

Changelog

The Frosmo Platform changelog tracks both main releases and maintenance releases, starting with Elephant Point. The changelog provides summary information about the changes in each maintenance release. The changelog also lists the platform component versions in each main and maintenance release.



The Frosmo Platform is hosted on multiple regional servers for improved availability. The changelog reflects the state and release schedule of Frosmo's European main server (admin.inpref.com). As a rule, a release is deployed simultaneously to all servers, so the state and schedule do not usually differ between the servers. However, sometimes a release can be deployed in stages, where the main server is updated first and the other servers at later dates. A release can also be deployed only to the main server and possibly to specific other servers.



The Frosmo Platform is a collection of discrete software components, each separately versioned. A given Frosmo Platform release is therefore a snapshot of specific component versions. All components follow the same version numbering scheme of `major.minor.revision`, for example `8.40.6`. The release entries below only list the versions for the components most relevant to end users and developers working with the Frosmo Platform.

The releases are listed in descending order by date, with the latest release on top.

For detailed information about the main releases, see the [Frosmo Platform release notes](#).

For detailed information about the Graniitti API changes in each release, see the [Graniitti API developer guide](#).

Frosmo Platform releases

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- [Maintenance release \(2019-04-08\)](#)
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- [Funny River \(2018-12-03\)](#)
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- [Maintenance release \(2018-10-01\)](#)
- [Maintenance release \(2018-09-03\)](#)
- [Maintenance release \(2018-08-27\)](#)
- [Maintenance release \(2018-08-23\)](#)
- [Elephant Point \(2018-08-20\)](#)

Maintenance release (2020-10-19)

Bug fixes

In the Control Panel:

- Fixed a bug in segmentation where, in configuring a segmentation rule, selecting the **per day** option for counting visitor actions actually selected the **per session** or **per visit** option (depending on the rule type) under the hood, and selecting the **per session** or **per visit** option actually selected the **per day** option. This bug only affected the following rule types, which support both a **per day** option and a **per session** or **per visit** option:
 - Conversion
 - Custom action
 - Page view
 - Product view
 - Trigger

Platform component versions

Component	Version
Frosmo Control Panel	4.56.0
Frosmo Core	8.54.0
Graniitti API	0.55.0

Maintenance release (2020-09-21)

Improvements

In Frosmo Recommendations:

- Added the `filters` property to recommendation configurations for advanced product filtering. You can use `filters` with product recommendations to define advanced result filtering that the platform applies automatically to all Recommendations API requests. For more information and for examples, see the [recommendation configuration reference](#).

In data tracking:

- The `frosmoProductCategories` property of the data layer product object now also supports array values. An array value can be either (a) a JavaScript array of strings or (b) a JSON-stringified array of strings with a maximum length of 1024 characters. For more information about the product object, see [Tracking products](#).

Bug fixes

In the Control Panel:

- Fixed a bug where duplicating a modification with *no* comparison group variation created a new modification with an *active* comparison group variation. The duplicate is now created with an *inactive* comparison group variation.

Platform component versions

Component	Version
Frosmo Control Panel	4.55.0
Frosmo Core	8.54.0
Graniitti API	0.55.0

Juneau (2020-09-09)

[Release notes](#)

Platform component versions

Component	Version
Frosmo Control Panel	4.54.0
Frosmo Core	8.54.0
Graniitti API	0.54.0

Maintenance release (2020-08-31)

Improvements

In the Control Panel:

- In modification analytics, the advanced tracking statistics now show a maximum of 50 custom events for the selected time period. If the variations of the modification together have more than 50 events, the statistics show the 50 events with the highest counts. This limit also applies to the downloadable statistics report.

Platform component versions

Component	Version
Frosmo Control Panel	4.53.0
Frosmo Core	8.53.0
Graniitti API	0.53.0

Maintenance release (2020-07-06)

Improvements

In the Control Panel:

- Recommendation configurations whose `type` is `bundle_converted`, `bundle_viewed`, or `bundle_viewed_converted` now support any (single) product attribute for filtering the generated recommendation data. Previously, the `bundle` types only used product ID for filtering the data. As with the `most_converted` and `most_viewed` types, the filtering must be defined in the `options.product_attrs` property of the configuration.

Top 5 products purchased together in the past 24 hours by type

```
{
  "name": "Products purchased together",
  "description": "Top 5 products purchased together in the past 24 hours by type",
  "type": "bundle_converted",
  "frequency": "15m",
  "hours": 24,
  "limit": 5,
  "map_ids": "product",
  "params": [
    "productType"
  ],
  "options": {
    "product_attrs": [
      "type"
    ]
  }
}
```

- When you create or edit an email recommendation, you can now edit the HTML code used to display the recommended products. The code is shared by all the products in the recommendation. To edit the code, click **Show template editor**, and edit the code in the editor.



The screenshot shows a 'Product template' editor with two buttons: 'Show template editor' and 'Hide template editor'. The editor contains the following HTML code:

```
1 <div style="padding: 10px">
2   <div style="height: {{productImage.height}}px; width: {{productImage.width}}px;
3     background-image: url('{{productImage}}');
4     background-repeat: no-repeat;
5     background-size: contain;
6     background-position: center center;"></div>
7   {{#productName.display}}
8     <div style="font-family: {{productName.font-family}};
9       font-size: {{productName.font-size}}px">{{product_name}}</div>
10    {{/productName.display}}
11    {{#productPrice.display}}
12      <div style="font-family: {{productPrice.font-family}};
13        font-size: {{productPrice.font-size}}px">{{product_price}}</div>
14    {{/productPrice.display}}
15  </div>
```

In Frosmo Recommendations:

- Updated the Recommendations API to support the following new query parameters for advanced filtering:
 - `limit`: Define the maximum number of recommended items to return. This parameter overrides the `limit` defined in the recommendation configuration.
 - `mapping`: Define the logic for mapping the IDs of the recommended items to source data in the Frosmo back end. This determines what data the recommendation actually returns for each item. This parameter overrides the `map_ids` defined in the recommendation configuration.

Platform component versions

Component	Version
Frosmo Control Panel	4.53.0
Frosmo Core	8.53.0
Graniitti API	0.53.0

Maintenance release (2020-06-22)

Improvements

In the Control Panel:

- In company settings, updated the time zone options as follows:
 - Added "America/Sao_Paulo" (UTC -03:00).

- Renamed "Poland" to "Europe/Warsaw" and "Turkey" to "Europe/Istanbul" to comply with the Coordinated Universal Time (UTC) standard.

Platform component versions

Component	Version
Frosmo Control Panel	4.52.1
Frosmo Core	8.51.0
Graniitti API	0.52.4

Maintenance release (2020-06-15)

Improvements

In the Control Panel:

- Updated the requirements for recommendation configurations based on the [built-in recommendation types](#). For more information, see the [Graniitti API changelog](#).
- After you edit and save a recommendation configuration, you must now manually regenerate the recommendation data for the changes to take effect. For more information, see [Generating recommendation data \(Frosmo Control Panel\)](#).

Bug fixes

In the Control Panel:

- Fixed a bug in templates where you could not remove a template even after the modification variation associated with the template had been removed. The bug affected both production and workspace templates.

Platform component versions

Component	Version
Frosmo Control Panel	4.52.0
Frosmo Core	8.51.0
Graniitti API	0.52.1

Maintenance release (2020-06-08)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.51.0
Frosmo Core	8.51.0
Graniitti API	0.49.0

Iron Creek (2020-05-25)

[Release notes](#)

Platform component versions

Component	Version
Frosmo Control Panel	4.50.0
Frosmo Core	8.50.0
Graniitti API	0.49.0

Maintenance release (2020-04-27)

Improvements

In the Control Panel:

- You can now close all modal views in the Control Panel by pressing the **Esc** key.
- Added context-sensitive **Learn more** links to further sections of the UI. Clicking a link takes you to the corresponding user guide or feature document in [Frosmo Documentation](#).

Bug fixes

In the Control Panel:

- Fixed a bug in recommendations where you could have multiple recommendation configurations with the same name within a site. Saving a recommendation configuration is no longer possible unless the recommendation name is unique within the site.

Platform component versions

Component	Version
Frosmo Control Panel	4.48.0
Frosmo Core	8.46.2
Graniitti API	0.48.0

Maintenance release (2020-04-14)

Improvements

In the Control Panel:

- Added a tutorial video on creating and using workspaces to **Workspaces > Overview**. If there are no workspaces created for the site, the video is displayed in the main view. If there are workspaces already created for the site, to access the video, click the help icon next to the **Create workspace** button.

Platform component versions

Component	Version
Frosmo Control Panel	4.46.3
Frosmo Core	8.46.2
Graniitti API	0.46.3

Maintenance release (2020-03-20)

Bug fixes

In the Control Panel:

- Fixed a bug where the Control Panel was unable to communicate to Frosmo Preview that the user was authenticated, even though the user was logged in to the Control Panel with the correct site selected. The bug resulted in Frosmo Preview failing to initialize and the Frosmo Preview UI freezing. This bug only affected Google Chrome users who had the **SameSite by default cookies** and **Enable removing SameSite=None cookies** features enabled.

Platform component versions

Component	Version
Frosmo Control Panel	4.46.2
Frosmo Core	8.46.2
Graniitti API	0.46.0

Maintenance release (2020-03-19)

Improvements

In Frosmo tools:

- Renamed the all-in-one preview and troubleshooting application to **Frosmo Preview**. The application used to be two separate applications, the Preview Tool and Frosmo Debugger.
- The Frosmo Preview UI now opens and displays the appropriate error message even when the application fails to initialize. You can view the error messages in the **Event Log** tab.

Bug fixes

In Frosmo Core:

- Fixed a bug where Frosmo Core tried to launch Frosmo Preview before the `<body>` element of the page was ready and therefore before the application UI could be displayed on the page, which resulted in the application not opening.

Platform component versions

Component	Version
Frosmo Control Panel	4.46.1
Frosmo Core	8.46.2
Graniitti API	0.46.0

Maintenance release (2020-03-17)

Bug fixes

In the Control Panel:

- Fixed a bug in modification schedule settings where changing the start time or end time, including adding or removing the end time, did not enable the **Save** button.
- Fixed a bug in modification schedule settings where the **Save** button was permanently disabled for modifications that had content preloading enabled, meaning you could not save any changes to their schedule settings.

Platform component versions

Component	Version
Frosmo Control Panel	4.46.1
Frosmo Core	8.46.0
Graniitti API	0.46.0

Maintenance release (2020-03-16)

Improvements

In the Control Panel:

- When you edit a placement, the list of modifications that use the placement is now grouped according to the following modification statuses:
 - Active
 - Upcoming
 - Past
 - Inactive
 - Invalid
- You can now create [trigger rules](#) based on the visitor's internet service provider (ISP). To create a trigger that fires only when the visitor's ISP name matches a specific value, define the following [trigger settings](#):
 1. **Evaluation point:** Select **Core event**.
 2. **Event type:** Select **Visitor location change**.
 3. **Rules:** Click **Add new rule**, select **Event data**, and set the rule using the **Internet service provider** property. The value of the property is checked against the ISP name associated with the visitor's IP address.

The screenshot shows the configuration interface for a trigger rule. It is divided into three main sections: Evaluation point, Event type, and Rules. The Evaluation point section has a dropdown menu set to 'Core event'. The Event type section has a dropdown menu set to 'Visitor location change'. The Rules section contains a modal window titled 'The data value of the' with a close button (X). Inside the modal, there is a dropdown menu set to 'Internet service provider' followed by the word 'property', another dropdown menu set to 'is exactly', and a text input field containing 'My ISP Company'. At the bottom of the modal is a button labeled 'Add new condition'.

In Frosmo Core:

- Changed the retention period of the Local Frosmo ID cookie (`frosmo_uid`) from 10 years to 1 year. For more information about the cookie, see [Data collection and storage](#).

In Frosmo tools:

- Combined the [Preview Tool](#) and [Frosmo Debugger](#) into a single preview and troubleshooting application.



The current documentation will be combined and updated for the single tool in the very near future.

Bug fixes

In the Control Panel:

- Fixed a bug in modifications where you could save the schedule settings of a modification without any display days selected. The **Save** button is now disabled and saving is no longer possible if you deselect all display days.

Other changes

In the Control Panel:

- [Error tracking](#) is now available only to Frosmo employees. In the main menu, the error tracking functionality has moved to **Setup > Error Tracking**. In addition, the page header no longer displays the warning icon for error tracking.

Platform component versions

Component	Version
Frosmo Control Panel	4.46.0
Frosmo Core	8.46.0
Graniitti API	0.46.0

Maintenance release (2020-03-02)

Improvements

In the Control Panel:

- Added context-sensitive **Learn more** links to further sections of the UI. Clicking a link takes you to the corresponding user guide or feature document in [Frosmo Documentation](#).

Bug fixes

In the Control Panel:

- Fixed a bug in modifications where, if you tried to [preview a modification variation](#) when the associated placement had no preview URL defined, the preview failed to work even after you clicked **Edit** in the preview error popup and added the missing preview URL to the placement. You had to reload the modification settings view to get the preview working.

Platform component versions

Component	Version
Frosmo Control Panel	4.45.2
Frosmo Core	8.44.9
Graniitti API	0.45.2

Maintenance release (2020-02-18)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.45.0
Frosmo Core	8.44.9
Graniitti API	0.45.1

Maintenance release (2020-02-17)

Improvements

In the Control Panel:

- When you edit a placement, the placement settings view now shows a list of modifications that use the placement. The list is grouped into active and inactive modifications. Clicking a modification name in the list opens the basic settings view for that modification.

For a production placement, the list shows only the production modifications that use the placement. For a workspace placement, the list only shows the workspace modifications that use the placement.

- Added context-sensitive **Learn more** links to further sections of the UI. Clicking a link takes you to the corresponding user guide or feature document in [Frosmo Documentation](#).

Platform component versions

Component	Version
Frosmo Control Panel	4.45.0
Frosmo Core	8.44.9
Graniitti API	0.45.0

Maintenance release (2020-02-07)

See the [Graniitti API changelog](#).

Platform component versions

Component	Version
Frosmo Control Panel	4.44.10
Frosmo Core	8.44.9
Graniitti API	0.44.10

Maintenance release (2020-02-06)

Bug fixes

In the Control Panel:

- Fixed a bug in advanced tracking where the column headings in the downloadable statistics report were off, and as a result the tracking data did not appear correctly.
- Fixed a bug in modifications where, if you disabled content preloading for a modification, the modification was not removed from the site custom script.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.10
Frosmo Core	8.44.9
Graniitti API	0.44.8

Maintenance release (2020-02-03)

Improvements

In the Control Panel:

- When you duplicate a modification, you can now select the [case](#) for the new modification. The available cases depend on the case of the original modification. For example, if the original modification is an **A/B test** modification, the duplicate is restricted to the **A/B test** and **Multi-armed bandit** cases. For more information, see [Duplicating a modification](#).
- When you create a new template, the **Content**, **Content options schema**, and **Content options UI schema** fields now contain simple example code for you to get started with.
- Improved the UI:
 - Added context-sensitive **Learn more** links to selected sections of the UI. Clicking a link takes you to the corresponding user guide or feature document in [Frosmo Documentation](#).
 - Made minor usability improvements across the UI.

Bug fixes

In the Control Panel:

- Fixed a bug on the **Segment summary** dashboard page where the segment statistics were incorrectly calculated for weeks that crossed the year boundary. The bug caused certain days to be attributed to the wrong week and year, resulting in missing data for the target week.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.9
Frosmo Core	8.44.9
Graniitti API	0.44.8

Maintenance release (2020-01-30)

Improvements

In Frosmo Core:

- Updated the settings of the `id` cookie, which stores a visitor's global Frosmo ID, to conform to the third-party cookie security restriction introduced in [Google Chrome version 80](#). Specifically, the `id` cookie now includes the attributes `SameSite=None` and `Secure`, which prevent Chrome from rejecting the cookie. The Frosmo Platform uses the `id` cookie with target groups to identify visitors across sites. For more information about the cookie, see [Data collection and storage](#).

Platform component versions

Component	Version
Frosmo Control Panel	4.44.8
Frosmo Core	8.44.9
Graniitti API	0.44.8

Maintenance release (2020-01-27)

Improvements

In the Control Panel:

- In a template, if you set the **Content export** option to **Automatic**, the template content is exported to the custom script only if the template is used in an active variation of an active modification and only if that modification has content preloading enabled. The Message API now delivers the template content for modifications with content preloading disabled, omitting the need to add the content to the custom script.
- For modifications:
 - When you duplicate a modification, you can now immediately define a name for the new modification, after which the Control Panel automatically opens the **Basic settings** view for the new modification.
 - When you activate a modification, the activation prompt now displays the modification schedule and provides a link for editing the scheduling settings, and also shows whether the modification is in test mode.
 - The calendar widget for defining the modification schedule now uses the European time format with Monday as the first day of the week.
 - You can now access modification analytics directly from the **Basic settings** view by using the quick menu button in the upper right corner of the view.

Bug fixes

In the Control Panel:

- Fixed a bug in the modifications list view where, if you clicked the **Create modification** button too quickly, the old modification UI was sometimes displayed.
- Fixed a bug in workspaces where, when you added a placement to the workspace, renamed that placement in the workspace, and used the placement in a modification in the workspace, the UI displayed the name of the original production placement in the modification **Basic settings** and **Select placement** views.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.8
Frosmo Core	8.44.8
Graniitti API	0.44.8

Maintenance release (2019-12-20)

Improvements

In the Control Panel:

- When you select to [preview](#) a modification variation, the preview URL now opens in a new tab. Previously, the URL opened in the same tab with the Control Panel.

Bug fixes

In the Control Panel:

- Fixed a bug in modifications where, if you enabled [content preloading](#) for a modification that was in [test mode](#), test mode was disabled for the modification. Now, test mode remains enabled for the modification.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.7
Frosmo Core	8.44.5
Graniitti API	0.44.5

Maintenance release (2019-12-16)

Improvements

In the Control Panel:

- Added a tutorial video on creating modifications to **Modifications > Overview**. If there are no modifications created for the site, the video is displayed in the main view. If there are modifications already created for the site, to access the video, click the help icon next to the **Create modification** button.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.6
Frosmo Core	8.44.5
Graniitti API	0.44.5

Maintenance release (2019-12-09)

Bug fixes

In the Control Panel:

- Fixed a bug in workspaces where, if you added an existing placement from production to a workspace, and opened the placement for editing in the workspace with the [new modification UI](#), the placement settings were not available.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.5
Frosmo Core	8.44.5
Graniitti API	0.44.5

Maintenance release (2019-12-03)

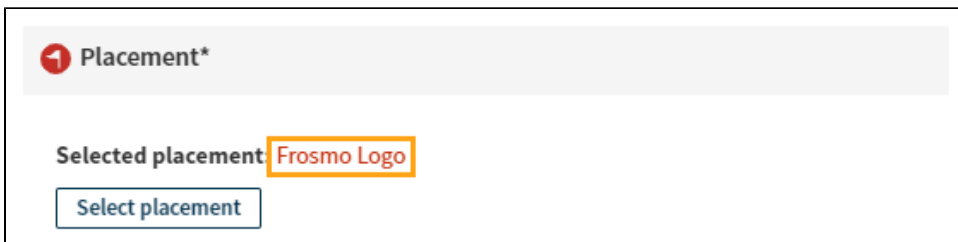
Improvements

In the database:

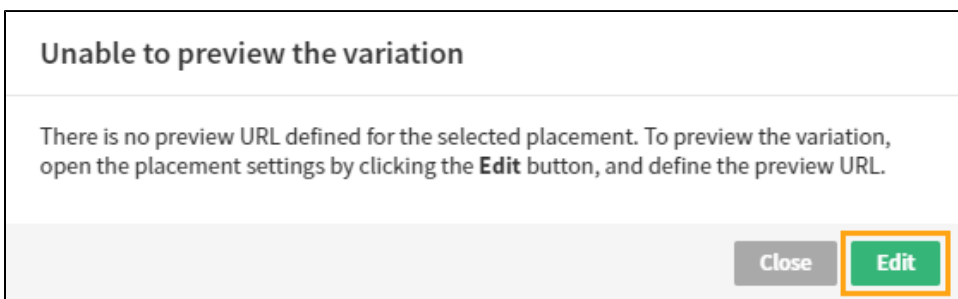
- For product data, increased the maximum length of the product ID attribute from 128 to 256 characters.

In the Control Panel:

- To edit the placement selected for a modification, you can now simply click the placement name in the **Basic settings** view of the modification. This opens the [placement settings](#), which you can edit and save normally. Previously, you had to separately find and edit the placement.



- If you try to preview a modification variation whose placement does not have a preview URL defined, you get an error message. The message now provides an **Edit** button, which you can click to open the placement settings and define the preview URL. Previously, you had to close the error message, and separately find and edit the placement.



Bug fixes

In the Control Panel:

- Fixed a bug in workspaces where a production template used in a workspace modification was [exported](#) even when the template **Export** field was set to **Never**, which should have prevented the export.

Platform component versions

Component	Version
Frosmo Control Panel	4.44.4
Frosmo Core	8.44.4

Maintenance release (2019-11-26)

Improvements

In the Control Panel:

- In the [new modification UI](#), in variation content settings, if you have a variation that uses template defaults without a template, the UI now shows the template defaults, but editing and saving the content and the template defaults is disabled. Previously, the UI did not show the template defaults, but you could edit and save the content.

If you have variations that uses template defaults without a template, you must convert those variations to use a template. For more information, see [Migrating from template defaults to templates](#).

Platform component versions

Component	Version
Frosmo Control Panel	4.44.3
Frosmo Core	8.44.0
Graniitti API	0.44.3

Happy Valley (2019-11-20)

[Release notes](#)

Platform component versions

Component	Version
Frosmo Control Panel	4.44.0
Frosmo Core	8.44.0
Graniitti API	0.44.1

Maintenance release (2019-11-11)

Improvements

In the Control Panel:

- Simplified the workflow for defining segments for a modification. The new workflow runs as follows:
 - In the **Basic settings** view, click **Define segments**.
 - Click **Select segments** or **Select more segments**, depending on whether you already have segments selected.
 - Select the segments, and click **Select**.
 - Select whether visitors should be included in or excluded from the selected segments.
 - Click **Save**.

For comparison, here's the old workflow:

- In the **Basic settings** view, click **Define segments**.
 - Click **Create segment combination**.
 - Select whether visitors should be included in or excluded from the selected segments.
 - Click **Select segments**.
 - Select the segments, and click **Select**.
 - Click **Save**.
- You can now define a **Preview URL** for a placement. The URL is used for previewing the variations of modifications that use the placement. The URL must be the absolute URL of a page for which the placement is valid.

Preview URL [?](#)

<https://frosmo.com/>

Bug fixes

In the Control Panel:

- Fixed a bug in templates where template content was not added to the custom script if the export was set to **Automatic** and the template was added to a modification before activating the modification.

Platform component versions

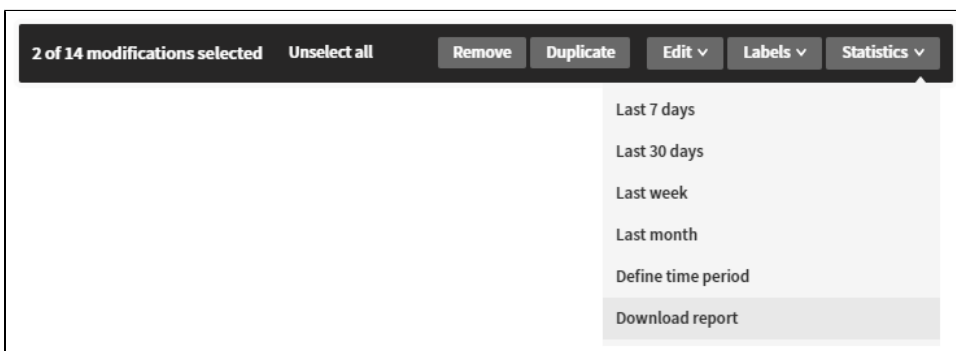
Component	Version
Frosmo Control Panel	4.43.17
Frosmo Core	8.43.10
Graniitti API	0.43.21

Maintenance release (2019-11-04)

Improvements

In the Control Panel:

- On the modifications overview page, in the multi-selection menu bar, removed the **Statistics** button, added the statistics download functionality under the **Analyze** menu as the **Download report** option, and renamed the menu to **Statistics**.



- For placements, increased the maximum length of the target element selector from 256 to 512 characters.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.16
Frosmo Core	8.43.9
Graniitti API	0.43.20

Maintenance release (2019-10-28)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.15
Frosmo Core	8.43.8
Graniitti API	0.43.19

Component	Version
Frosmo Control Panel	4.43.15
Frosmo Core	8.43.9
Graniitti API	0.43.19

Maintenance release (2019-10-14)

Improvements

In the Control Panel:

- The **Export** option for modification templates now has three possible values:
 - Automatic:** The template is automatically added to the custom script of the site if the template is used in an active variation of an active modification. This is the default value.
 - Always:** The template is always added to the custom script.
 - Never:** The template is never added to the custom script.
- Removing a workspace now also removes all the content of that workspace (modifications, placements, templates, triggers). This does not affect content used in production.

In Frosmo Core:

- Trigger rules now support matching against Boolean values when the rule contains a value defined as "is exactly true" or "is exactly false".

The screenshot shows a 'Rules' configuration window. Inside, there is a text area with the text 'The value of the window.fp1419 variable'. Below this, there is a dropdown menu with 'is exactly' selected and a text input field containing 'true'. At the bottom of the window, there is a button labeled 'Add new condition'.

In the Preview Tool (Frosmo Preview):

- When you select a modification to preview, the variation selected by default is now the one with the lowest ID number (normally, variation 1). You can select another variation to preview from the **Variation** drop-down menu.

Bug fixes

In the Control Panel:

- Fixed a bug where, if you used a production trigger in a workspace placement, and then removed the workspace without first explicitly removing the placement from it, the trigger could no longer be removed.
- Fixed a bug where, if you created a placement in production with a trigger attached to it, and then added the placement to a workspace, the attached trigger was not automatically added to the workspace.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.14
Frosmo Core	8.43.9
Graniitti API	0.43.18

Maintenance release (2019-10-07)

Improvements

In the Control Panel:

- The **Export** option for modification templates is now enabled by default, when you create a new template. This means that the template is automatically added to the custom script of the site if the template is used in an active modification.
- The modification statistics tables now show the variation title along with the performance statistics, making it easier to compare variation performance.
- In workspaces, the maximum length for a workspace title is now 128 characters instead of 32 characters.
- Previously, when a site had single-page application (SPA) support enabled and a page change event occurred, the order for evaluating segmentation rules and requesting modifications from the server was different than on a normal page load. Now, the order is similar regardless of whether the page is in a single-page application, or in a normal website.

In Frosmo Core:

- You can now use the `frosmo.load` and `frosmo.ready` events to verify that the Frosmo Core script has been loaded and successfully initialized. The following example shows how to add listeners to catch the events.

```

window.addEventListener('frosmo.load', function () {
  var easy = window.frosmo.easy;
  easy.console.log('Frosmo Core has loaded (externally dispatched event)');
});

window.addEventListener('frosmo.ready', function () {
  var easy = window.frosmo.easy;
  easy.console.log('Frosmo Core is ready (externally dispatched event)');
});

```

Bug fixes

In the Control Panel:

- Fixed a bug in triggers where, if you set the **Evaluation point** as **Core event** and the event type as **Other predefined event** and then entered the event name, the event name field disappeared from view.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.13
Frosmo Core	8.43.8
Graniitti API	0.43.17

Maintenance release (2019-10-01)

Bug fixes

In the Control Panel:

- Fixed a bug where, if you tried to duplicate a placement, nothing happened, and the placement was not duplicated.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.12
Frosmo Core	8.43.6
Graniitti API	0.43.16

Maintenance release (2019-09-23)

Improvements

In the Control Panel:

- When you open a template for editing, the editor now shows which modifications currently use the template.
- If you rename a template, the new name is now automatically updated to every modification variation that uses the template.

In Frosmo Core:

- If a trigger has an alias, when the trigger is fired, Frosmo Core now also sends the trigger data with the alias event. The alias event contains the same data as the `trigger.fire` event for the trigger. For example, if a trigger has the alias `productPush`, when the trigger gets fired, Frosmo Core now sends the same trigger data with both the `trigger.fire` event and the `productPush` event.

Bug fixes

In the Control Panel:

- Fixed a bug where, if you tried to remove a template that was used in one or more modifications, the UI did not display a proper message about why you could not remove the template.
- Fixed a bug where, if you tried to remove a production placement that was used in a workspace modification, the operation failed even if the workspace and therefore the modification had been removed.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.11
Frosmo Core	8.43.6
Graniitti API	0.43.16

Maintenance release (2019-09-16)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.9
Frosmo Core	8.43.4
Graniitti API	0.43.15

Maintenance release (2019-09-09)

Improvements

In Frosmo Core:

- If the data layer module is initialized for a site, Frosmo Core now automatically initializes the data layer on page load by creating an empty `window.dataLayer` array. If the array already exists on the page, Frosmo Core uses the existing variable.

Bug fixes

In the Control Panel:

- Fixed a bug in workspaces where a workspace modification sometimes failed to display in preview mode if the workspace placement for the modification was created from a production placement.

In Frosmo Core:

- Fixed a bug in segmentation where a visitor assigned to a segment in a mutually exclusive segment group was incorrectly removed from that segment. If the visitor completed an action that had previously placed them in a different segment in the same group, the visitor was removed from their current segment for that page load, leaving them in no segment in the group. The next page load placed them back to the correct segment. Now, the visitor correctly remains in their current segment.

- Fixed a bug in segmentation where defining a segmentation rule with a query selector matching a regular expression for any value (.) resulted in the visitor getting segmented without having any query selector in their page URL. Now, the visitor only gets segmented if their page URL contains the specified query selector (with any value).
- Fixed a bug in segmentation where URL changes in a single-page application (SPA) were not correctly registered, resulting in the visitor not getting segmented if a segmentation rule depended on a specific URL. Now, SPA URL changes are correctly caught, and segmentation based on those URLs works as expected.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.8
Frosmo Core	8.43.4
Graniitti API	0.43.14

Maintenance release (2019-09-02)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.7
Frosmo Core	8.43.3
Graniitti API	0.43.13

Maintenance release (2019-08-26)

Improvements

In Frosmo Recommendations:

- When retrieving `most_viewed` or `most_converted` recommendations with the [Recommendations API](#), you can now filter the returned recommendations by only some of the request parameters defined in a recommendation configuration. You can define values for only those parameters by which you want to filter the recommendations, and leave the remaining parameters with empty values. Previously, you had to either define values for all the parameters or leave all the values empty. The following example request now returns recommendations for all shoes irrespective of their color, whereas previously the request would've failed unless you also defined the color or left both parameters with empty values.

```
GET https://inpref.com/recoApi/v2/?method=multifetch&
origin=shop_company_com&
recos=[{
  "name": "Most viewed products",
  "params": {
    "type": "Shoes",
    "color": ""
  }
}]
```

Platform component versions

Component	Version
Frosmo Control Panel	4.43.6
Frosmo Core	8.43.3
Graniitti API	0.43.12

Maintenance release (2019-08-12)

Improvements

In the Control Panel:

- When creating or editing a modification template, clicking **Save** no longer closes the editor. Instead, to close the editor, click **Close**. If you have unsaved changes in the editor, the **Close** button is replaced by the **Cancel** button, which discards the unsaved changes and closes the editor.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.6
Frosmo Core	8.43.3
Graniitti API	0.43.12

Maintenance release (2019-08-05)

Improvements

In the Control Panel:

- You can now manually queue recommendation generation at any time, even if generation is already ongoing for a recommendation. This allows you to, for example, immediately regenerate a recommendation after changing its configuration, regardless of the current status of the recommendation. Previously, the quick menu option to generate a recommendation was disabled if the recommendation was already being generated.

Bug fixes

In the Control Panel:

- Fixed a bug where changes to a template were not correctly shown in the template editor unless you reloaded the template overview page after saving the changes. Now, if you edit and save a template, and then immediately edit the same template again, the template editor correctly loads the latest, edited version of the template.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.5
Frosmo Core	8.43.3
Graniitti API	0.43.12

Maintenance release (2019-07-01)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.4
Frosmo Core	8.43.3
Graniitti API	0.43.10

Maintenance release (2019-06-17)

Improvements

In the Control Panel:

- Made numerous minor usability improvements across the UI.

In Frosmo Recommendations:

- Made numerous minor improvements to enhance the back-end processes for handling recommendation data.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.3
Frosmo Core	8.43.2
Graniitti API	0.43.8

Maintenance release (2019-06-03)

Improvements

In the Control Panel:

- For modification templates:
 - Updated the UI for improved usability and a new look-and-feel.
 - Exporting a template is now enabled by default. Exporting the template adds the template content to the custom script of the site, which is mandatory for most modifications to function as expected.
- Made minor usability improvements across the UI.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.2
Frosmo Core	8.43.2
Graniitti API	0.43.5

Maintenance release (2019-05-28)

Bug fixes

In Frosmo Core:

- Fixed a bug where trigger counts were not always saved correctly, which resulted in visitors not being segmented correctly. Now, the saving function is always called before the segmentation is evaluated so that any trigger-based segmentation works as expected.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.1
Frosmo Core	8.43.2
Graniitti API	0.43.2

Maintenance release (2019-05-20)

Improvements

In the Control Panel:

- Improved the usability of the UI:
 - For modifications, in modification content settings, added a **Select template** button for variations. The button opens a modal window where you can search for and select the template you want to use with the variation. Previously, you had to know and manually enter the template name.
 - For templates, added search, expand/collapse, and sorting options to the templates overview page.
 - For all sliding modal windows, added a close button ("X") to the top left corner, next to the modal title. This button works the same as the **Cancel** button at the bottom of a modal window.
 - Made numerous minor adjustments and tweaks across the UI.
- Migrated all sites that still used the legacy segmentation UI ("V1") to use the new segmentation UI ("V2").
 - If your site has segments created with the legacy UI, the segments are still fully functional, and you can access them by switching to the legacy UI from the **Settings** menu on the **Segments** page.
 - For more information about the segmentation UI redesign, see the [Lynwood release notes](#).

In Frosmo Recommendations:

- Updated the Product API to consistently select which product data attribute value to return if the same attribute occurs multiple times in the source product data. In the source data, the same attribute can be defined in the `data` field, in the `promotionLabel` field, and in its own, dedicated top-level field. In case of duplicate attributes, the order of preference for selecting which attribute value to return is as follows:
 1. `data`
 2. `promotionLabel`
 3. Dedicated field

Bug fixes

In the Control Panel:

- Fixed a bug in triggers where, if you selected the **Data layer event** evaluation point and the **Event data** rule for a trigger, the UI would not allow you to manually enter property names such as `["gtm.elementId"]`. Instead, you had to copy and paste these name values to the property name field. You can now enter such values normally.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.1
Frosmo Core	8.43.1
Graniitti API	0.43.2

Maintenance release (2019-05-13)

Bug fixes

- Fixed a bug where, if you removed the segment combination defined for a modification, the change was not saved and the modification was still displayed only to the visitors in those segments. Now, if you remove the segment combination defined for a modification, the modification is displayed to all visitors.

Platform component versions

Component	Version
Frosmo Control Panel	4.43.0
Frosmo Core	8.43.0
Graniitti API	0.43.0

Goodnews Bay (2019-05-06)

Platform component versions

Component	Version
Frosmo Control Panel	4.43.0
Frosmo Core	8.43.0
Graniitti API	0.43.0

Maintenance release (2019-04-08)

Improvements

In the Control Panel:

- Added short tutorial videos for placements and segments. If you have no placements/segments created, the video is shown on the placements /segments overview page. If you have one or more placements/segments, you can find the video in the help text.
- Updated the placements UI for improved usability and a new look-and-feel. The new UI provides the same functionality as the old one.
- For modifications, updated the placement selection drop-down menu to a button that opens a modal window where you can search for and select the placement, and view information about the available placements.
- For triggers, added the **Data layer event** evaluation point. Use this evaluation point to fire triggers every time a data layer event occurs on a page.
- For triggers, updated the **Event data** rule:
 - Added support for property names that contain one or more periods.
 - Added automatic normalization and trimming for the property name on save.
 - Added a tooltip with detailed instructions and a dynamically generated example of the expected event data object.
- Made numerous minor usability improvements across the UI.
- Discontinued official support for Internet Explorer. For a list of supported browsers, see [Technical overview](#).

In Frosmo Core:

- For triggers, added support for the **Data layer event** evaluation point.

In Frosmo Recommendations:

- Updated the Recommendations API to version 2. While deprecated, version 1 remains accessible, and requests that use version 1 work normally. For more information, see [Recommendations API](#).

Bug fixes

In the Control Panel:

- Fixed a bug in password creation where the UI did not accept a password with one or more special characters but no numbers. The UI now correctly accepts passwords that contain at least one number or one special character.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.4
Frosmo Core	8.42.4
Graniitti API	0.42.3

Maintenance release (2019-03-11)

Improvements

In the Control Panel:

- Increased the maximum size of modification template content to 512 KB (524 288 characters). If a template exceeds this limit, the Control Panel displays a warning and does not allow you to save the template until you reduce its content size to conform to the limit.
- In modification analytics, advanced tracking events are now sorted in ascending order by variation ID.

In Frosmo Recommendations:

- Improved the scheduling process for generating recommendations. This fixes the issue where the recommendation status (returned by the Graniitti API and visible in the Control Panel) did not always reflect the actual state of the generation.

Bug fixes

In the Control Panel:

- Fixed a bug in modification analytics where the advanced tracking statistics were not updated with event data when switching from a time period that had no events to a time period that did have events. The statistics view continued to incorrectly display a message that there are no events for the selected time period.
- Fixed a bug in segment settings where a conversion, product purchase, or product view segmentation rule did not display the product name when a single product was selected.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.3
Frosmo Core	8.42.3
Graniitti API	0.42.2

Maintenance release (2019-02-27)

Bug fixes

In Frosmo Core:

- Fixed a bug where API calls related to advanced tracking were not sent on the next page load in case they failed on the previous page load.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.2
Frosmo Core	8.42.3
Graniitti API	0.42.1

Maintenance release (2019-02-25)

Bug fixes

In the Control Panel:

- Fixed a bug where the **Data Management > Segmentation** section was not visible in the navigation menu after changing from one site to another.

In Frosmo Core:

- Fixed a bug where calling the `dataLayer.push()` function in the browser console returned an undefined value instead of the original return value.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.2
Frosmo Core	8.42.2

Graniitti API	0.42.1
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Maintenance release (2019-01-23)

Bug fixes

In Frosmo Core:

- Fixed a bug where Google Analytics tracking events were triggered before the required tracking ID was registered, resulting in no tracking events being sent. This bug only affected sites that use multiple tracking IDs and where the required tracking ID gets registered after a long delay.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.1
Frosmo Core	8.42.1
Graniitti API	0.42.1

Maintenance release (2019-01-14)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.42.1
Frosmo Core	8.42.0
Graniitti API	0.42.1

Funny River (2018-12-03)

[Release notes](#)

Platform component versions

Component	Version
Frosmo Control Panel	4.42.0
Frosmo Core	8.42.0
Graniitti API	0.42.0

Maintenance release (2018-11-13)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.5
Frosmo Core	8.41.2

Maintenance release (2018-11-05)

Improvements

In the Control Panel:

- For workspace modifications, added the **Resolve** button also for cases where the original production modification is deactivated. For more information, see [Publishing a workspace](#).

Bug fixes

In the Control Panel:

- For workspace modifications, fixed a bug where cached modifications were published from a workspace to production as basic modifications rather than as cached ones.
- For workspace modifications, fixed a bug where the **Add existing modifications to workspace** view did not retain your selection if you filtered the list of modifications so that your selected modifications were not shown.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.5
Frosmo Core	8.41.1
Graniitti API	0.41.5

Maintenance release (2018-10-15)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.3
Frosmo Core	8.41.1
Graniitti API	0.41.4

Maintenance release (2018-10-01)

Improvements

In the Control Panel:

- Updated the Graniitti API page to show the relevant Graniitti API URLs.
- Updated the product selector menu for segmentation rule settings to list products in descending order by update date and time.

Bug fixes

In the Control Panel:

- Fixed a bug where the UI allowed you to save only 999 values for a custom action.
- Fixed a bug where the workspace overview page incorrectly displayed the **Resolve** button for modifications.

Platform component versions

Component	Version
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Component	Version
Frosmo Control Panel	4.41.2
Frosmo Core	8.41.0
Graniitti API	0.41.3

Maintenance release (2018-09-03)

This release updates the Graniitti API.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.1
Frosmo Core	8.40.6
Graniitti API	0.41.2

Maintenance release (2018-08-27)

This release only includes Frosmo-internal improvements.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.1
Frosmo Core	8.40.6
Graniitti API	0.41.1

Maintenance release (2018-08-23)

This release updates the Graniitti API.

Platform component versions

Component	Version
Frosmo Control Panel	4.41.0
Frosmo Core	8.40.6
Graniitti API	0.41.1

Elephant Point (2018-08-20)

[Release notes](#)

Platform component versions

Component	Version
Frosmo Control Panel	4.41.0
Frosmo Core	8.40.6

