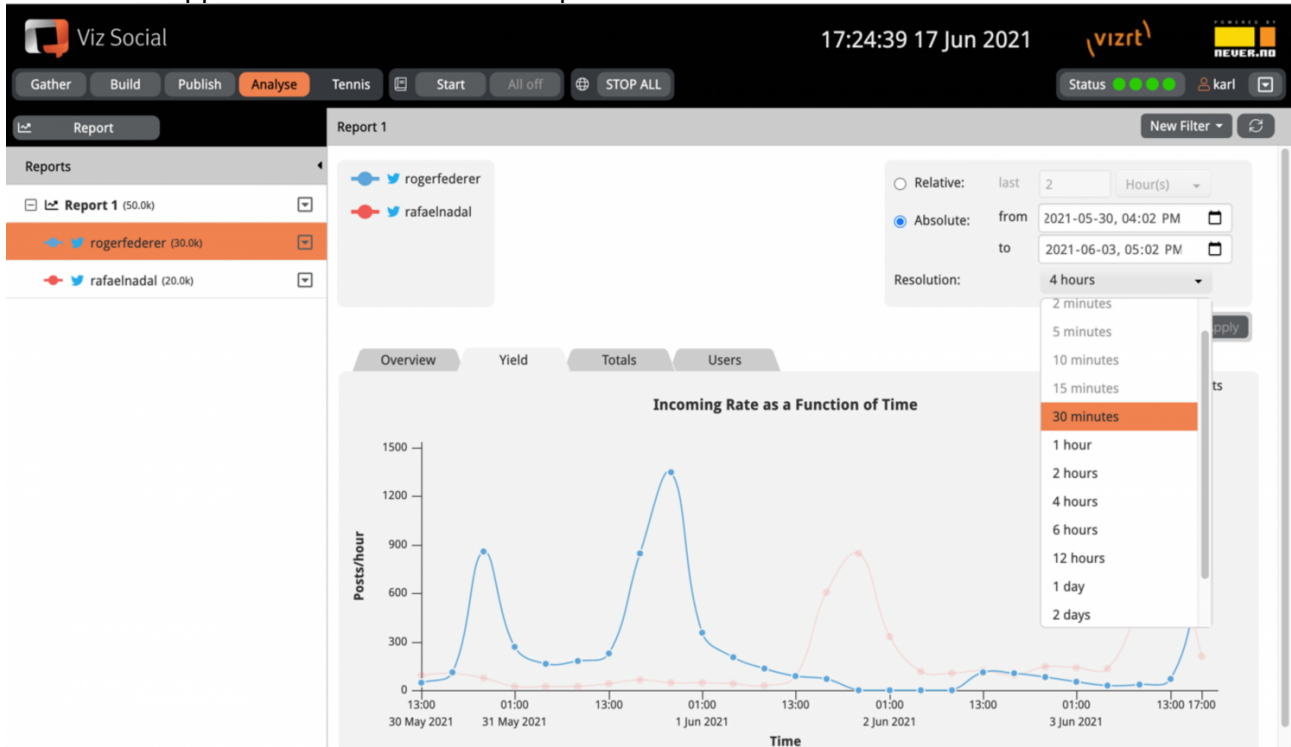


6.2 Interval Configuration

Once all data sets have been added to a Report, the Report can be tuned, and the data is ready for interpretation. The most important thing to consider is the time window. By default, each Report shows the evolution over time of the data set for the last two hours with a resolution of ten minutes. Users can choose their preferred time interval, either as a relative indication (the last ... minutes/hours/days/weeks) or as an absolute time interval with fixed start and end times.

The resolution can be chosen so that detailed fluctuations are visible or not. The system has a configurable maximum number of points so sometimes smaller resolutions are automatically disabled because they would result in too many data points in the Report. Resolutions and time

intervals are applied to all data sets in a Report at the same time.



6.3 Interpreting Data In Reports

After the data has been selected and the time interval has been chosen, the most important task can be performed: the interpretation of the data. Currently, Viz Social shows four different data categories in four separate tabs:

- [Overview](#)
- [Yield](#)
- [Totals](#)
- [Users](#)

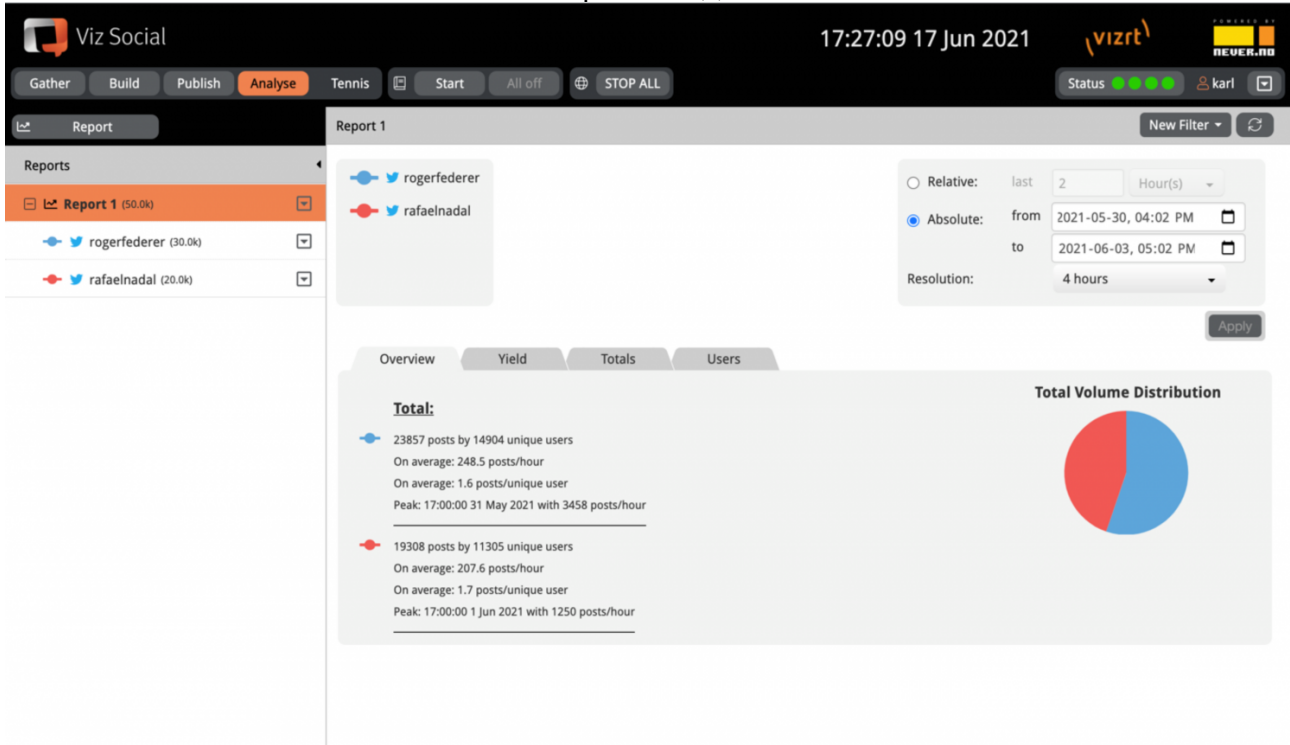
Each one is described in its own section below.

6.3.1 Overview

The Overview tab shows the key figures per data set within the Report and for the configured time window. Currently these figures are:

- The number of posts and the number of unique users.
- The average number of posts per time interval.
- The average number of posts per unique user.
- The peak moment and the peak traffic.
- The top user and his/her total number of posts.

Figures are presented per data set and in case overlays are active, both filtered and unfiltered data can be shown in parallel. In addition, a pie chart is shown to make it easy to visually compare the volumes of the various data sets (both for total and for filtered data where relevant). A mouse-over effect shows the actual numbers used in the pie chart(s).

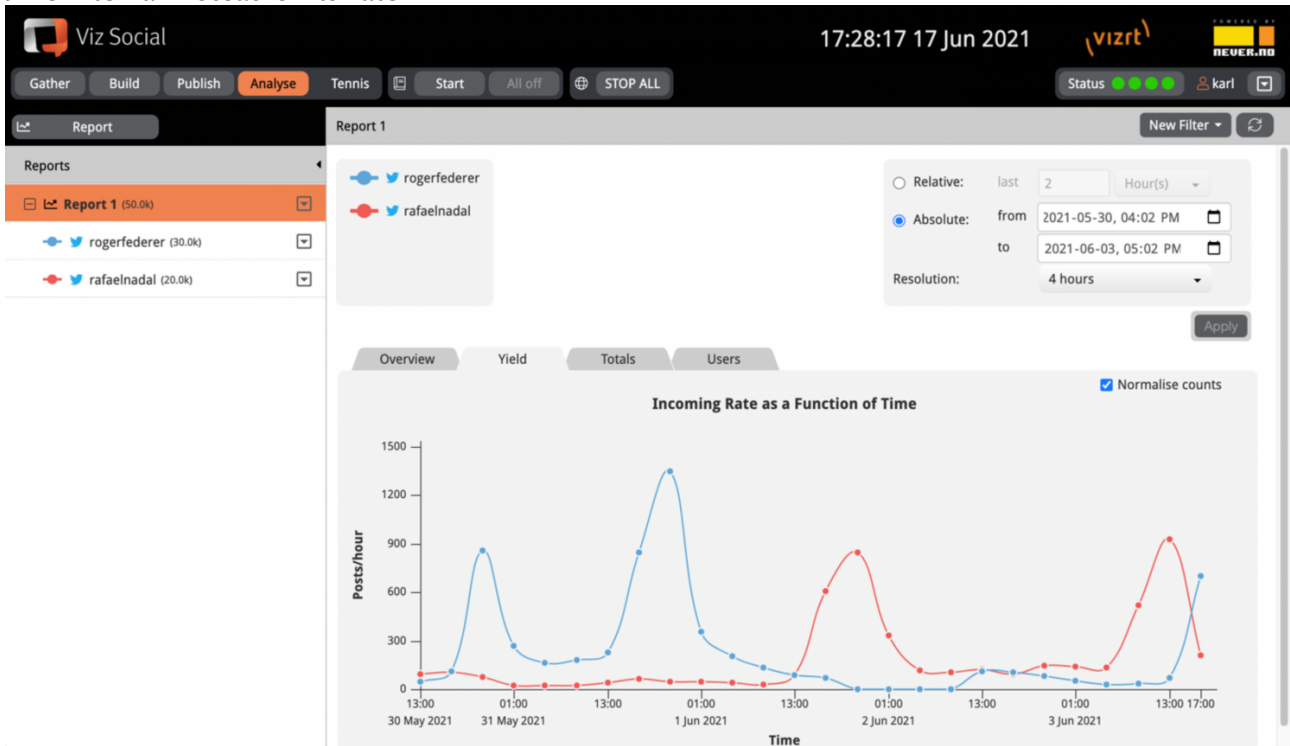


6.3.2 Yield

The Yield tab shows the rate of incoming traffic per data set as a function of time for the configured time window. The mouse-over canvas shows the exact numbers per time slice for all data sets. In case overlays are active, both filtered and unfiltered data can be shown in parallel and individual data sets can be visually emphasized by selecting them in the left column.

By default, the Report shows the yield as messages/time unit on the Y-axis (as normalised data). By unchecking the **Normalize counts** checkbox the Reports show the bare message count for each

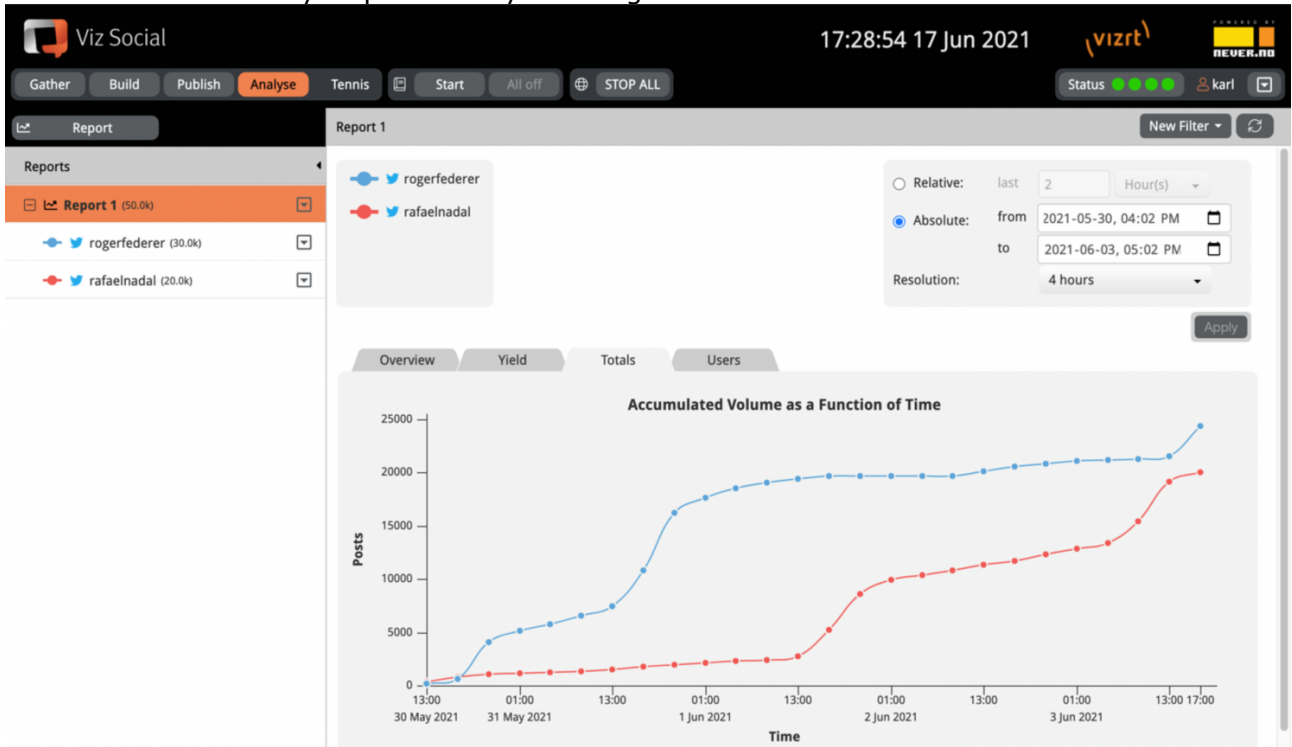
time interval instead of its rate.



6.3.3 Totals

The Totals tab shows the cumulative total of incoming traffic per data set as a function of time for the configured time window. Counting always starts with zero for the first/leftmost time slice, so it does not take posts into account from before or after the configured time window. The mouse-over canvas shows the exact numbers per time slice for all data sets. When a Search is going slow, it results in a horizontal line, and when it is going fast, a steep increase can be observed. All lines are monotonously increasing.

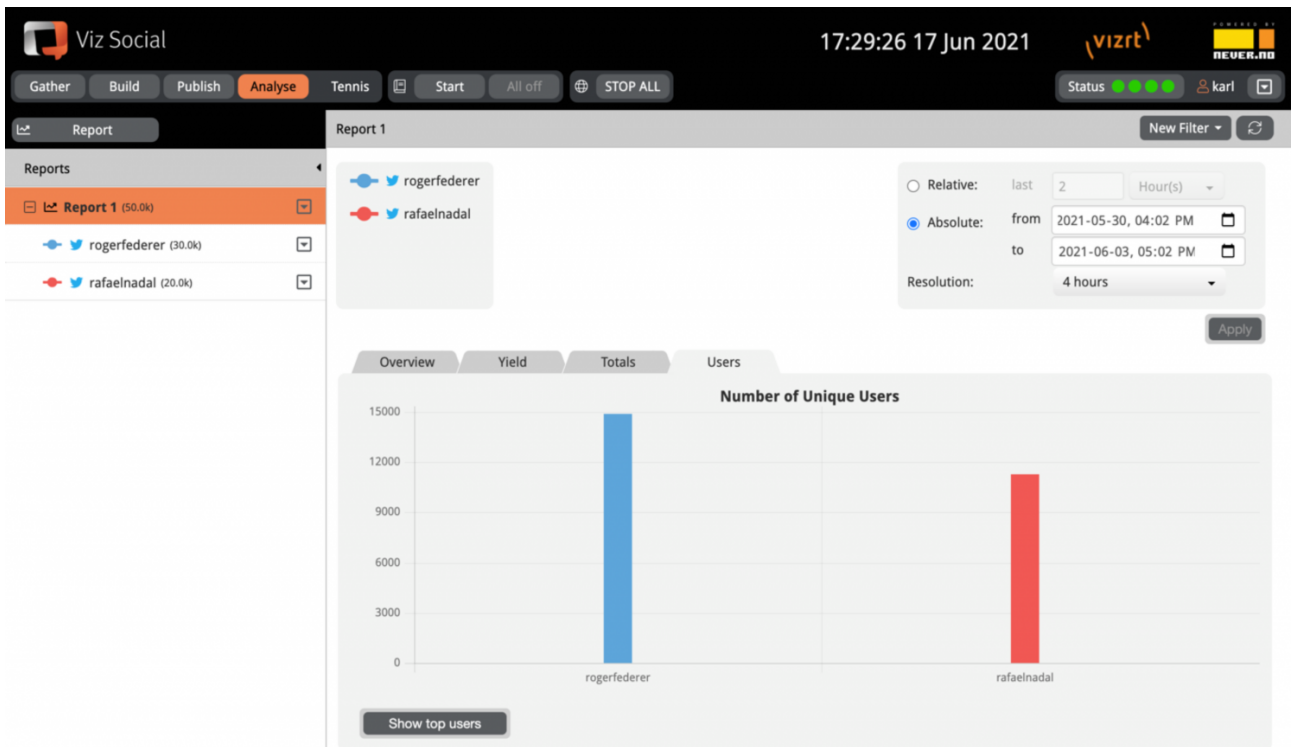
In case overlays are active, both filtered and unfiltered data can be shown in parallel and individual data sets can be visually emphasized by selecting them in the left column.



6.3.4 Users

The Users tab shows the top *N* most active users per data set for the configured time window. With the dropdown menu at the top, the value of *N* can be selected. In the bar chart at the top, the number of unique users can be compared across different data sets.

In case overlays are active, both filtered and unfiltered data can be shown in parallel and individual data sets can be visually emphasized by selecting them in the left column.



The screenshot displays two lists of top users. The first list is for 'rogerfederer' (30.0k) and the second is for 'rafaelnadal' (20.0k). Each list shows a rank, a user profile picture, the user name, and the number of unique users.

Rank	User	Unique Users
Total:		
1.	Aksriv04	85
2.	blossom_tree7	75
3.	ATPtennis2002	71
4.	lavenderRF20	65
5.	aritrabvb	50
6.	SteakWang	41
7.	RogerFed20	39
8.	PraveenMoga...	37
9.	mochinookasan	33
10.	annie25320275	31
11.	danicara77	30
12.	Hariroger_	29
13.	relax792	29
14.	aslindasays	28
15.	joseantmartins	27
16.	LRMlillo	26
17.	1000alex0001	24
18.	VIKI_RF	23
19.	Belinda0871	22
20.	posty2021	22
of 14904 unique users		
Total:		
1.	blossom_tree7	90
2.	Cokoladova68	79
3.	ATPtennis2002	72
4.	11VolleysPERSet	67
5.	Moana125	67
6.	Vamosgirl1	66
7.	Rafanatica1	59
8.	tohabebj	58
9.	Dorli_Wi	55
10.	GraciasRafa1	53
11.	genny_ss	48
12.	1000alex0001	46
13.	Marlinaayu	46
14.	RafaelNadal_BR	46
15.	hikaru_easy	46
16.	Arni_Abd	40
17.	deepakangadi7	36
18.	pizarro2019	36
19.	iamlathanth	34
20.	AleRafaAlex	33
of 11305 unique users		

6.4 Overlays

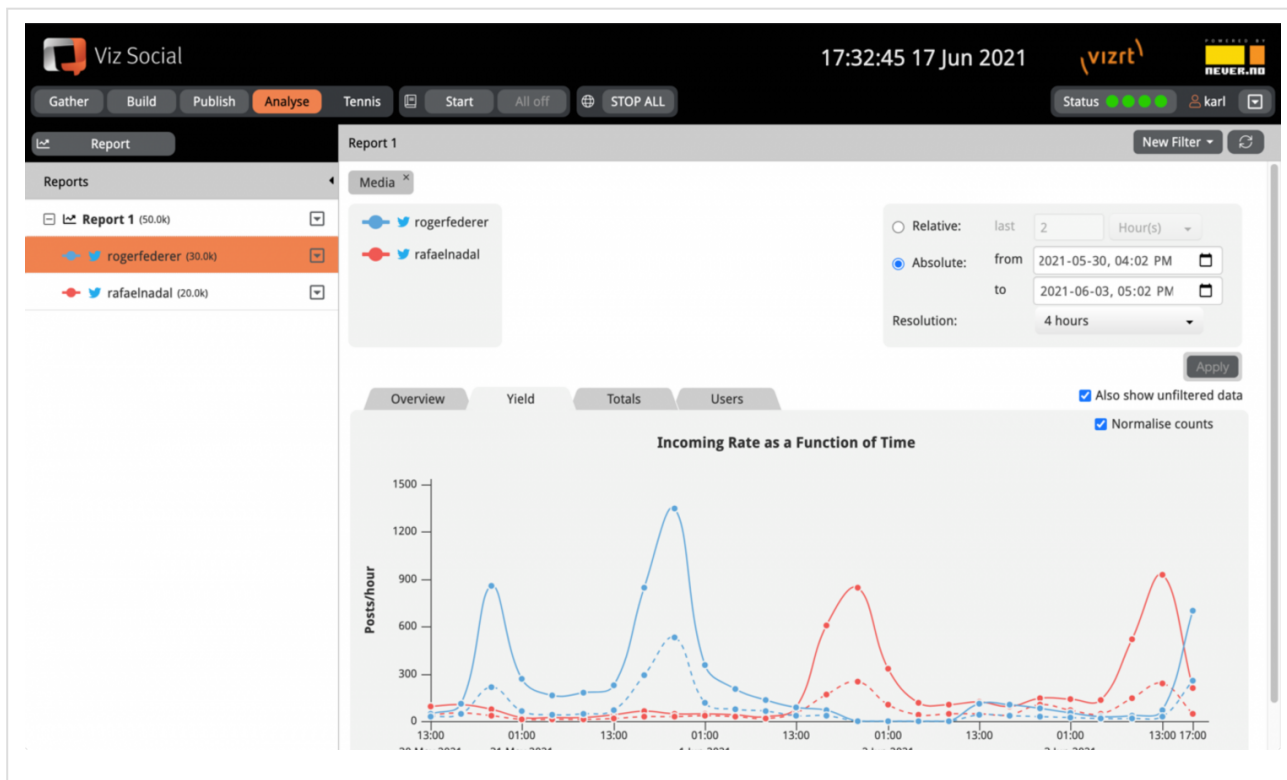
Quite similar to the Views of Carousels, Reports also can be overlaid to also show the evolution of only a specific subset of the data. Multiple of these Views can be setup simultaneously. Views do not impact the bare data itself, so when they are removed the original data of the first Report is shown again.

When Views have been set up, the **Also show total data** checkbox becomes visible directly under the canvas for configuring the time window. When this checkbox has been selected, then for each data set overlaid data and original data are shown simultaneously, so that the effect of the overlay can be seen in a single glance. This works particularly well when selecting individual data sets in the left column.

Overlays for Reports

The screenshot displays the Viz Social interface during an analysis phase. The top navigation bar includes buttons for 'Gather', 'Build', 'Publish', 'Analyse', and 'Tennis'. The main content area is titled 'Report 1' and shows a list of reports on the left: 'Report 1 (50.0k)', 'rogerfederer (30.0k)', and 'rafaelnadal (20.0k)'. The 'rogerfederer' report is selected. The main chart area is titled 'Incoming Rate as a Function of Time' and shows a line graph with 'Posts/hour' on the y-axis (0 to 600) and time on the x-axis (13:00 to 17:00). The graph displays two data series: a blue dashed line for Roger Federer and a red dashed line for Rafael Nadal. The Roger Federer series shows a significant peak around 01:00. The Rafael Nadal series shows a smaller peak around 01:00. The interface includes a sidebar with report filters, a top navigation bar, and a control panel for time windows and data display options.

Displaying Filtered and Unfiltered Data



6.5 Exporting Reports

The data and graphics of Analyze can be exported for further processing. Viz Social supports export as a formatted PDF when users want to retain the graphics. Alternatively, when the core data is needed, users can also export the data as CSV or JSON.

7 Roles And Access Rights

Each Viz Social installation comes with one preconfigured Local Administrator account. Local Administrators have all privileges and all access rights. As such they are able to create other users and other Local Administrators. They also have full access to all Stories on the platform and their rights are not limited in any way. It is advised to use a conservative policy in handing out Local Administrators rights.

This section contains information on the following topics:

- [User Management](#)
- [Access Control](#)

7.1 User Management

The User Management module is available for users that have the User Administrator role enabled in their profile. This module can be accessed via the context menu in the right top corner. Here users can be created, edited (managed) or deleted. Apart from basic parameters as username, real name, password and mail address, the following other attributes can be set:

- Does this user have the Local Administrator role? (in which case all other roles and access rights are enabled)?
- Does this user have the User Administrator role?
- Does this user have the Social Administrator Administrator role?
- Is this user allowed to create/own Stories, and if so, how many?
- What are the default access right for this user?

The screenshot displays the Viz Social user management interface. At the top, the header shows the Viz Social logo, the time '17:35:05 17 Jun 2021', and the user's profile 'karl'. Below the header is a table listing users:

User	Stories owned	Default role(s)	Chrome extension tokens registered
helen	0	Local Administrator	--
karl	1	Local Administrator	--
lill	0	Local Administrator	--
scripter	0	Local Administrator	--

The 'karl' user profile is expanded, showing the following details:

- Username:** karl
- First name:** Karl
- Last name:** Neverno
- Password:** [masked]
- Repeat password:** [masked]
- Email address:** [empty]
- 2FA required:**
- Permissions:**
 - Allowed to react on behalf of others
 - Authorised to create own Stories
 - Allowed to own:** Unlimited stories / At most 1 stories
- Default roles:**
 - Local Administrator
 - User Administrator
 - Social Administrator
 - Gatherer
 - Builder
 - Publisher
 - Analyser
 - Trend Analyst

Buttons for 'Close' and 'Update' are visible at the bottom right of the profile form. A 'Create new user' button is at the bottom left, and an 'Exit' button is at the bottom right.

7.2 Access Control

Viz Social uses a Story-centric and owner-centric access and authorization model. After a user with the appropriate privilege has created a new Story, that user becomes the owner of that Story.

7.2.1 Granted Access Control

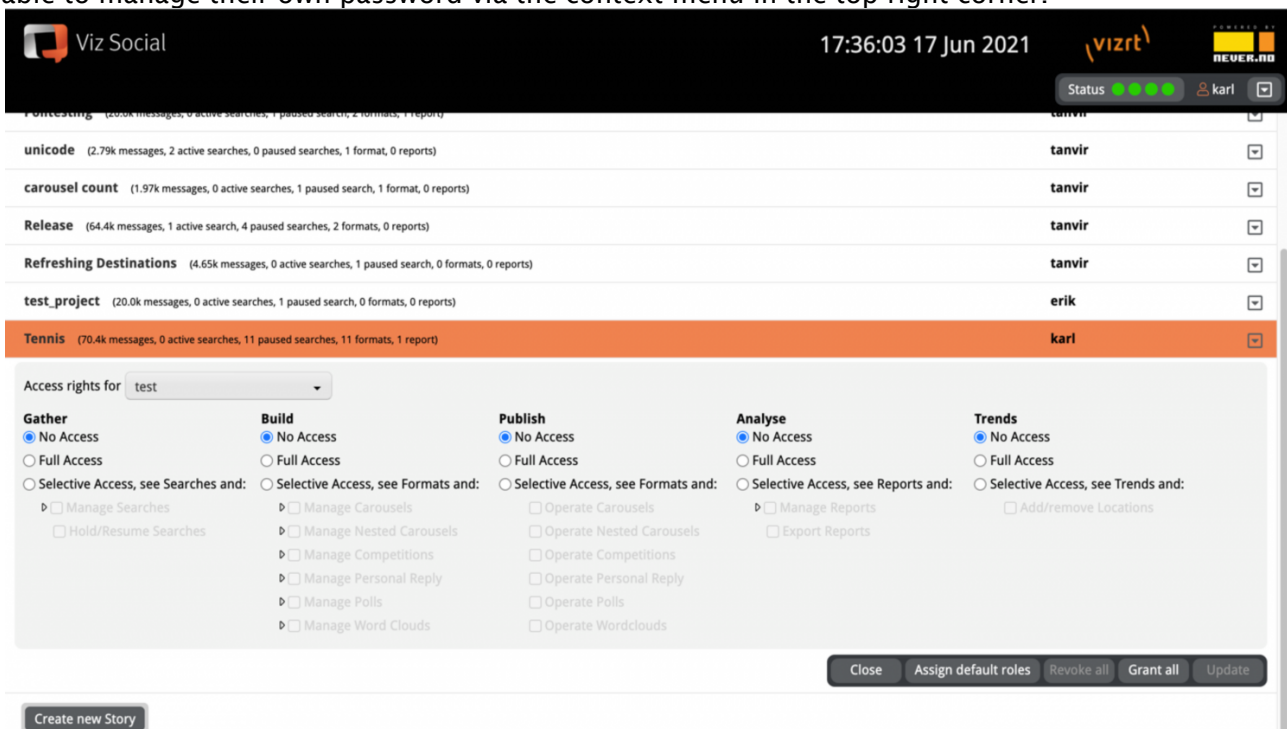
By default, a Story can only be seen and accessed by its owner, the Local Administrators and by those who explicitly have been granted access by the owner. The Story owner and the Local Administrators are the only ones that can use the context menu to:

- Delete the Story.
- Grant other users access to the Story.

The Social Administrator role is needed for users to manage the system-wide social accounts settings, while the User Administrator role is required to manage the user administration on the platform.

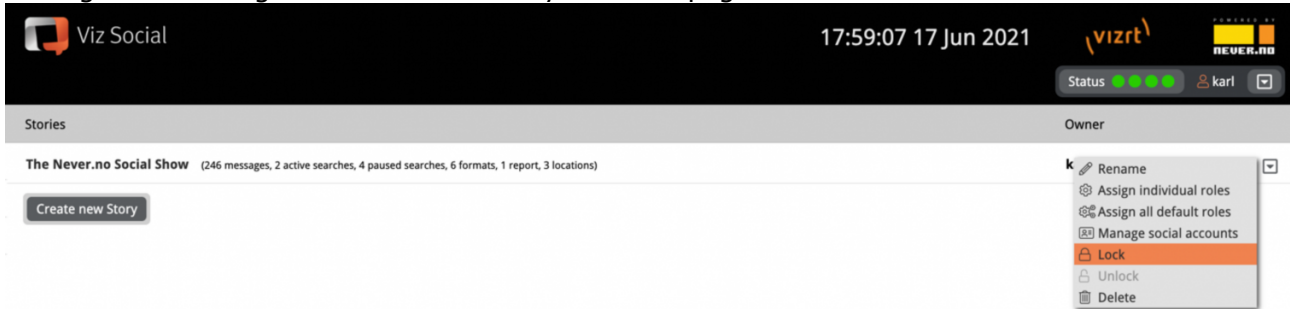
Using the **Assign all default roles** option from the context menu, all users on the platform are given access rights in accordance with their default role. For instance everyone with a Gatherer default role receives read/write access to this Gather module, etc. Fine-tuned and non-default rights can be handed out by selecting the **Assign individual roles** option from the Story-specific context menu. Once a user has received the right to see one module (Gather/Build/Publish/Analyze) in a Story, they see that Story in their Story overview and access/navigation within it in accordance with the set-up user profile.

This helps to integrate Viz Social in larger organizations where access to information is often shared by several people with different roles and authority levels. All users on the platform are able to manage their own password via the context menu in the top right corner.



7.2.2 Locking

In the context menu, Viz Social also offers the possibility to lock Stories. A locked Story remains accessible for everyone it was accessible for, however while locked, Searches continue but nothing can be modified or deleted. Only the owner or an administrator can lock/unlock a Story. Both locking and unlocking are done on the Story overview page.



8 Chrome Extension

Viz Social has a Chrome extension to further ease the collection of individual Posts from social networks. The Viz Social Chrome extension gives users the possibility to add Tweets, Facebook/Instagram Posts or YouTube Videos to their Viz Social installation directly from the social network sites with just a few clicks.

This section contains information on the following topics and procedures:

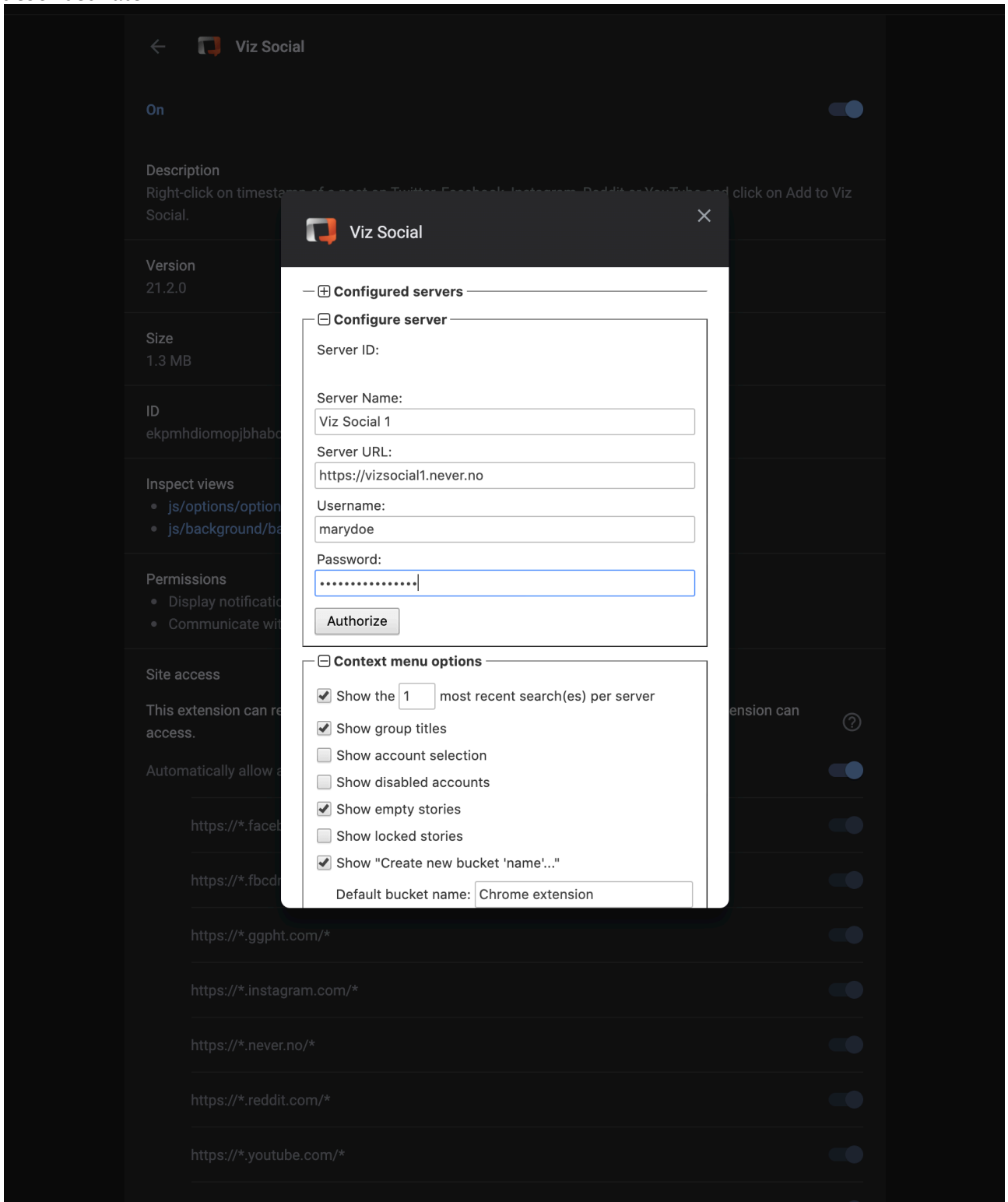
- [Setup](#)
- [Using the Viz Social Chrome Extension](#)
- [Configuration](#)
- [Security](#)
- [Constraints](#)

8.1 Setup

The Viz Social extension can be downloaded and installed from the Chrome Web Store.

After it has been added to the browser, the extension must be configured. Click on the Viz Social icon right of the address bar or type <chrome://extensions> in the browser's address bar, select **Details** of the Viz Social entry and choose **Extension Options**. Fill in the *Configure Viz Social server* entry of the menu and click on **Authorize**. All other configuration items are optional and are

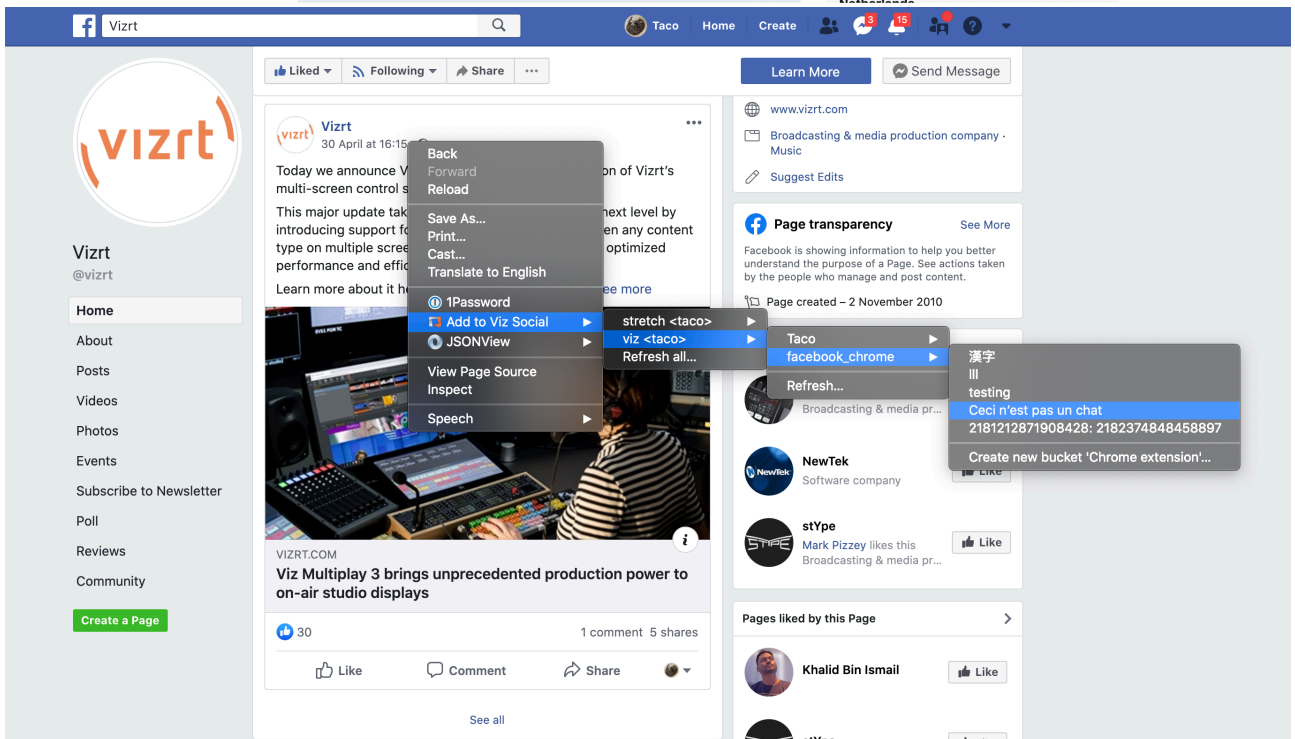
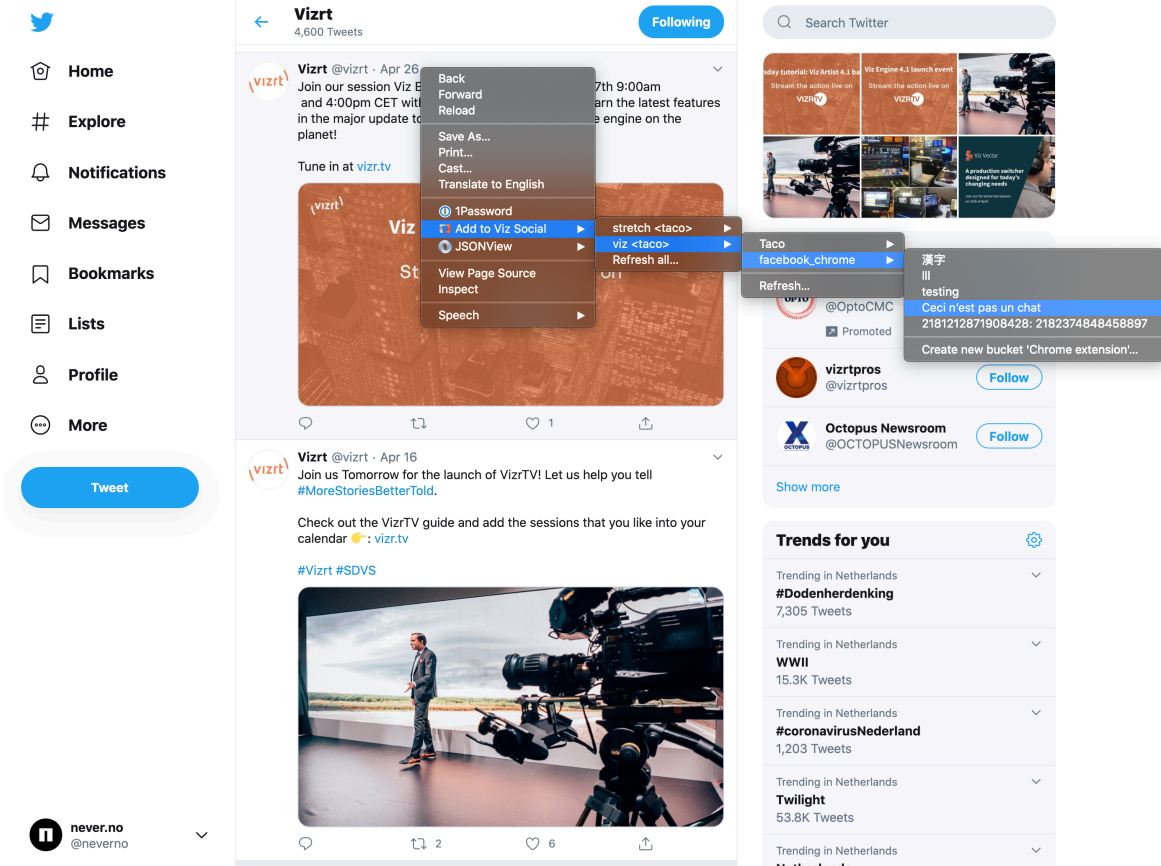
described later.

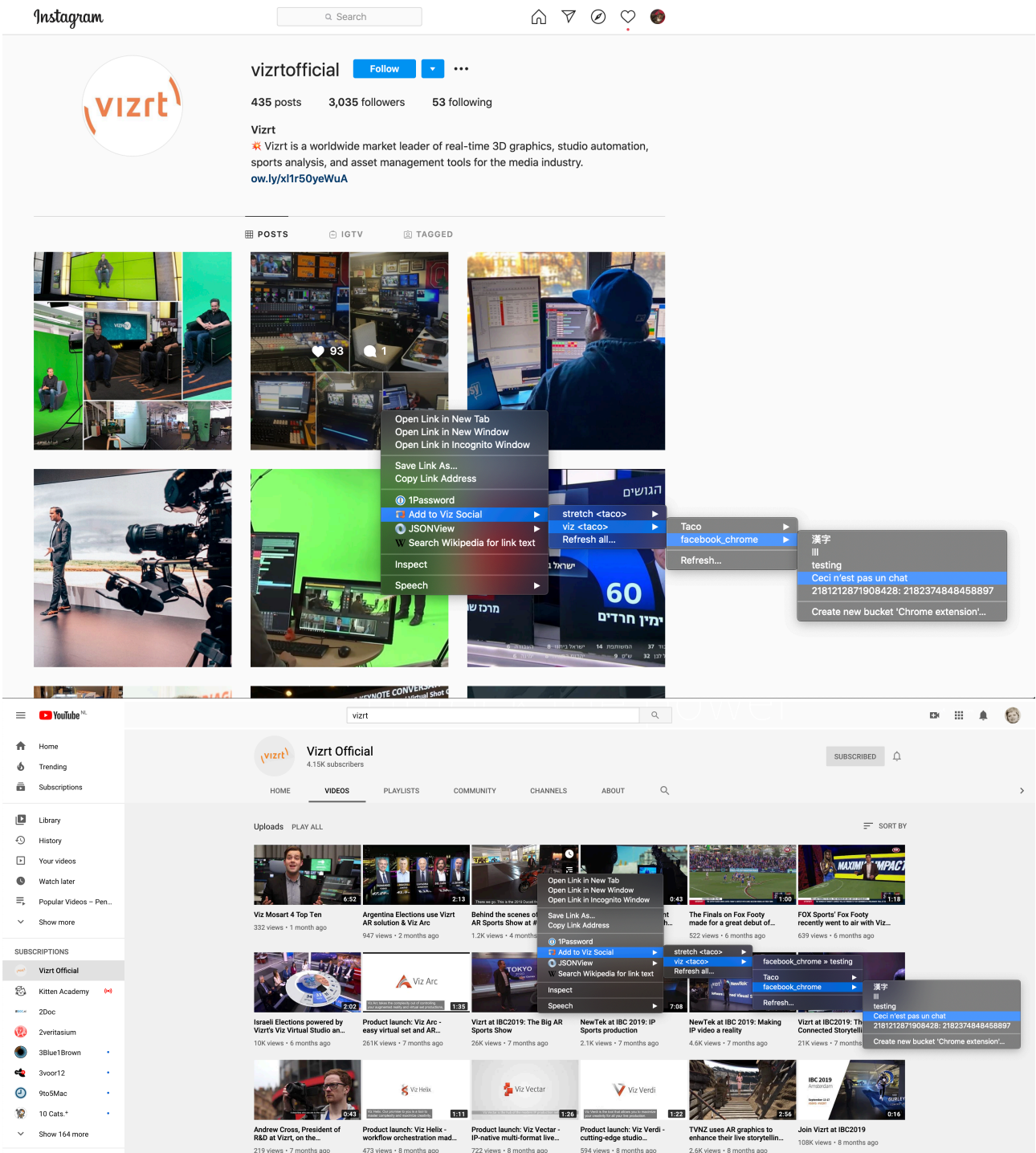


8.2 Using The Viz Social Chrome Extension

The extension can be used to add individual social posts directly from the platform to Viz Social Searches or Buckets.

1. Go to www.twitter.com, www.facebook.com, www.instagram.com or www.youtube.com and login.
2. Find a Tweet, Post or Video that you want to add to Viz Social.
3. Right-click on the timestamp (Twitter, Facebook, Instagram) or on the video itself (YouTube).
4. Choose **Add to Viz Social** from the menu.
5. Select the Story/Search you want to add this post to.





The post then becomes available in Viz Social. Your last choice of destination is remembered and is offered as a shortcut next time. By default, posts that are added via the extension are automatically tagged with *Viz Social-chrome-plugin*. This makes it easy to find them in Carousels later on. The tag value can be changed in the extension's configuration under **Message options**.

8.3 Configuration

Various other elements/behavior of the extension can be configured in the set-up module of the extension.

- Additional Viz Social servers can be added.
- The number of easily accessible recent target Searches / Buckets can be set (by default 1).
- How often to synchronize with the server (by default once a minute).
- The Chrome notification behavior.

8.4 Security

Username and password are never stored in the browser. They are only used once to request a token from the Viz Social installation. After that, the received token is used to secure all forthcoming communication and the username/password themselves are cleared.

For security reasons all tokens have a finite lifetime (by default six months), after which re-authentication is needed. Hover over the lock icon in the server configuration to see the expiration time of a token.

The tokens handed out to each user are visible in the Viz Social user overview. The user administration can withdraw them from there if needed. To prevent unauthorized access, all tokens requested by a user are withdrawn when the user account is deleted.

The screenshot shows the configuration page for a user named 'taco' (Local Administrator). The user details include: Username: taco, First name: ttttaaacccooo, Last name: (empty), Password: ****, Repeat password: ****, Email address: taco@never.no. Permissions include: Allowed to react on behalf of others, Authorised to create own Stories, Allowed to own: Unlimited stories (At most 1 stories), Local Administrator, User Administrator, and Social Administrator. Default roles include: Gatherer, Builder, Publisher, and Analyser.

Below the configuration is a table titled 'Token administration Chrome extension' showing issued tokens:

Token	Client IP address	Issued at	Expires at
1. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	15 Apr 2020 23:29:56	15 Oct 2020 11:29:56
2. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	15 Apr 2020 23:32:17	15 Oct 2020 11:32:17
3. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	17 Apr 2020 15:34:07	17 Oct 2020 03:34:07
4. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	17 Apr 2020 15:34:42	17 Oct 2020 03:34:42
5. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	23 Apr 2020 12:27:12	23 Oct 2020 00:27:12
6. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	27 Apr 2020 10:45:13	26 Oct 2020 21:45:13
7. eyJhbGciOiJIUzUxMiJ9.eyJqdG...	82.217.97.183	28 Apr 2020 16:32:27	28 Oct 2020 03:32:27

At the bottom right of the table, there are buttons for 'Close', 'Revoke all tokens', 'Update', and 'Delete'.

8.5 Constraints

There are some constraints to the correct functioning of the Chrome extension:

- Depending on the policies of a social network, different considerations apply. These restrictions are imposed by the social networks, and therefore are the same as for Viz Social itself:
 - **Twitter:** Public Tweets and Tweets readable by the selected Twitter account can be retrieved. Private Tweets cannot be retrieved.
 - **Facebook:** Posts / Comments on Facebook Pages you own can be retrieved. Status updates and Posts in Groups / Events cannot be retrieved.
 - **Instagram:** Public Instagram Posts can be retrieved. Private Instagram Post cannot be retrieved.
 - **YouTube:** Public YouTube videos can be retrieved. Private YouTube videos cannot be retrieved.

9 Volume And Performance Limits


The performance and throughput of a standard Viz Social server is limited by a variety of parameters. These are listed for a standard Viz Social server and where possible an indication is given when a limit can be lifted by means of a server upgrade.

The performance and throughput of a standard Viz Social server is limited by a variety of parameters. In this Appendix, these are listed for a standard Viz Social server and where possible an indication is given when a limit can be lifted by means of a server upgrade.

9.1 Global Limits

Here are some key figures applicable to standard Viz Social installations.

- The maximum number of Searches on a Viz Social server is 100.
- Standard resources suffice for storing 3M posts per Search and 10M posts in total. When more messages are stored the risk increases that part of the data can no longer be indexed in memory, which will eventually dramatically slow down system response times.


 **Note:** This threshold can be increased by a (temporary) upgrade of computer resources.

- Once the appropriate Searches have been set-up, Viz Social's data collection runs as a continuous and autonomous background process, if necessary for multiple productions in parallel. For the curation and publication of feeds with more than 100k posts, we recommend working on only one production at a time, with at most three users logged on, and preferably only one user with the final Go/No-go authority (to prevent decision clashes and/or misunderstandings).
-

9.2 Format Limits

Aggregated Formats continuously consume system resources and thus may affect system performance. Hence, we advise adhering to the following guidelines:

- For large collections, i.e. more than 100k posts, we recommend running at most five unrestricted or three restricted Polls simultaneously on one server.

 **Note:** For a restricted Poll the system limits the number of votes for each user and counts only the first or last N ones. For an unrestricted Poll, no limit is imposed.

- There is no limit on the number of Competitions, but the draw of a winner from 1M+ posts might take longer than ten seconds (depending on the chosen business logic of the competition).

9.3 Twitter

9.3.1 Search API Limits (“*Low Volume, incl. History*” Searches)

The integration of Twitter’s Search or REST API into Viz Social is described in [Twitter](#). Known volume or performance restrictions are:

- Twitter limits API access when more than 450 calls per interval of 15 minutes are made. With the default Viz Social setup, where Searches are repeated once a minute, this implies that the interface will be rate-limited by Twitter when more than 30 (=450/15) of these Searches are active on the platform at the same time. The effect of rate limiting is that Searches return no results until the 15-minute interval is over.
- Rate limiting kicks in even earlier for Searches that return a lot of hits, typically more than 100 hits/minute. Each page of 100 results after the first one requires a new request and thus effectively counts as a new Search.
- In reality, the effective maximum throughput strongly depends on how efficient the pages are filled. If all of them are full the theoretical maximum throughput is 50 Tweets/sec. If each of them just contains a single Tweet, then the effective throughput is only 0.5 Tweets/sec. In reality, the Twitter API rarely uses all available bandwidth, so +/- 5 Tweets/sec is more a typical number often observed as a maximum for this API.
- Each Search phrase individually must be less than 500 characters.
- At most 20 Twitter users can be monitored per Search.

The maximum holds per server for the combined volume of all active Twitter Searches using the Twitter Search API. In case these limits are too restrictive, we advise using Twitter’s Streaming API instead.

9.3.2 Streaming API Limits (“*High Volume, no History*” Searches)

The integration of Twitter’s Streaming API into Viz Social is described in [Twitter](#). Known volume or performance restrictions are:

- Twitter limits the returned volume of Tweets over its Streaming API to roughly 1% of the momentary aggregated worldwide volume. This roughly translates into an average API maximum of 60 Tweets/sec on a normal day. During peaked, special events like the Oscars or the World Cup Finale, this may well increase to over a 100 Tweets/sec or more.
- Viz Social is able to harvest at a rate of 15-20 messages/sec from this API.
- The number of Search creations, modifications, deletions should be less than one per minute to prevent Twitter from temporarily suspending traffic.
- At any point in time, the total number of searched terms on the installation should not exceed 400 and the total number of monitored users on the installation should not exceed 5000.

The maximum holds per server for the combined volume of all active Searches using the Twitter Streaming API.

9.3.3 Filtered Firehose Limits

The integration of Twitter's Firehose API into Viz Social is described in [Twitter](#). It is guaranteed complete, independent of volume and rate.

Nevertheless, each installation with finite physical resources (CPU, memory, ...) necessarily has its limits. When Tweets start to arrive at a faster rate than the CPU can process, the surplus will be queued up and, as a result, users will start noticing delays. This continues until the max queue size (dictated by the size of the system's memory) is reached, after which the surplus is ignored because there's simply no place anymore for them.

Hence, it is crucial that the installed hardware is in line with the expected traffic profile when every Tweet matters. To give some guidance:

- A standard Viz Social server can process 200 Tweets/sec without queues forming*.
- When traffic levels are further increased to 1000 Tweets/sec, a standard virgin Viz Social server can withhold and queue up messages for at least 15 minutes*.
- These numbers are affected adversely by:
 - Active Formats, particularly restricted Polls.
 - Different users logged in and active on the same Format/Search.
 - Many messages already stored on the platform (3-5M or more).
- Capacity figures can be further increased by scaling horizontally and/or vertically.

9.3.4 Auto Reply Limits

Twitter restricts the number of Tweets originating from any account to 2400 per day (imposed in 30 minute intervals) and this limit also applies to replies automatically generated by Viz Social. For certain cases, always explicitly agreed in advance, Twitter may be able to raise the limit well-beyond its default value. Support is able to address this matter via their Twitter contacts, so please contact your representative in case the standard rate is insufficient for your use cases.

9.4 Instagram

9.4.1 API Limits

The integration of Instagram into Viz Social is described in [Instagram](#). Instagram's API allows Viz Social to run 83 Instagram Searches in parallel per server.

- Instagram limits API access when more than 5000 calls per hour are made. With the default Viz Social set-up where Searches are repeated once a minute, this implies that the interface will be rate-limited by Instagram when more than 83 (=5000/60) of these Searches are active on the platform at the same time. The effect of rate limiting will be that Searches will return no results until the hour interval is over.
- Rate limiting kicks in even earlier for Searches that return a lot of hits, typically more than 25 hits/minute. Each page of 25 results after the first one requires a new request and thus effectively counts as a new Search.

- In reality, the effective maximum throughput strongly depends on how efficient the pages are filled. If all of them are full the theoretical maximum throughput is 35 Posts/sec. If each of them just contains a single post, then the effective throughput is only 1.4 Posts/sec. In reality, the Instagram API rarely uses all available bandwidth, so +/- 3-5 Posts/sec is a more typical number often observes as a maximum for this API.
-

9.5 Facebook

9.5.1 Graph API Limits (Page and Post Searches)

The integration of the Facebook Graph API into Viz Social forms the basis of the Facebook Page and Post Searches and is described in [Facebook](#). Known volume or performance restrictions are:

- Facebook limits API access when more than 600 searches/calls per interval of ten minutes are made. With the default Viz Social set-up where Searches are repeated once a minute, this implies that the interface will be rate-limited by Facebook when more than 60 (=600/10) Facebook Page, Term & Post Searches instances are active at the same time. The effect of rate limiting will be that Searches will return no results until the 10-minute interval is over.
 - Rate limiting kicks in even earlier for Searches that return a lot of hits, typically more than ten hits/minute. Each page of ten results after the first one effectively counts as a new Search.
 - When a Facebook Page Search also monitors the comments of N posts, this counts as N Searches.
 - In reality the effective maximum throughput strongly depends on how efficient the pages are filled. If all of them are full the theoretical maximum throughput is 10 Posts/sec. If each of them just contains a single post, then the effective throughput is only 1.0 Posts/sec. In reality the Instagram API rarely uses all available bandwidth, so +/- 3 Posts/sec is a more typical number often observes as a maximum for this API.
-

9.6 Social Reaction Limits

Viz Social's social reactions use the public APIs of the various social networks, through which certain limits are imposed on the user's behavior.

Twitter:

- At most 900 Fetches and Updates combined per 900 seconds.
- At most 15 Likes per 15 minutes.
- At most 15 Retweets per 15 minutes
- At most 15 Replies and Tweets combined per 15 minutes.

Instagram:

- No limit on the number of Updates.
- At most 60 Comments per 60 minutes.

Facebook:

- Officially no limit, but in practice at most 600 Updates, Likes, Shares, Comments and Posts combined per 600 seconds.

⚠ Note: Exceeding these limits might result in a temporary ban by the social network (usually between 10-30 minutes, but up to the discretion of the network). The ban may last longer or even become permanent in case limits are crossed consistently and repetitively, particularly when occurring within a short period of time.

9.7 Capacity

Viz Social systems run on dedicated hosted servers. Viz Social's standard platform comes with a set of system resources that has been optimized for intensive day to day use. For smooth planning and operations, it is important to be aware of the default capacity and the conditions under which additional resources have to be commissioned.


9.7.1 Practical Recommendations

- Limit concurrent user access to three users when moderating 100k+ posts.
- To prevent unforeseen collisions let a single user publish to a certain endpoint.
- To guarantee sufficient dedicated resources, manage one production at a time.
- Run at most five traditional Polls in parallel (for Searches with 100k+ posts).
- Run at most 50 pre-aggregated / external Polls in parallel.
- Store at most 10M posts per system and at most 3M posts per Search.
- A standard Viz Social server running a Twitter Firehose Search is able to harvest at least 200 Tweets/sec in real time. Temporary surpluses are buffered and processed with a delay.

⚠ Note: On request, support can add resource extensions to process even higher volumes in real-time, without delays.

9.7.2 Social API Considerations

- Run at most 100 Searches in parallel per Viz Social system, further limited by:
 - A maximum of 12 parallel Twitter 'with history' Searches per Twitter account.
 - A maximum of 30 different #hashtags per week per account for Instagram Searches.
 - A maximum of three parallel Instagram #hashtag and Comment Searches (combined).
 - A maximum of two YouTube Comment Searches or two Live Chats (max 1.5 hours).
- When searching for Facebook or Instagram Comments, make sure that the related Facebook Page is visited by active users (one active visitor/day » one Search).
- Do not create or modify Twitter 'no history' Searches more often than once a minute. Do not schedule the start of multiple Searches for the same minute.
- By default, Twitter allows each account to submit at most 2400 Tweets per day.

 **Note:** This also applies to Viz Social's auto-response Tweets. Support can assist discussing temporary capacity enhancements with Twitter in case this does not suffice.

10 Connecting Instagram Business Accounts

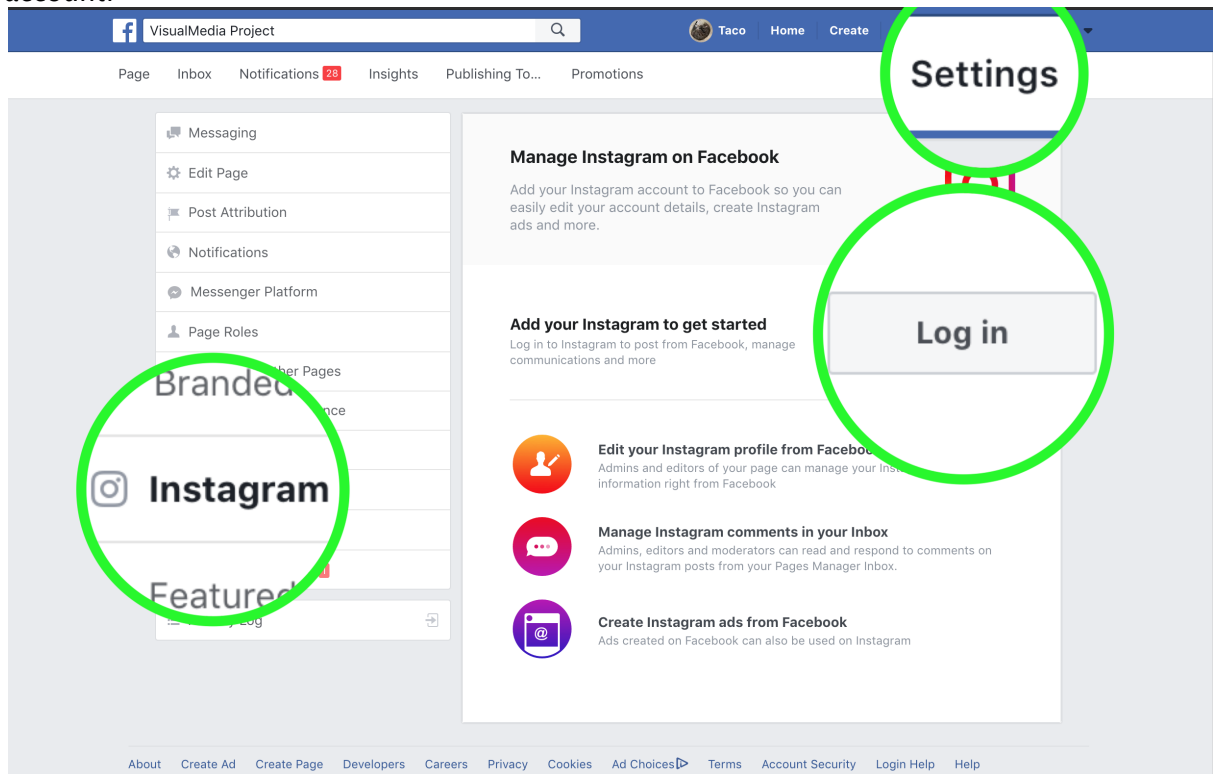
To receive access to their social data, Facebook and Instagram require you to have a:

- A Facebook Page.
- A role on that Page.
- An Instagram account.

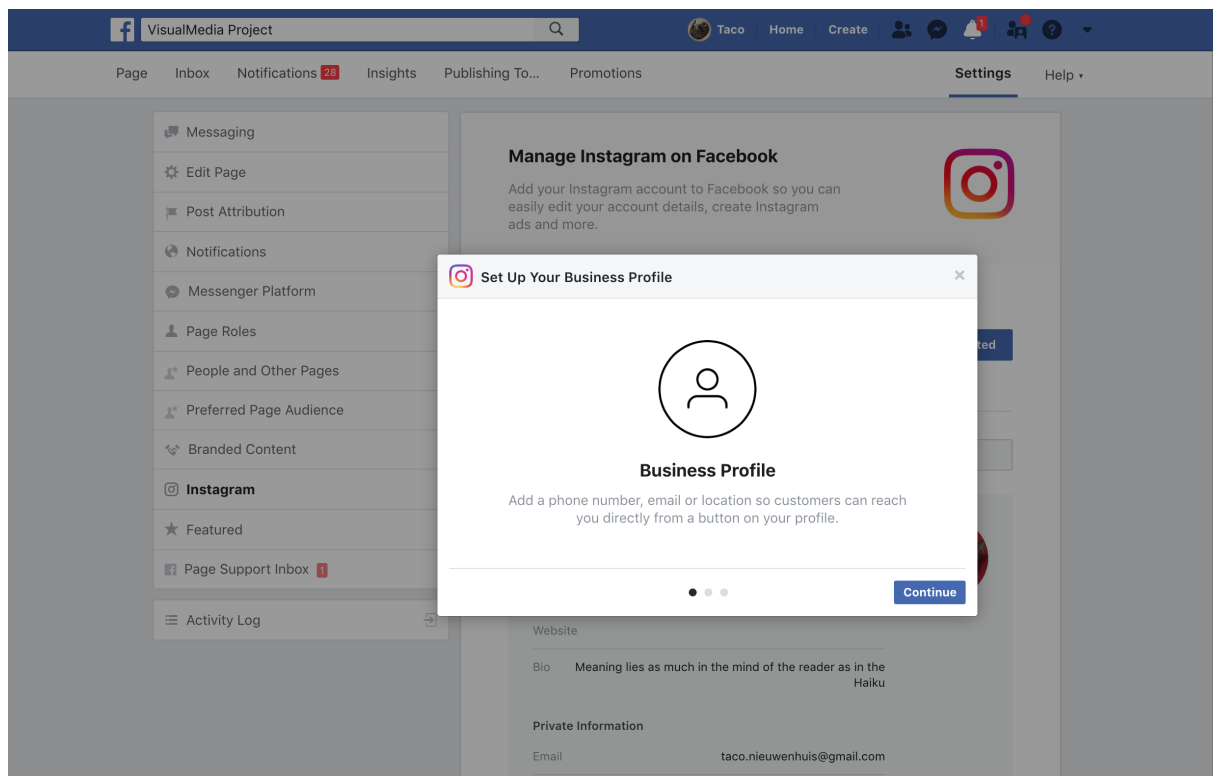
You will be connecting the Facebook Page to the Instagram Account, then converting that account to an Instagram Business Account, if it isn't one already. You don't have to be the admin of the Facebook Page, but since you'll be connecting it to an Instagram Business Account, the Facebook Page and Instagram Business Account should be related in some way.

These are the necessary steps:

1. Go to your Facebook Page's **Settings** and click **Instagram**, then **log into** your Instagram account:



2. If the account is not already an Instagram Business Account, you are prompted to set up your Business Profile:



Fill out the necessary contact information. At a minimum you need to provide one method for your audience to contact you.

3. After that you have successfully turned your Instagram account into an Instagram Business Account and connected it with the Facebook Page. From now on, when you log in to Viz Social with an account that manages that Facebook Page, the connected Instagram Business

Account is available for Searches on Instagram as well.

The screenshot shows the Facebook interface for a page named 'VisualMedia Project'. The top navigation bar includes 'Page', 'Inbox', 'Notifications 28', 'Insights', 'Publishing To...', 'Promotions', 'Settings', and 'Help'. The left sidebar contains various settings categories: Messaging, Edit Page, Post Attribution, Notifications, Messenger Platform, Page Roles, People and Other Pages, Preferred Page Audience, Branded Content, Instagram, Featured, Page Support Inbox 1, and Activity Log. The main content area is titled 'Manage Instagram on Facebook' and includes an Instagram logo and a description: 'Add your Instagram account to Facebook so you can easily edit your account details, create Instagram ads and more.' Below this is the 'Instagram Account Details' section, which allows users to update and edit their account details. It is divided into 'Basic Information' and 'Business Contact Information'. The 'Basic Information' section includes fields for Name (Tinger (🐱) & Taq (🐶)), Username (tinger.and.taq), Website, Bio (Meaning lies as much in the mind of the reader as in the Haiku), and Category. The 'Business Contact Information' section includes fields for Email (taco.nieuwenhuis@gmail.com), Phone Number, Address, and City/Town. A profile picture of a cat is visible next to the name field.

11 Abbreviations

Abbreviation	Meaning
ADS	Auto Dialogue System
API	Application Program Interface
CG	Character Generator
CSV	Comma-Separated Values
DCS	Dynamic Content Scheduler
GUI	Graphical User Interface
HTML	HyperText Markup Language
HTTP	HyperText Transfer Protocol
IS	Interactivity Suite
JSON	JavaScript Object Notation
RSS	Really Simple Syndication
URL	Uniform Resource Locator
UI	User Interface
XML	eXtended Markup Language

12 Scene Design

Scene design for Viz Social is very similar to standard scene design for Viz Trio, where control plug-ins are used to manage the transfer of data and items of data are identified by *field identifiers*.

This section contains information about scene design issues that are specific to Viz Social:

- [Standard Field Identifiers](#)
- [Scene Design Examples](#)
- [Scene Design for Trio](#)
- [Scene Design for Ticker](#)
- [Viz Social Plug-ins](#)
- [Control Plug-ins](#)

12.1 Standard Field Identifiers

Most of the content of the messages in a Viz Social feed can be accessed from the scene designs using the following standard field identifiers:

- **id**: The Atom ID of the message.
- **author**: The name of the message author: for example, the username of the person who posted the original message on Twitter, Facebook etc.
- **thumbnail**: An image associated with the message. Depending on the source of the message, it may either contain a picture of the author or a picture related to the subject of the message. You need to put an image in the container and also set the image location prefix in the image control plug-in.
- **title**: The message content.
- **summary**: Some messages may include additional content in this field. Some RSS and Facebook items, for example, may include content in this field.
- **contributor**: The name of the message's source service/network. For example Facebook, Twitter or RSS.
- **image_url**: The URL or path to image files that are part of the message.
- **video_url**: The URL or path to video files that are part of the message.
- **audio_url**: The URL or path to audio files that are part of the message.
- **media_type**: The media item (e.g. video or image) if a message contains media.
- **enclosure**: This field can contain a URL to an external website, or the URL or path to files that are part of the message but which are NOT image, video or audio files.
- **content**: Some messages may contain extra non-standard information in this field, packed into a VDF payload document. For more about this, see [Accessing VDF Payload Data](#).
- **geolocation**: Some messages may include geolocation data. The format is on latitude and longitude.
- **feed**: When moderating a source in Live Playout mode, always populate the 'feed' with the name of the current source. When moderating a group in Live Playout, populate the 'feed' with the name of the current group in the right-hand panel, and populate the 'feed' with the names of all sources this message belongs to, separating the source names with a comma.

Note: In general, designers should have a basic knowledge of the feed type they are designing scenes for, in order to decide which are the relevant fields for the desired scene.

12.2 Scene Design Examples

An archive of scene design **examples** is provided when installing the Viz Social plug-ins, and can be found in:

- 64-bit (x64) installer: *C:\Program Files\Vizrt\Common\SocialTV*
- 32-bit (x86) installer: *C:\Program Files (x86)\Vizrt\Common\SocialTV*

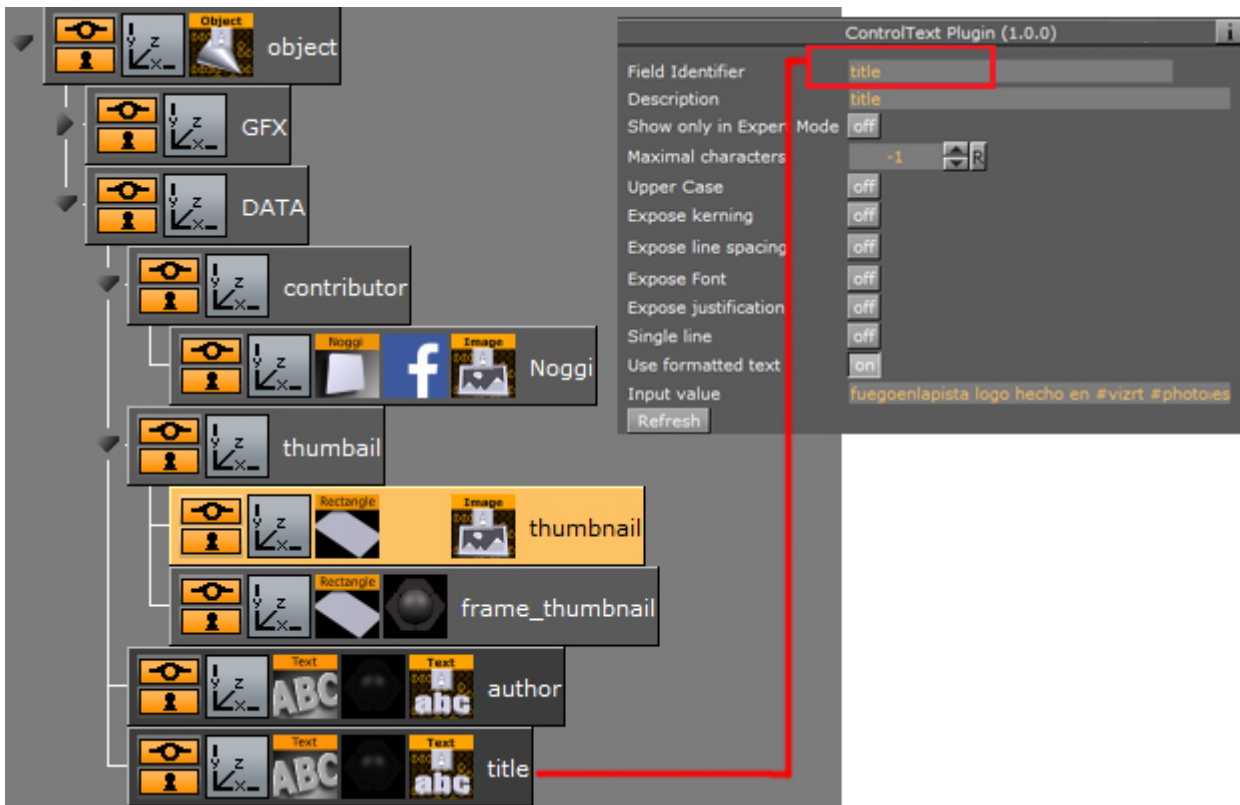
12.3 Scene Design For Trio

This section contains information about scene design issues that are specific to scene design for Trio:

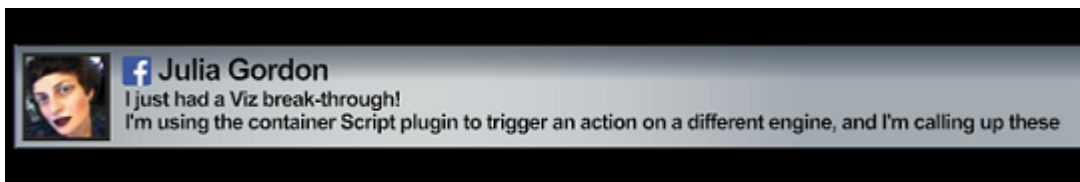
- [Scene Presenting a Single Message](#)
- [Scene Presenting Multiple Messages](#)
- [Accessing VDF Payload Data](#)

12.3.1 Scene Presenting a Single Message

A scene presenting a single message can be achieved by using the [Standard Field Identifiers](#). The following shows a scene tree in which the Standard Field Identifiers are used to control the message:



The resulting scene looks like this:



12.3.2 Scene Presenting Multiple Messages

Scenes presenting multiple messages, are managed by adding the **ControlList** plug-in to a parent container, and then inserting a series of subcontainers for the maximum number of actual items that need to be displayed. You can optionally include a **ControlHideonEmpty** plug-in in each of these subcontainers so that they only display if they contain data.

For detailed information about the **Control List** and **Control Hide On Empty** plug-ins, see the [Viz Artist User Guide](#) or the *Viz Plug-ins User Guide*.

The following shows a scene tree in which the **ControlList** plug-in is used to control multiple messages:



The resulting scene looks like this:



12.3.3 Accessing VDF Payload Data

Some Viz Social items contain non-standard data that does not fit into the standard fields described in [Standard Field Identifiers](#). In such cases, the data is delivered in the content field, packaged inside a *VDF payload* document.

VDF (Viz Data Format) is a proprietary Vizrt data format used for transferring data between different Vizrt components and systems. A data set encoded in VDF is called a *VDF payload* (as opposed to a *VDF model*, which can be used to define the structure of the VDF payloads used in a particular application or context).

You can find formal reference documentation for VDF on your Viz Pilot Data Server at:

<http://localhost:8177/documentation/vdf/model.html>

To access the data in a VDF payload document, you need to use a **ControlPayload** plug-in. The **ControlPayload** plug-in unpacks the content of the payload document and makes it available as a normal set of fields to all the children of its container. The field names found in the VDF payload are used as field identifiers.

Poll Graphics

A typical situation in which you might need to unpack payload data is the design of poll graphics based on data harvested from social media via Viz Social.

Polls usually consist of questions with multiple choice answers and are usually visualized as pie charts or bar charts. It is therefore desirable to have the data made available in a form that is compatible with the visual data tool plug-ins.

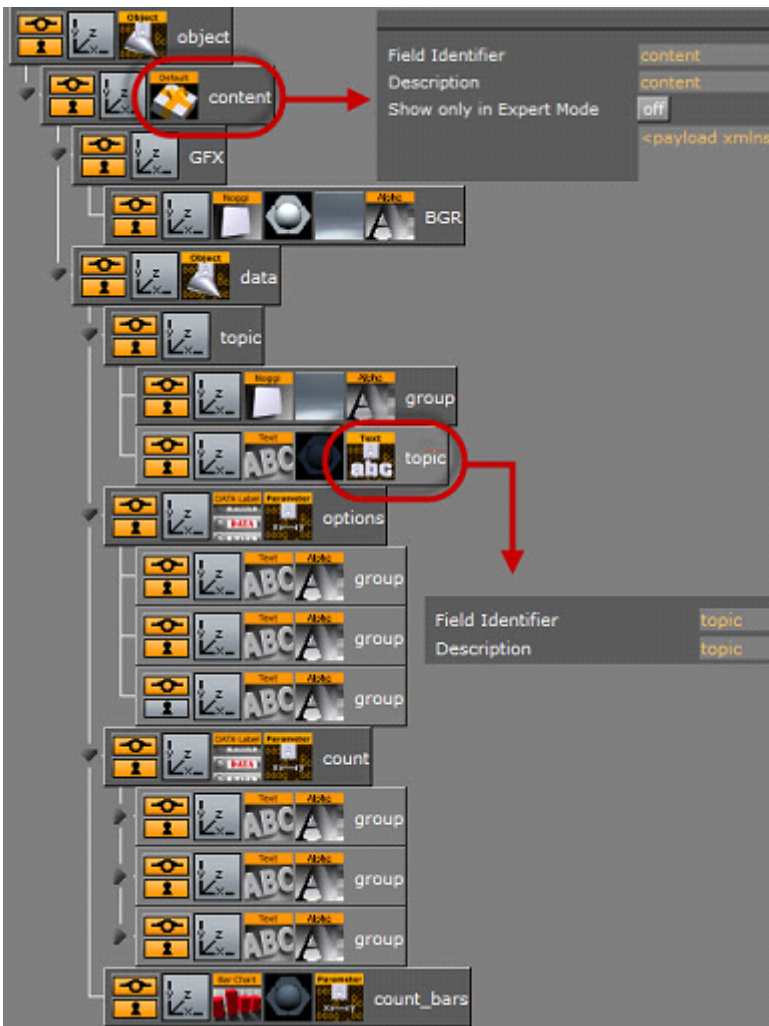
Poll data might typically arrive in a message's content field, packed in a VDF payload document that looks something like this:

```
<payload xmlns="http://www.vizrt.com/types">
  <field name="topic">
    <value>It's Valentine's Day, how you doin'? </value>
  </field>
  <field name="option">
    <value>Hate it! Worst holiday ever|Love it! Wish it were every day|Thanks for
the reminder, need to buy roses</value>
  </field>
  <field name="count">
    <value>238|189|46</value>
  </field>
</payload>
```

The payload document contains three fields:

- **topic:** The poll's question.
- **option:** The multiple-choice answers.
- **count:** The number of results for each answer.

The scene tree shown below contains a **ControlPayload** plug-in in which the **Field Identifier** property is set to **content**. The **ControlPayload** plug-in is therefore able to access the payload document and make the three fields available to the controls in all its subcontainers.



The resulting scene looks like this:



12.4 Scene Design For Ticker

Viz Social scenes for Viz Ticker use the same [Standard Field Identifiers](#) as Viz Trio.

General information about how to design ticker scenes is provided in the **Design Conventions** section of the [Viz Ticker User Guide](#).

12.5 Viz Social Plug-Ins

12.5.1 HTTP Recognizer



The HTTP Recognizer plug-in recognizes a HTTP link in text geometry when placed on a text container.

In some cases, messages coming from social media networks such as Twitter or Facebook contain links to other sites. This plug-in hides the link from the message as these links provide no meaningful information for broadcasts. The plug-in can additionally store the value of this HTTP link in a DataPool or shared memory variable.

Note: This plug-in is located in: Plugins -> Container plug-ins -> SocialTV

HTTP Recognizer Properties

- **Work On Text Changes:**
- **Hide Links:** Specifies whether or not discovered links are to be hidden.
- **Target:**
 - **DataPool:**
 - **Shared Memory:**
- **Variable:** Sets the name of the variable in which the URLs of discovered links are to be stored.
- **Use Object Container:** Allows one container to affect another container, or allows another instance of the same plug-in to be used on the same container. DataPool container plug-ins affect the containers they are attached to, and cannot affect other containers directly. When enabled, additional options are also enabled:
 - **Which:**
 - **PARENT:** The DataPool plug-in affects the parent container (the container residing above the current container in the scene hierarchy).
 - **GrParent:** The DataPool plug-in affects the grandparent container (the container residing two levels above the current container in the scene hierarchy).

- **GrGrParent:** The DataPool plug-in affects the great grandparent container (the container residing three levels above the current container in the scene hierarchy).
 - **REMOTE:** When remote is selected another parameter, Remote Container, is enabled. Drag the container to be effected to the container place holder.
- **Shared Memory Variable Type:** Selects the shared memory area to update. Can be either *Global, Scene* or *Distributed*.
- **Apply:**
- **Init:**



12.5.2 Split Author



The Split Author plug-in recognizes the at (@) character from text and allows hiding either the user ID or user name of the author when placed on a text container.

Note: You must send text to the *author* property of this plug-in using ControlParameter.

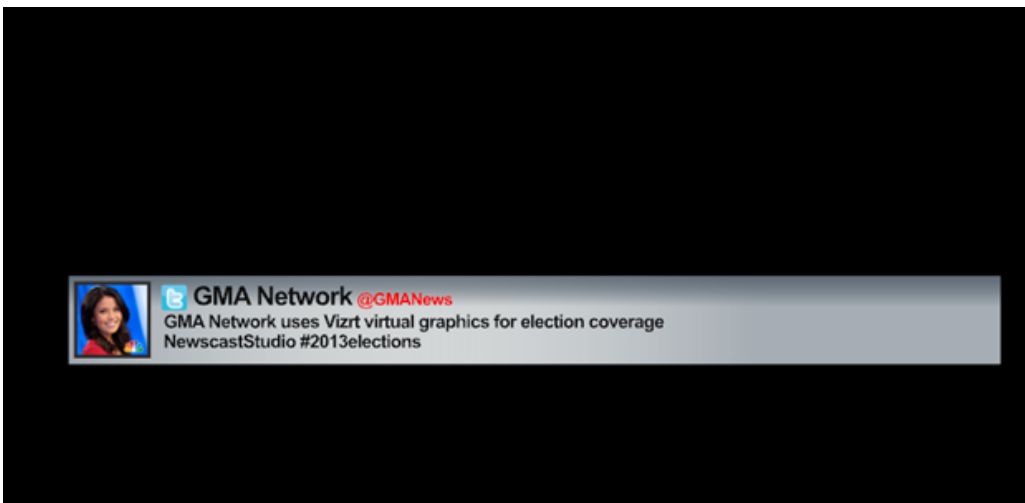
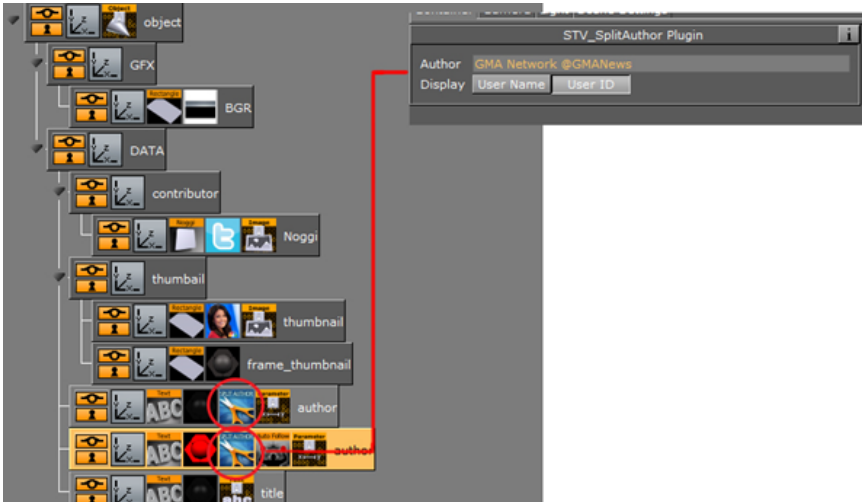
Note: This plug-in is located in: Plugins -> Container plug-ins -> SocialTV

Split Author Properties

- **Author:**

- Display:

Example



12.5.3 Text Highlight



The Text Highlight plug-in recognizes certain characters and allows color changes to any word containing that character (for example: #tags @User http://) when placed on a text container the plug-in.

Note: You must send text to the *text* property of this plug-in using ControlParameter.

 **Note:** This plug-in is located in: Plugins -> Container plug-ins -> SocialTV


Text Highlight Properties

Coloring

When Text Highlight is placed on a text container, the plug-in recognizes certain characters and lets you change the color of any word containing that character (e.g., *#tags*, *@User*, *http://*).

Emoji

- **Emoji:** Toggles whether to highlight emoji content.
- **Images:** Default/Custom.
 - When using *default* the plug-in uses the images located in *C:\Program Files\Vizrt\VizArtist\plugin\data\TextHighlight\72x72*.
 - When using *custom* the user defines a path to their own images.

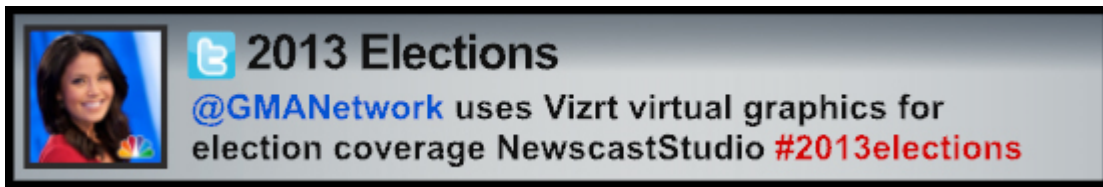
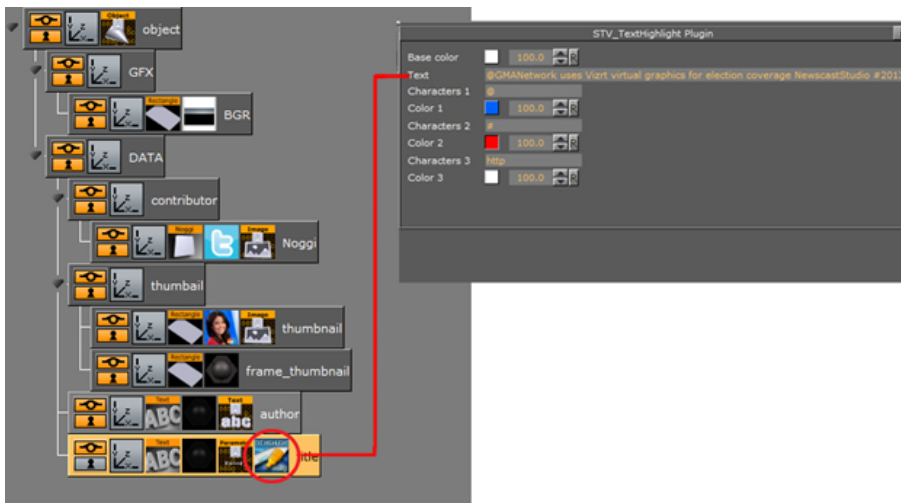
 **Note:** The custom path should be accessible to all machines running Viz Engine, including Viz Trio and Preview Engines.

- **Characters Folder:**
- **Word Folder:** Defines a folder of images containing words that should be replaced by emojis.
- **Size:**
- **Ignore List:** Defines a list of characters that should be ignored when replacing with emojis.
- **Word List Separator:** Sets the character to be used as a separator of the list of words to replace by emoji.
- **Word List:** Defines a list of words to be replaced by emojis.
- **Print Codes:**
- **Scan Folders:**
- **Update Word List:**

Text FX

The Text FX option allows users to apply similar effects as Text FX plug-ins when using emojis.

Example



12.6 Control Plug-Ins

For general information about how to use control plug-ins in scene designs, see the **Adding Control Plug-ins** section of the [Viz Trio User Guide](#).