[**Control Center**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/?id=control-center)

The Ads Control Center, or Ads Shepherd, is a tool that helps you monitor and optimize the performance of the eBay ads.

With the Control Center, you can:

* Monitor the health of the ads infrastructure systems globally.
* Check the performance of PLS, PLA, PLX, and other ads programs, based on a variety of metrics.
* Create and track custom performance metrics.
* Define alert rules to detect potential inconsistencies and threats.
* Create and manage incidents to resolve any issues detected by the alert rules.
* Evaluate the impact of experiments and recent code changes on ads performance.

# [Home Page](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=home-page)

The [**home page**](https://adsshepherd.muse.vip.ebay.com/) dashboard provides a quick overview of the ads infrastructure health and core metrics data for all major eBay sites.

To switch between the **Global Health** map and the core metrics for **PLS**, **PLA**, and **PLX** ads programs, use the tabs at the top of the page.

Below the health map and the metrics, you can find a list of the most recent changes released for different ads programs as well as high-priority incidents and other announcements, if any.

A screenshot of a computer

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## [Global Health](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=global-health)

The **Global Health** map helps you assess the health status of the eBay sites globally.

Each site's status may range from **Healthy** (green) to **Fatal** (red), depending on the number of unresolved P1 and P2 [**incidents**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management) raised for this site. The status is refreshed every **24** seconds.

Right next to the map, you can see real-time business metrics compared with last week's data for all eBay sites around the world.  
To view data for a specific location only, select it from the dropdown menu in the top left-hand corner of the map.

The following business metrics are included:

* **PL Revenue** – Overall revenue from Promoted Listings.
* **PLS Revenue** – Revenue from Promoted Listings Standard (PLS).
* **PLA Revenue** – Revenue from Promoted Listings Advanced (PLA).
* **PLX Revenue** – Revenue from Promoted Listings Express (PLX).

For more details on each of the ads programs, use the **PLS**, **PLA**, and **PLX** tabs.

## [PLS, PLA, and PLX Metrics](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=pls-pla-and-plx-metrics)

The **PLS**, **PLA**, and **PLX** tabs provide additional performance metrics for the PLS, PLA, and PLX ads programs in the last 24 hours.

For each metric, there is an hourly chart that you can use to compare this week's performance against last week. The metrics data is refreshed every **5** minutes.

By default, the revenue metrics chart is displayed. To switch to another metric, select it from the dropdown menu in the top left-hand corner of the graph.

Depending on the tab you select, the following key metrics are available:

**PLS**

* **PLS Revenue** – Overall revenue from Promoted Listings Standard (PLS).
* **PLS GMV** – Gross merchandise value for PLS.
* **PLS Sold Adrate (%)** – Ad rate for sold PLS. Equals to PLS revenue divided by PLS GMV.
* **PLS Attribution Ratio (%)** – Attribution ratio for PLS. Equals to PLS GMV divided by PLS-enabled GMV.  
  For PLS-enabled GMV metrics, see [**Core Metrics**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_dashboard).

**PLA**

* **PLA Revenue** – Overall revenue from Promoted Listings Advanced (PLA).
* **PLA GMV** – Gross merchandise value for PLA.
* **PLA Clicks** – Number of clicks on PLA ads.
* **PLA CPC** – Average cost per click for PLA.

**PLX**

* **PLX Revenue** – Overall revenue from Promoted Listings Express (PLX).
* **PLX Listings Count** – Number of PLX listings.
* **PLX Impressions** – Number of PLX impressions.
* **PLX Clicks** – Number of clicks on PLX ads.

For other ads-related metrics and more drill-down options, see the [**Core Metrics**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_dashboard) page of the Control Center.

## [Changes](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=changes)

At the bottom of the [**home page**](https://adsshepherd.muse.vip.ebay.com/), you can preview the most recent features released for each of the ads programs.

To see all recent features for a specific ads program, click **More**.

To learn more about other changes, click the arrow on the right to open the [**Changes**](https://adsshepherd.muse.vip.ebay.com/metadata/changes) page.

## [Incidents Board](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=incidents-board)

If there are ongoing active incidents that haven't been resolved yet, they are displayed in the lower right-hand corner of the [**home page**](https://adsshepherd.muse.vip.ebay.com/).

You can click the incident's title to see additional details or use the arrow to navigate to the [**Incidents**](https://adsshepherd.muse.vip.ebay.com/incident/list) page.

To learn more about incidents, see [**Incident Management**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management).

## [Announcements](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/global_health?id=announcements)

If there are important announcements related to the ads programs or the Control Center, they are displayed at the very bottom of the page.

# [Core Metrics](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=core-metrics)

The [**Core Metrics**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics/v2) page enables you to track metrics data for all major ads programs using an interactive chart.

You can combine the metrics with different data sources and use the chart to analyze revenue, GMV, clicks, sales, impressions, and other ads KPIs.

The chart can also help you detect abnormal trends in ads performance and predict stable values based on the past performance.

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By default, the timeline of the chart uses Mountain Standard Time (MST, -07:00) that is never switched to daylight saving time, both for legacy and data consistency reasons. However, you can change the time zone in the top right-hand corner or in the [**Settings**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_general).

To add more metrics to this page, please contact the [**Ads Infra team**](mailto:DL-eBay-Ads-Infra@ebay.com).

Besides the core metrics that are provided centrally, you can also define your own custom metrics by creating metrics collection rules in the [**Metrics Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager) and monitor them using the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer).

## [How to Use the Metrics Chart](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=how-to-use-the-metrics-chart)

To display a chart for a specific metric, you can join different data parameters using the **Metrics** field.

1. In the **Metrics** field, select the [**data source**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=data-sources), [**ads program**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=ads-programs), and [**metric**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=metrics) you are interested in.  
   You can combine several metrics in one chart if necessary.  
   Please note that metrics availability depends on the selected ads program and data source.
2. Use the **Time** field to specify the time range for the chart and choose the graph increment (**Time Step**).  
   By default, the graphs are shown in hourly increments over the past 7 days.
3. To analyze the data further, you can use other [**Filters**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=filters) and [**Tools**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=tools), as described below.

If you want to save the chart parameters for easy access next time you log in, click **Save Filter**.  
To share the metrics chart, you can copy its address using the **Share URL with Absolute Timestamps** button.

**Data Sources**

The chart can be based on data coming from one of the following sources:

* **Realtime** – Data fetched in real time from the respective Oracle tables.
* **Offline** – Data that is dumped to Elasticsearch regularly. Can be used to spare the resources spent on real-time data fetch.
* **Nous** – Business metrics data from Nous.
* **Daily Digest** – Daily digest reports.
* **NRT Pipeline** – Optimized near real-time data.
* **NuMonitor** – Real-time data resulting from eBay transactions (Seller Hub) and merch recommendation data (ClickHouse).  
  Unlike the **Realtime** data source, it supports additional filtering options, such as filtering by algorithm family (**Algo Family**).

**Ads Programs**

You can choose among the following ads programs or their combinations:

* **PLS** – Promoted Listings Standard.
* **PLA** – Promoted Listings Advanced.
* **PLS + PLA** – Promoted Listings Standard and Promoted Listings Advanced data combined.
* **PLX** – Promoted Listings Express.
* **SFA** – Seller-Funded Ads.
* **Promoted Display** – Ads that are part of the Promoted Display program, a self-service solution enabling eBay sellers to create targeted ad campaigns.
* **Global Site** – Gross merchandise value (GMV) for all eBay sites.

To learn more about promoted listings ads programs, see [**Promoted Listings Documentation - Custom Insights**](https://wiki.vip.corp.ebay.com/x/UNyaNw).

**Metrics**

The following metrics are available, depending on the ads program and the data source you select:

| **Metric** | **Description** | **Available For Ads Programs** |
| --- | --- | --- |
| **Revenue** | Gross ads revenue from promoted listings transactions or CPC clicks. | PLS , PLA , PLX , SFA, Promoted Display |
| **Impression** | View count. | PLS , PLA , PLX, Promoted Display |
| **Clicks** | Click count. | PLS , PLA , PLX , SFA, Promoted Display |
| **Fallback Clicks** | Number of clicks that are used as a fallback solution. | Promoted Display |
| **Sales** | Sales count. | PLS , PLA, PLX |
| **GMV** | Gross merchandise value. Equals to the total amount of purchases made at the seller. | PLS , PLA , SFA , Global Site |
| **FP GMV** | Fixed price gross merchandise value. | Global Site |
| **PL-Enabled GMV** | Gross merchandise value for promoted listings. | PLS |
| **PLS Sold Ad Rate** | Ad rate for sold promoted listings standard. Equals to PLS revenue divided by PLS GMV. | PLS |
| **PLS Attribution Ratio** | Attribution ratio for promoted listings standard. Equals to PLS GMV divided by PLS-enabled GMV. | PLS |
| **PLS GMV Penetration** | Gross merchandise value penetration for promoted listings standard. | PLS |
| **PLS-Enabled GMV Penetration** | PLS GMV plus organic GMV penetration. | PLS |
| **PLS Revenue Penetration** | Revenue penetration for promoted listings standard. | PLS |
| **ROAS** | Return on advertising spent. Equals to GMV divided by revenue. | PLS , PLA , SFA |
| **CPC** | Cost per click on the ad. Equals to revenue divided by clicks. | PLA , SFA |
| **eCPM** | Revenue per 1000 impressions. | PLS , PLA |
| **CTR** | Click through rate. | PLS , PLA , PLX, Promoted Display |
| **PTR** | Purchase through rate. Percentage of users who make the purchase after seeing the ad. | PLS , PLA |
| **Listing Count** | Number of listings. | PLX |
| **Google Click** | Click count on Google SFA. | SFA |
| **Google Cost** | Cost on Google SFA. | SFA |
| **Google Impression** | View count on Google SFA. | SFA |
| **Google CPC** | Cost per click on Google SFA. | SFA |
| **Active Campaigns** | Active campaigns in the SFA program. | SFA |
| **Paused Campaigns** | Paused campaigns in the SFA program. | SFA |
| **Active Sellers** | Active sellers enrolled in the SFA program. | SFA |
| **MiGMB** | Merch-initiated Gross Merchandise Bought (GMB) for the global site. | Global Site |
| **MiGMB Penetration** | Merch-initiated GMB penetration for the global site. | Global Site |

## [Filters](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=filters)

You can adjust the chart by applying additional filters:

* **Site** – One or more eBay sites around the world.
* **Page Family** – Page where the ad is displayed.  
  It can be search results page (**SRP**), merchandise page (**Merch**), or an external website (**Off eBay**).
* **Placement ID** – ID of a specific area on a page where the ad content is displayed. For a list of placement IDs, see the [**Placements**](https://adsshepherd.muse.vip.ebay.com/metadata/placements) page or [**this wiki**](https://wiki.corp.ebay.com/x/V_aTM).
* **Platform** – Platform used to access eBay, such as desktop computer (**dWeb**), mobile device (**mWeb**), or other devices (**Others**).
* **Root Category ID** – ID of the root category of the catalog where the merchandise belongs.
* **Algo Family** – Algorithm family. The configuration of most algorithms is defined in the [**Homesplice**](https://github.corp.ebay.com/pl/homesplice-config/blob/1.0.0/homesplice-Production.yaml) configuration file.
* **Campaign Type** – Type of the ad campaign.
* **Created by Flow** – The flow used to create the campaign. Can be either left empty or set to **QSU** (Quickly Set Up).
* **Checkout Device** – Type of the device used to complete the purchase, such as desktop computer (**dWeb**), mobile device (**mWeb**), as well as **Android** or Apple (**iOS**, **iOS tablet**) devices.
* **Page ID** – eBay page ID. For a list of page IDs, see [**Page Info**](https://adsshepherd.muse.vip.ebay.com/metadata/page-info) or [**this wiki**](https://wiki.corp.ebay.com/x/qGkyMQ).
* **Click Src** – Source of the click. The clicked element can be either the item itself (**ITM**) or the action buttons: **Add to Watchlist** (**A2W**), **Add to Cart** (**A2C**), and **View in Cart** (**VIC**).
* **Sale Type** – Type of the sale. You can choose between **Direct Sale**, when a clicked promoted item is purchased within 30 days, and **Halo Item Sale**, when another promoted item is purchased within 30 days of the click event.

## [Tools](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=tools)

The following tools can be used to add extra dimensions to the chart:

* **Compare History** – Compare data with the previous week and up to three weeks ago.  
  When comparing history, it can be helpful to change the **Time Step** of the graph to see the overall trend.
* **Waterfall** – Show more data points that contribute to the metrics when you hover over the graph.
* **Split** – Display separate graphs for different dimensions, for example, eBay sites.  
  If you would like to hide any of the individual graphs, click the respective legend items to gray them out.
* **Anomaly Detection** – Show periods of time when abnormal behavior was detected in the previous three hours.
* **Flat Currency** – Use flat currency exchange rate to ensure that all monetary data is presented in the same currency.  
  This option is enabled by default. You can disable it to use daily currency exchange rates instead.
* **Show Changes** – Add timeline markers showing when a change occurred.  
  To see the details of a change, hover over the respective timeline marker. You can also navigate to ServiceNow or the [**Changes**](https://adsshepherd.muse.vip.ebay.com/metadata/changes) page of the Control Center.
* **Show Alerts** – Highlight the points on the graph that correspond to the moments when alerts were raised.  
  Hover over a point to inspect the details, such as the underlying alert rule.
* **Predict Data Lag** – Allow the chart to predict stable values for the last three days, based on historical data lag metrics.

## [Additional Metrics Sets](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=additional-metrics-sets)

Besides the most commonly used metrics, there are two additional sets of metrics that you can view by clicking either of these tabs in the top right-hand corner:

* **CPC Funnel** – Graphs and data visualizations for cost-per-click (**CPC**) metrics.
* **GC Seller** – **PLA Revenue** and **CPC** metrics for Greater China sellers. You can display data for all eBay sites globally or for specific eBay sites only.
* **Near Real Time Experiment** – Experiment-related metrics. To learn more about experiments, see [**NRT Business Metrics**](https://wiki.vip.corp.ebay.com/x/Ar5MOQ).

# [Metrics Explorer](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_explorer?id=metrics-explorer)

The [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer) enables you to monitor the performance of custom metrics. Custom metrics data can be collected in the [**Metrics Manager**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-manager) using metrics collection rules.

This tool can also be used as an alternative to metrics dashboards in Pronto.

## [How to Use the Metrics Explorer](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_explorer?id=how-to-use-the-metrics-explorer)

To display a graph for a custom metric:

1. In the **Rule and Index** field, select the **Name** of the metrics collection rule and its **ES Index**, as you defined them in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/controlcenter/monitoring/metrics-explorer).
2. Select the **Metric Name** that you defined in the SQL query of the metrics collection rule or on the [**Metrics Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/metrics) page.
3. Choose an **Aggregator** for the metric graph.  
   The most widely used SQL aggregate functions — such as **AVG**, **COUNT**, **MAX**, **MIN**, and **SUM** — are supported.
4. If you want to, you can also adjust the **Time Range** for the graph and split the data into several graphs, based on a specific dimension selected in the **Bucket Name** field.  
   You can define custom dimensions on the [**Dimension Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/dimension) page. For details, see [**Metrics and Dimension Metadata**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_metadata).
5. Click **Search** to display the graph.

You can hover over the graph to explore additional details.

# [Core Dashboards](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_dashboard?id=core-dashboards)

This panel is a central place for all work-critical dashboards. You can use them for troubleshooting. Click on a dashboard link to open it in the Shepherd console.

If you would like to see more dashboards here, please contact the [**Ads Infra team**](mailto:ads-sre@ebay.com).

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# [Metrics Manager](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=metrics-manager)

Collection of metrics is essential for efficient monitoring. To optimize metrics collection, the Control Center provides not only [**Core Metrics**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics/v2) that are updated centrally, but also other self-service tools, such as the [**Metrics Manager**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-manager).

The **Metrics Manager** enables you to define your own metrics collection rules.  
The collected data can be used to monitor your custom metrics in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer) or to create dashboards in [**Pronto Kibana**](https://esadsquality-kibanaslc.vip.ebay.com/).

You can collect custom metrics from three types of sources:

* **Spark SQL** – HDFS or Hive tables.
* **ClickHouse SQL** – ClickHouse data.
* **ElasticSearch SQL** – Elasticsearch data.
* **Prometheus QL** – Prometheus data.

## [Create a Metrics Collection Rule](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=create-a-metrics-collection-rule)

To create a new metrics collection rule:

1. On the [**Metrics Collection Rule Manager**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-manager) page, click **Add** in the top right-hand corner.

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1. Define the rule's configuration.  
   The available configuration settings may vary, depending on the **Data Source** you select.  
   For details, see [**Create a Metrics Collection Rule**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule).
2. When ready, click **Submit** to save the new rule.

After you have created and enabled the metrics collection rule, it starts collecting data according to the schedule or when triggered by another event, as configured.

To view graphs for the collected metrics, you can use the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/controlcenter/monitoring/metrics-explorer). For more information, see [**Metrics Explorer**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_explorer).

## [Validate the Metrics Collection Rule](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=validate-the-metrics-collection-rule)

To verify the metrics collection rule, you can try it out:

1. Click the Play button, and then click **Trigger**.

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1. After a while, the result is displayed.  
   **Total Count** is the actual total count of metrics data collected. The result data displayed in the table would be sampled.

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## [Create Dashboards in Kibana](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=create-dashboards-in-kibana)

Before you can create a dashboard, you must add an index pattern for your metrics collection rule, based on its [**ES Index**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=rule-parameters) parameter.  
Index patterns can be added in [**Kibana**](https://esadsquality-kibanaslc.vip.ebay.com/) under **Kibana** > **Index Patterns**.

See also [**Dashboard and visualizations**](https://www.elastic.co/guide/en/kibana/current/dashboard.html) in the Kibana guide.

A screenshot of a graph

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## [Troubleshooting](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=troubleshooting)

If you encounter issues when configuring your metrics collection rules, please use the [**#shepherd-support**](https://app.slack.com/client/T0M05TDH6/C025RCXUV39) Slack channel to get support from the [**Ads Infra team**](mailto:DL-eBay-Ads-Infra@ebay.com).

# [Create a Metrics Collection Rule](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=create-a-metrics-collection-rule)

You can create and configure a new metrics collection rule on the [**Metrics Manager**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-manager) page.

To set up a new rule:

1. Click **Add** in the top right-hand corner.

A screenshot of a computer

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1. Define the rule's configuration.  
   The available configuration settings may vary, depending on the **Data Source** you select.  
   For details, see [**Rule Parameters**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=rule-parameters) below.

Rule Sample

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1. When ready, click **Submit** to save the new rule.

After you have created and enabled the metrics collection rule, it starts collecting data according to the schedule or when triggered by another event, as configured.

To view graphs for the collected metrics, you can use the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/controlcenter/monitoring/metrics-explorer). For more information, see [**Metrics Explorer**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_explorer).

## [Rule Parameters](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=rule-parameters)

While configuring a metrics collection rule, you need to define the following parameters:

**Rule Parameters**

| **Parameter** | **Description** |
| --- | --- |
| **Name** | The name of the metrics collection rule. This name must be unique. |
| **User Group** (optional) | User group assigned to the rule. Only group members can edit or delete the rules assigned to this group. To learn how to set up user groups, see [**User Group**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_user_group). |
| **Domain** | Provide the name of the project within your team. This parameter helps distinguish among various projects in larger teams. For example, there are different teams under the Ads CCOE team, such as Reporting Infra, CPC Click Fraud, an so on. |
| **Team** | Select your team. If it's a new team, please contact the [**Ads Infra team**](mailto:DL-eBay-Ads-Infra@ebay.com) to have it added. |
| **Job Name** (optional) | SQL job name. It can be the same as the rule name. |
| **Data Source** | Select the source of the metrics data to collect. It can be **Spark SQL**, **ClickHouse SQL**, or **ElasticSearch SQL**. |
| **Description** (optional) | Provide a description for the metrics collection rule. |
| **Metrics Metadata / Dimension Metadata** (optional) | Add custom metrics and dimensions you defined on the [**Metrics Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/metrics) and [**Dimension Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/dimension) pages. See also [**Metrics and Dimension Metadata**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_metadata). |
| **Backfill Time** (optional) | Time range for the rule to run. For example, if set to **5 hours**, the rule will collect data for the past 5 hours each time and replace old data with newly collected data. This parameter is used in conjunction with the **Delta Time** parameter. For example, if you set **Backfill Time** to **5 days** and **Delta Time** to **1 day**, data from 6 days ago up to 1 day ago (yesterday) will be collected. |
| **Delta Time** (optional) | Time delay for the rule to run. For example, if set to **1 day**, today the rule will collect the data as of yesterday, while tomorrow it will collect today's data. This parameter is used in conjunction with the **Backfill Time** parameter. For example, if you set **Backfill Time** to **5 days** and **Delta Time** to **1 day**, data from 6 days ago up to 1 day ago (yesterday) will be collected. |
| **Add Query** | Specify your SQL or PromQL query, depending on the **Data Source** you selected. Multiple SQL statements in one rule are also supported.  **Note**: Please use " instead of 'in your SQL statements. Otherwise, you may encounter escaping problems.  If your SQL or HDFS path contains a date string, please note that the supported date format in SQL is %Y%d%m or ${%Y%d%m}[-1d]. If you need to escape the % symbol, use the %% combination. |
| **Add filter** | Optionally, you can add a JSON filter for your SQL query. |
| **Triggers** | Specify the conditions that will trigger the rule. You can choose whether the rule should be triggered when the specified HDFS file is modified or whether it should be run periodically, according to the **Schedule** parameter settings. |
| **Schedule** | How often the rule must be run. The configuration uses cron format to schedule tasks. Please notice that the time must be specified in the MST timezone. |
| **HDFS Path** | Path to the success file of your HDFS job. You may need to use a placeholder for the date in the file path, such as y=%Y/m=%m/d=%d. |
| **Target** | The location where the metrics are stored. In most cases, **Pronto** is recommended. If it's your first metrics collection rule, please apply for a permission from the Pronto Cluster **esadsquality**. For storing large results (50,000 rows or more), **HDFS** should be preferred. |
| **Replace Data** | If this option is selected, the metrics data will be replaced when you run the metrics rule again on the same date (**slot\_timestamp**). You can choose between **Full** and **Partial** replacement modes. If the data is replaced partially, you must list the columns to be updated in the **Update Keys** field. |
| **Index Split** | By default, the collected data is sent to one index. You can choose to split the data, organizing it by day, week, or other time period, according to the timestamp of the collected data. For example, if you split the data by week, a -{year}\_{week} suffix is appended to the original index name. |
| **Shard Routing** | If you choose to enable shard routing, please note that the **Routing Field** must already exist in the collected data. For example, if you set it to sellerId, the returned data should also contain sellerId. |
| **ES Index** | The index name to use for searching your data in Pronto. If you don't want to create a Pronto dashboard for your metrics, you can still create one using the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer). |

## [Spark SQL](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=spark-sql)

If you chose **Spark SQL** as the **Data Source**, you need to configure additional SparkSQL-specific parameters:

| **Parameter** | **Description** |
| --- | --- |
| **Batch Account** | Batch account to use when running Spark SQL queries. Please contact the [**Ads Infra team**](mailto:DL-eBay-Ads-Infra@ebay.com) when you have a new batch account to add. |
| **Queue Name** | The queue to use while running Spark SQL queries. |
| **Cluster** | Spark SQL cluster. The following values are available: - **apollorno** – Apollo Hadoop cluster for Spark jobs. - **hermesrno** – Hermes Hadoop cluster for Spark jobs. |
| **Advanced Settings**: **Spark Config** (optional) | You can select **Advanced Settings** and specify additional Spark config parameters. |

### [Examples](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=examples)

**1: Basic**

**Configuration:**

**Schedule: 0 11 \* \* \*  
Backfill Time: 1  
Delta Time: 0  
SQL:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_%Y%m%d/adsdata`;

**How it runs:**

**On 2021-06-21 11:00 MST, the metrics collection task will be triggered. The SQL statement will be transformed to:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210621/adsdata`;

**The time field (slot\_timestamp) in ES will be: 2021-06-21.**

**2: Delta Time**

**Configuration:**

**Schedule: 0 7 \* \* \*  
Backfill Time: 1  
Delta Time: 1  
SQL:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_%Y%m%d/adsdata`;

**How it runs:**

**On 2021-06-21 07:00 MST, the metrics collection task will be triggered. The SQL statement will be transformed to:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210620/adsdata`;

**The time field (slot\_timestamp) in ES will be: 2021-06-20.**

**3: Backfill**

**Configuration:**

**Schedule: 0 7 \* \* \*  
Backfill Time: 3  
Delta Time: 0  
SQL:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_%Y%m%d/adsdata`;

**How it runs:**

**On 2021-06-21 07:00 MST, the metrics collection task will be triggered. Three SQL queries will be run:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210621/adsdata`;

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210620/adsdata`;

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210619/adsdata`;

**There will be three results stored in ES. The time field (slot\_timestamp) in ES will be: 2021-06-21,2021-06-20,2021-06-19.**

**4: Date Format in SQL**

**Configuration:**

**Schedule: 0 7 \* \* \*  
Backfill Time: 1  
Delta Time: 0  
SQL:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_${%Y%m%d}[-1d]/adsdata`;

**How it runs:**

**On 2021-06-21 07:00 MST, the metrics collection task will be triggered. The SQL query will be transformed into:**

SELECT

count(\*) cnt\_rule\_all

FROM

parquet.`/apps/b\_ads\_data/result/result\_20210620/adsdata`;

**The time field (slot\_timestamp) in ES will be: 2021-06-21.**

## [ClickHouse SQL](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=clickhouse-sql)

If you want to use ClickHouse SQL as the metrics data source, you need to configure additional ClickHouse-specific parameters:

| **Parameter** | **Description** |
| --- | --- |
| **Keyspace** | The keyspace of Clickhouse. The following values are available: - **Ads** – For production. - **AdsTest** – For pre-production. - **AdsInfra** – For production. - **AdsInfraPreProduction** – For pre-production. |

### [Examples](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=examples-1)

**1: Collect Hourly Data**

**Collect real-time revenue every 15 minutes and update last 3 hours' data, since there will be a data lag.**

**Configuration:**

**Schedule: 0 15/\* \* \* \*  
Backfill Time: 3  
Delta Time: 0  
SQL:**

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('${%Y-%m-%d %H:00:00}')

AND eventts < toDateTime('${%Y-%m-%d %H:00:00}[1h]'))

AND version = 0;

**How it runs:**

**Metrics collection task will be triggered every 15 minutes. On 2021-06-21 07:15:00, for example, three SQL queries will be run:**

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('2021-06-21 07:00:00')

AND eventts < toDateTime('2021-06-21 08:00:00'))

AND version = 0;

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('2021-06-21 06:00:00')

AND eventts < toDateTime('2021-06-21 07:00:00'))

AND version = 0;

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('2021-06-21 05:00:00')

AND eventts < toDateTime('2021-06-21 06:00:00'))

AND version = 0;

**The time field (slot\_timestamp) in ES will be: 2021-06-21 07:00:00,2021-06-21 06:00:00,2021-06-21 05:00:00.**

**2: Collect Daily Data**

**Collect yesterday's real-time revenue every day at 11:00 AM.**

**Configuration:**

**Schedule: 0 11 \* \* \*  
Backfill Time: 1  
Delta Time: 1  
SQL:**

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('${%Y-%m-%d 07:00:00}')

AND eventts < toDateTime('${%Y-%m-%d 07:00:00}[1d]'))

AND version = 0;

**How it runs:**

**The metrics collection task will be triggered every 15 minutes. On 2021-06-21 11:00:00, for example, the following SQL query will be run:**

SELECT

sum(revenueUSDScale4) as revenue

FROM

Ads.sales

WHERE

(eventts >= toDateTime('2021-06-20 07:00:00')

AND eventts < toDateTime('2021-06-21 07:00:00'))

AND version = 0;

**The time field (slot\_timestamp) in ES will be: 2021-06-20 07:00:00.**

## [ElasticSearch SQL](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=elasticsearch-sql)

If you want to use ElasticSearch SQL as the metrics data source, you need to configure additional Elasticsearch-specific parameters:

| **Parameter** | **Description** |
| --- | --- |
| **Cluster** | Elasticsearch (ES) cluster. The following values are available: - **esplexpress** – ES Promoted Listings Express (PLX) cluster. - **esplexpress\_lvs** – ES PLX cluster in the las Vegas data center (LVS). - **esplexpress\_rno** – ES PLX cluster in the Reno data center (RNO). - **esplexpress\_slc** – ES PLX cluster in the Salt Lake City data center (SLC). - **esbilling** – ES billing cluster. |

### [Examples](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=examples-2)

**1: Click Count**

**Collect click count for Promoted Listings Express (PLX).**

**Configuration:**

**Schedule: 2 19 \* \* \*  
Backfill Time: 7  
Delta Time: 0  
SQL:**

SELECT

count(\*) as item\_count, sum(sum.clicks) as sum\_clicks, sum(distribution.clicks) as dist\_clicks

FROM

"plx-pl-${%Y%m%d}";

**How it runs:**

**The metrics collection task will be triggered at 7:02 PM every day and will collect data for the last 7 days. On 2021-06-21 19:02:00, for example, seven SQL queries will be run:**

SELECT

count(\*) as item\_count, sum(sum.clicks) as sum\_clicks, sum(distribution.clicks) as dist\_clicks

FROM

"plx-pl-${20210621}";

SELECT

count(\*) as item\_count, sum(sum.clicks) as sum\_clicks, sum(distribution.clicks) as dist\_clicks

FROM

"plx-pl-${20210620}";

**...**

SELECT

count(\*) as item\_count, sum(sum.clicks) as sum\_clicks, sum(distribution.clicks) as dist\_clicks

FROM

"plx-pl-${20210615}";

**There will be seven results stored in ES. The time field (slot\_timestamp) in ES will be: 2021-06-21,2021-06-20,2021-06-19,2021-06-18,2021-06-17,2021-06-16,2021-06-15.**

## [Prometheus QL](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=prometheus-ql)

If you want to use Prometheus QL as the metrics data source, you only need to provide a PromQL query without defining any additional parameters.

## [Validate the Metrics Collection Rule](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_create_rule?id=validate-the-metrics-collection-rule)

To verify that the metrics collection rule is properly configured, you can try it out:

* 1. Click the Play button, and then click **Trigger**.

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* 1. After a while, the result is displayed.  
     **Total Count** is the actual total count of metrics data collected. The result data displayed in the table would be sampled.

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# [Metrics and Dimension Metadata](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_metadata?id=metrics-and-dimension-metadata)

If you have set up a metrics collection rule in the [**Metrics Manager**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-manager), you can configure additional metrics and dimensions for this rule and use them to refine the graphs in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer).

You can connect these metrics and dimensions to a metrics collection rule by editing it in the **Metrics Manager**. For details, see [**Metrics Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager?id=rule-parameters-1).

## [Metrics Metadata](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_metadata?id=metrics-metadata)

On the [**Metrics Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/metrics) page, you can define new custom metrics for an existing metrics collection rule.

To add a new metric:

1. Click **Add** in the top right-hand corner.
2. Provide a **Name** for the custom metric and specify the following parameters:
   * **Aggregation** – SQL aggregate function to use with the metric.  
     The most widely used functions, such as **AVG**, **COUNT**, **MAX**, **MIN**, and **SUM**, are supported.
   * **Status** – Status of the metric according to the Touchstone metric workflow.  
     The status can be **Initial**, **Validated**, **Active**, or **Inactive** (deactivated).  
     To learn more about metrics onboarding in [**Touchstone**](https://touchstone.muse.vip.ebay.com/), see [**Metrics Onboarding**](https://sites.google.com/ebay.com/experimentation/metrics-and-reports/metrics/metrics-on-boarding).
   * If you want to, you can specify the **Metric Group**, **Metric Type**, and **Touchstone ID**.
   * **Definition** – JEXL expression defining the metric.  
     To learn more about JEXL syntax, see the [**JEXL Reference**](https://commons.apache.org/proper/commons-jexl/reference/syntax.html). You can also take a look at the Touchstone resources [**here**](https://sites.google.com/ebay.com/experimentation/metrics-and-reports/metrics/metrics-on-boarding#h.3foyhzm7wvqp) and [**here**](https://sites.google.com/ebay.com/experimentation/metrics-and-reports/metrics/metric-onboarding-faq#h.kuc31j82yqzi).
3. If your custom metric is a primary one, enable the **Primary Metric** toggle.  
   To learn more about primary and guardrail metrics, see [**this page**](https://sites.google.com/ebay.com/experimentation/get-started/experiment-design#h.jrjza1630bxv).
4. If you want to, you can provide an additional **Description** for your metric.
5. When ready, click **Submit**.

The new metric is added to the **Metric Name** menu in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer).

## [Dimension Metadata](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_metadata?id=dimension-metadata)

[**Dimension Metadata**](https://adsshepherd.muse.vip.ebay.com/metadata/dimension) allows you to create new dimensions that you can use to slice the data in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer).

To add a new dimension:

1. Click **Add** in the top right-hand corner.
2. Provide a **Name** for the new dimension and specify the following parameters:
   * **Type** – The dimension can be either a **number** or a **string**.
   * **Example Value** – Example value of the dimension.
3. You can also provide an **Alias** and a **Description** for the dimension.
4. When ready, click **Submit**.

The new dimension is added to the **Bucket Name** menu in the [**Metrics Explorer**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics-explorer).

# [Alerts](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=alerts)

The [**Alerts**](https://adsshepherd.muse.vip.ebay.com/alerting/collection) page shows an overview of the alerts triggered for the ads and promoted listings performance.  
By default, only new and recognized (acknowledged) alerts are shown. However, you can adjust the filters to display resolved alerts, too.

High priority alerts (P1 and P2) that appear on this page are also published in the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel.

## [Alert Rules](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=alert-rules)

Each alert is based on an alert rule. Alerts are triggered when specific conditions defined in the underlying alert rule are met. To learn more about alert rules and how to set them up, see [**Alert Rule Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=alert-rule-manager).

## [Searching for Alerts](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=searching-for-alerts)

You can search for a specific alert by:

* **Name** - Complete name of the alert rule. Searching by partial names is not supported.
* **Status** – Status of the alert. Three statuses are available: TRIGGERED (new alert), ACKNOWLEDGED (being worked on), and RESOLVED (the root cause has been addressed).
* **Priority** – Priority, ranging from P1 (highest) to P4 (lowest).
* **Type** – Type of the alert, based on the alert rule that triggered the alert. See also [**Alert Rule Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=alert-rule-manager).
* **Team** – Team owning the alert rule.
* **Time Range** – Range of dates when the alert was triggered.

## [Managing Alerts](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=managing-alerts)

You can manage alerts by acknowledging or resolving them either in the Control Center or through the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel.

* The Control Center allows you to acknowledge alerts and resolve them, as well as navigate to external platforms using [**SOP**](https://wiki.vip.corp.ebay.com/x/knTkN) and [**Groot**](https://groot.vip.ebay.com/) links, if they are defined in the [**alert rule**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=create-an-alert-rule).
* In the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel, you can also snooze alerts or create incidents based on the alerts.

## [Creating Incidents from Alerts](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=creating-incidents-from-alerts)

You can easily create incidents from alerts using alert messages in the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel.  
Just click the **Incident** button in the alert message on Slack to open the **Create Incident** dialog in the Control Center. The **Title** and **Alerts** fields are prefilled automatically. To learn how to configure other fields, see [**Incident Management**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=incident-management).

## [Snoozed Alerts](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=snoozed-alerts)

If you click the **Snooze** button for an alert message in the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel, this alert appears on the [**Snoozed List**](https://adsshepherd.muse.vip.ebay.com/alerting/snoozed-list) page. You can filter the snoozed alerts by the alert rule name or by placement ID.

## [Alert Statistics](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alerts_overview?id=alert-statistics)

For a deeper look into the alerts data, you can use the information on the [**Statistics**](https://adsshepherd.muse.vip.ebay.com/alerting/stats) page.  
You can view the number of alerts per team during the last 24 hours, 2 days, or week, and see how many notifications were sent to each team using different communication channels.

# [Alert Rule Manager](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=alert-rule-manager)

You can use the [**Alert Rule Manager**](https://adsshepherd.muse.vip.ebay.com/alerting/rule-manager) page to manage existing alert rules and create new ones.  
Alert rules define the conditions that trigger a specific alert.

## [Search for Alert Rules](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=search-for-alert-rules)

You can search for a specific alert rule by its name, type, team, owner, priority, description, and other criteria.  
The alert rules are displayed based on the criteria specified in the search bar.

**Please note that searching by owner supports only complete phrases, it doesn't find parts of a phrase.**

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For each alert rule, there are three actions available:

* **Enable**/**Disable** toggle (marked 1 in the image above) – Enables or disables the alert rule.
* **Edit** (2) – Opens the **Edit Alert Rule** dialog where you can edit the alert rule parameters.
* **Trigger** (3) – Triggers an alert manually.
* **Delete** (4) – Deletes the alert rule.

To sync the alert rules with Sherlock IO, use the sync button (marked 5) in the lower right-hand corner of the page.

## [Create an Alert Rule](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=create-an-alert-rule)

To create an alert rule:

1. Click the **Add** button in the search bar. The **Create Alert Rule** dialog opens.

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2. Specify the following parameters for the alert rule:

| **Parameter** | **Description** |
| --- | --- |
| **Name** (mandatory) | Name of the alert rule. |
| **Type** (mandatory) | Type of the alert rule. See the next step for type-specific parameters. |
| **Priority** (mandatory) | Priority of the alert rule, ranging from P1 (highest) to P4 (lowest). High priority alerts (P1 and P2) are published in the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel. |
| **Annotation** (optional) | Description for the alert rule. |
| **Team** (mandatory) | Team owning the alert rule. |
| **Domain** (mandatory) | Domain where the alert rule belongs. The available options include **Merch**, **Reporting**, and **SRE**. |
| **User Group** (optional) | User group assigned to the rule. Only group members can edit or delete the rules assigned to this group. To learn how to set up user groups, see [**User Group**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_user_group). |
| **Revenue Impact** (mandatory) | Defines whether there is a potential impact on revenue. |
| **Labels** (optional) | Labels for the alert rule, such as: - **Site** – Site from where the alert is triggered. - **Client** – App client or platform from which the alert is triggered. - **Page ID** – Page ID for the rule, in case this rule has a pager duty service. - **Placement ID** – Placement ID for the rule, in case this rule monitors a certain placement. |
| **SOP Link** (optional) | The SOP link for this rule. |

**Sherlock.IO**

| **Parameter** | **Description** |
| --- | --- |
| **Rule Type** (mandatory) | Type of the Sherlock alert rule. You can choose between **Alerting** and **Recording**. |
| **User Group** (mandatory) | User group for the Sherlock alert rule. |
| **Data Source** (mandatory) | Choose whether the data is derived from the metrics or from the events. |
| **Rule Group** (optional) | The group this alert rule belongs to. By default, it is the same as the alert name. |
| **Notifiers** | Recipients of the alert as configured on the [**Notifier**](https://adsshepherd.muse.vip.ebay.com/alerting/rule-manager?tab=Notifier) tab. |
| **Interval** (mandatory) | How often the rule conditions should be assessed. You can specify the interval in minutes, hours, or days. |
| **For** (mandatory) | For how long the rule should be assessed. You can specify the duration in minutes, hours, or days. |
| **PromQL Expr** (optional) | Specify a PromQL expression. |
| **Notification** (optional) | Provide a channel for the alert notifications. You can use **Pager**, **Slack Channel**, or both. If you're using a private Slack channel, please invite the [**@ControlCenter-Bot**](https://ebay-eng.slack.com/team/W017U86G10D) app first. To send notifications to a specific person, add @ before the user alias. |

A screenshot of a computer

Description automatically generated

**HDFS Timeliness**

| **Parameter** | **Description** |
| --- | --- |
| **HDFS Path** (mandatory) | A success flag file for an HDFS job, for example, /apps/b\_ads\_data/result/result\_%Y%m%d/adsdata/\_SUCCESS. Available if you choose to use non-relative files. |
| **Upstream HDFS Path** (mandatory) | A success flag file for a HDFS job from input data. For example, /apps/b\_ads\_data/result/result\_%Y%m%d/adsdata/\_SUCCESS. Available if you choose to use relative files. |
| **Downstream HDFS Path** (mandatory) | A success flag file for a HDFS job to output data. For example, /apps/b\_ads\_data/result/result\_%Y%m%d/adsdata/\_SUCCESS. Available if you choose to use relative files. |
| **Delta Time** (mandatory) | Time difference between the current time and the detected time for HDFS path. For example, 1 day signifies to check whether the HDFS path was generated 1 day ago from now. |
| **Relative Time** (mandatory) | Time between the input flag file and output flag file to be generated. For example, For example, 1 s means to check whether the upstream HDFS path file is generated 1 second before the downstream HDFS path file. Available if you choose to use relative files. |
| **Schedule** (mandatory) | A cron time string in the UTC time zone. For example, 0 12 \* \* \*. |
| **Notification** (optional) | Provide a channel for the alert notifications. You can use **Pager**, **Slack Channel**, or both. If you're using a private Slack channel, please invite the [**@ControlCenter-Bot**](https://ebay-eng.slack.com/team/W017U86G10D) app first. To send notifications to a specific person, add @ before the user alias. |

**ES Expression**

| **Parameter** | **Description** |
| --- | --- |
| **Time Field** (mandatory) | Time field for Elasticsearch. The default value is slot\_timestamp. |
| **Time Range** (mandatory) | Time range for the search expression in hours or days. |
| **Time Offset** (mandatory) | Time offset in hours or days. |
| **Aggregation Type** (mandatory) | Aggregation type. |
| **Query String** (mandatory) | A JSON array to be used as the filter part of the Elasticsearch query, for example, [{ "match": { "eventType": "PLC" }}]. |
| **Expression** (mandatory) | Elasticsearch expression. The basic format for the expression is <es\_index>.<field>. Simple math expressions are also supported, for example, abs(collect\_rule1.count - collect\_rule2.count)/collect\_rule1.count > 0.25. For a list of variables you can use, see [**Variables**](https://shepherd-api-adsshepherd.vip.ebay.com/rules/comm/variables). |
| **Schedule** (mandatory) | A cron time string in the UTC time zone. For example, 0 12 \* \* \*. |
| **Notification** (optional) | Provide a channel for the alert notifications. You can use **Pager**, **Slack Channel**, or both. If you're using a private Slack channel, please invite the [**@ControlCenter-Bot**](https://ebay-eng.slack.com/team/W017U86G10D) app first. To send notifications to a specific person, add @ before the user alias. |

**Customized**

Custom alert rule types provide additional parameters that you can use for your alert rules.  
The available options depend on the custom alert type you select.

1. When ready, click **Create**.

## [Notifications](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager?id=notifications)

To view the recipients that have been configured for alert rules, use the [**Notifier**](https://adsshepherd.muse.vip.ebay.com/alerting/rule-manager?tab=Notifier) tab of the **Alert Rule Manager**.

# [Incident Management](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=incident-management)

If you notice an alert or unusual behavior that requires additional actions from the Ads Infra team, you can create an incident. Incidents are tickets that help you resolve the underlying issue, while tracking all important details.

## [Workflow](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=workflow)

The current process for managing incidents is the following:

1. The on-call developer analyzes the existing [**active incidents**](https://adsshepherd.muse.vip.ebay.com/incident/list?status=Active) and monitors high-priority alerts (P1 and P2) in the [**#ads\_p1p2\_alerts**](https://ebay-eng.slack.com/archives/C02PWMYR54J) Slack channel.
   * Based on the information gained from the most recent alerts, the on-call developer updates the incidents.
   * If there is an alert that has no matching open incident but requires additional actions, the developer creates a new incident.  
     This can be done using a button in the Slack message.
2. At the end of the shift, the on-call developer hands over the active incidents list to the next on-call developer.
3. All active incidents are summarized in a report that is sent to the respective Ads teams and team leads.

A diagram of a process

Description automatically generated

Incident Schema

CREATE TABLE `incident` (

`id` int(11) NOT NULL AUTO\_INCREMENT,

`title` varchar(256) NOT NULL DEFAULT '' COMMENT 'title of incident',

`description` text COMMENT 'description of incident with MD format',

`severity` varchar(16) NOT NULL COMMENT 'Enum: P1, P2, P3, P4',

`business\_impact` tinyint(1) DEFAULT NULL COMMENT 'if this incident has business impact like revenue. 1: yes, 0: no',

`revenue\_loss` float NOT NULL DEFAULT '0' COMMENT 'the number that revenue actually lost in the incident',

`revenue\_recovered` float NOT NULL DEFAULT '0' COMMENT 'the number that revenue recovered after incident is resolved',

`start\_time` int(11) NOT NULL COMMENT 'the time incident starts',

`end\_time` int(11) NOT NULL COMMENT 'the time incident resovled',

`status` varchar(32) NOT NULL DEFAULT 'Active' COMMENT 'Enum: Active, Resolved',

`type` varchar(32) NOT NULL DEFAULT 'unknown' COMMENT 'Enum: unknown, suspicious, valid, invalid',

`root\_cause` varchar(128) NOT NULL DEFAULT '' COMMENT 'root cause category of incident',

`tags` varchar(256) NOT NULL DEFAULT '' COMMENT 'tags like PLA, PLX and separated by commas',

`domain` varchar(128) NOT NULL DEFAULT 'Unknown',

`annotation` varchar(1024) NOT NULL DEFAULT '' COMMENT 'annotation of incident',

`alerts` varchar(512) NOT NULL DEFAULT '' COMMENT 'related alerting rule id',

`slack` varchar(128) NOT NULL DEFAULT '' COMMENT 'slack link',

`snow` text COMMENT 'service now incident link if exists',

`email` varchar(256) NOT NULL DEFAULT '' COMMENT 'email title',

`rca` varchar(2048) NOT NULL DEFAULT '' COMMENT 'RCA link of this incident',

`oncall\_log` text COMMENT 'on-call log for SRE',

`creator` varchar(128) NOT NULL DEFAULT 'Start' COMMENT 'the person who create this incident',

`create\_time` int(11) NOT NULL COMMENT 'create time',

`update\_time` int(11) NOT NULL COMMENT 'update time',

PRIMARY KEY (`id`)

) ENGINE=InnoDB AUTO\_INCREMENT=1 DEFAULT CHARSET=utf8

To learn more about the incident schema, see [**this wiki**](https://wiki.corp.ebay.com/x/WYYIP).

## [Processing an Incident](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=processing-an-incident)

When working on an incident, you can modify it by editing the description or adding comments.

* To edit the incident, use the Edit icon in the [**Incidents**](https://adsshepherd.muse.vip.ebay.com/incident/list) list.
* To add a comment, use the Comment icon.

## [Closing an Incident](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=closing-an-incident)

When the root cause of the incident has been determined and addressed, you can close the incident by resolving it.

To resolve an incident, open it for editing and set its **Status** to **Resolved**. Alternatively, you can click the Resolve icon in the [**Incidents**](https://adsshepherd.muse.vip.ebay.com/incident/list) list.

## [Searching for Incidents](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/incident_management?id=searching-for-incidents)

You can use the filter bar on the [**Incidents**](https://adsshepherd.muse.vip.ebay.com/incident/list) page to search for incidents by title, severity, business impact, type, creation or resolution time, and other parameters.

# [Changes](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_changes?id=changes)

On the [**Changes**](https://adsshepherd.muse.vip.ebay.com/metadata/changes) page, you can view recent events that might have affected ads programs.  
These events include code changes, experiments, launches, configuration changes, and many other. Some of them may potentially impact revenue, GMV, and other metrics collected by the Control Center.

If you notice a sudden drop or rise in the business metrics chart, for example, on the [**Core Metrics**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics/v2) page, it can be useful to compare it with the changes timeline.

A screenshot of a calendar

Description automatically generated

## [Calendar and List Views](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_changes?id=calendar-and-list-views)

You can view the timeline of the changes as a calendar or a list, whichever is more convenient for you.

By default, only launches and projects are displayed. However, you can adjust this using the **Type** filter.

Other filters are also available, such as:

* **Ads Program** – Ads program, such as **PLA**, **PLS**, or **SFA**. For more information, see [**Ads Programs**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_core_metrics?id=how-to-use-the-metrics-chart).
* **App** – Name of the target app. The **App** filter supports fuzzy search.
* **EP ID** – ID of the experiment.
* **Ticket** – ID of the change in ServiceNow.
* **Placement ID** – ID of a specific area on a page where the ad content is displayed. For a list of placement IDs, see the [**Placements**](https://adsshepherd.muse.vip.ebay.com/metadata/placements) page or [**this wiki**](https://wiki.corp.ebay.com/x/V_aTM).
* **Page Family** – Page where the ad is displayed, such as search results page (**SRP**), merchandise page (**Merch**), or an external website (**Off eBay**).
* **Business Unit** – Relevant business unit.
* **Platform** – Platform used to access eBay, such as desktop computer (**dWeb**), mobile device (**mWeb**), or other devices (**Others**).
* **Site** – One or more international eBay sites.
* **Time** (List view only) – Time range when the changes took place.

## [Airtable Data](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_changes?id=airtable-data)

In addition to the table and list views, you can see other changes-related [**Airtable**](https://airtable.com/) data on the **Changes Hub**, **Planned EP Timeline**, **Project Launch Timeline**, **All Changes Timeline**, and **M3 Launch Timeline** tabs.

## [Core Metrics](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_changes?id=core-metrics)

When working with the [**Core Metrics**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics/v2) data, you can use the **Show Changes** option to add the changes timeline as another dimension to the metric graph.

# [Pool Metrics](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_pool_metrics?id=pool-metrics)

The [**Pool Metrics**](https://adsshepherd.muse.vip.ebay.com/metadata/pool-metrics) page displays the latest ads-related pool data, such as resource ID, tier, archtier, and other metadata.

You can search for pools by name (**CalPool**), metric, or namespace. The **CalPool** filter supports fuzzy query.

To see all metrics related to a pool, click the Expand icon.

A screenshot of a computer

Description automatically generated

## [Export Pool Data](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_pool_metrics?id=export-pool-data)

You can export all pool data to a CSV file using the Download icon.

# [Other Metadata](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_other?id=other-metadata)

In addition to [**pool metrics**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_pool_metrics), you can also view other metadata, such as placements, merchandise categories, and page IDs. You can use these metadata in conjunction with metrics monitoring tools, such as the [**Core Metrics**](https://adsshepherd.muse.vip.ebay.com/monitoring/metrics/v2) page.

## [Placements](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_other?id=placements)

On the [**Placements**](https://adsshepherd.muse.vip.ebay.com/metadata/placements) page, you can search for placements by ID, name, page family, device, and other parameters.

## [Categories](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_other?id=categories)

The [**Categories**](https://adsshepherd.muse.vip.ebay.com/metadata/categories) page helps you determine the IDs of specific merchandise categories.

## [Page Info](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/metadata_other?id=page-info)

[**Page Info**](https://adsshepherd.muse.vip.ebay.com/metadata/page-info) provides a list of page IDs and their detailed descriptions.

# [Ads Scheduler](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/ads_scheduler?id=ads-scheduler)

The [**Ads Scheduler**](https://adsshepherd.muse.vip.ebay.com/ads-scheduler) page enables you to define ads workflows.  
You can configure a workflow manually by entering its configuration or upload a YAML file with a list of tasks declared in the Airflow-style directed acyclic graph (DAG) format.

## [Add a New Workflow](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/ads_scheduler?id=add-a-new-workflow)

To add a new workflow:

1. Click the **Add** button and configure the following settings:
   * **Name** – ID of the workflow. The name must be unique.
   * **Start Date** – Start date of the workflow.
   * **Version** – Version of the workflow.
   * **Domain** – Ads area where this workflow is used.
   * **Owner** – Your eBay alias.  
     Please note that a workflow can be triggered, deployed, and deleted only by its owner.
   * **Tags** – The values you entered in the **Domain** and **Owner** fields are added as tags by default.  
     You can also add your own custom tags.
   * **Description** – If you want to, you can add a description for the workflow.
2. Choose how to configure the workflow. You can either enter it manually or upload a YAML file with a workflow declared as a DAG.  
   For configuration samples, see [**this wiki**](https://wiki.corp.ebay.com/display/AdsInfra/Yaml).  
   To learn more about DAG syntax, see the official [**Airflow documentation**](https://airflow.apache.org/docs/apache-airflow/stable/core-concepts/dags.html).
3. You can also provide pre-production and production configuration instructions, if needed.
4. When ready, click **Submit**.

## [Workflow Components](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/ads_scheduler?id=workflow-components)

A typical workflow is made up of tasks and other components that define how they should run, such as:

* **dag\_id** – ID of the workflow. Must be the same as the **Name**.
* **email** – Email addresses of the recipients who must be notified about the events in the workflow.  
  You can also specify an **email\_on\_failure** or **email\_on\_retry** attribute if you would like the recipients to be notified whenever a task in the workflow fails or is retried.
* **timeout** – Default execution timeout for the tasks in the workflow.  
  Please note that if you set the timeout to 0, the task operators will never time out by default.
* **retries** – How many times a failed task must be retried by default.  
  This setting can be overridden on the task level.

The tasks in the workflow are defined using the following properties:

* **task\_type** – Type of the task operator.  
  The supported operators include bash, python, hadoop, spark, pyspark, pykrylov, krylov\_retrain, git\_sync, and some others.
* **group\_id** – ID of the task group. You can use this setting to group individual tasks in complex workflows.
* **inherit** – If the task configuration must be inherited from another task, enter the ID of the parent task.
* **required\_data\_paths** – Data paths required for the task.
* **settings** – Other mandatory and optional settings, depending on the specified **task\_type**.  
  These may include bash commands, callables for Python files, Spark batch accounts, Krylov configs, and other settings.
* **arguments** – Optional arguments.
* **depends\_on** – If the task depends on successful completion of another task, you can provide its ID.

To learn more about tasks and their properties, see [**Tasks**](https://airflow.apache.org/docs/apache-airflow/stable/core-concepts/tasks.html) and [**airflow.models.baseoperator**](https://airflow.apache.org/docs/apache-airflow/stable/_api/airflow/models/baseoperator/index.html#module-airflow.models.baseoperator) in the official Airflow documentation.

## [Manage Workflows](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/ads_scheduler?id=manage-workflows)

You can trigger, deploy, edit, delete, and retry workflows using the following actions buttons:

* Trigger button – Trigger the workflow. When you trigger an ads workflow, you must specify whether it should be triggered in the pre-production or production environment. You may also specify dynamic parameters, if needed.
* Deploy button – Deploy the workflow. When you deploy a workflow, you must provide a Version number for the deployment, as well as specify the environment where to deploy the workflow: production or pre-production.
* Edit button – Edit the workflow. For the available configuration options, see Add a New Workflow.
* Delete button – Delete the workflow.
* Retry button – Retry the workflow.

# [General Settings](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_general?id=general-settings)

You can use the [**General Settings**](https://adsshepherd.muse.vip.ebay.com/settings) page to adjust the default settings, such as:

* **Time Zone** – Time zone for the metrics and other time-sensitive data.  
  You can choose your browser time or another time zone of your choice.  
  The default time zone is Mountain Standard Time (MST), which is never switched to daylight saving time, both for legacy and data consistency reasons.
* **Request Timeout** – Default timeout for requests in seconds.
* **Sidebar Style** – By default, the sidebar is collapsible. You can expand or collapse the sidebar using the Expand icon in the bottom left-hand corner.  
  Alternatively, you can set the sidebar style to **Drawer**, which will hide it behind a menu in the top left-hand corner of the Control Center page.The changes you make on this page do not affect other users.

# [User Group](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_user_group?id=user-group)

The [**User Group**](https://adsshepherd.muse.vip.ebay.com/user-group) page enables you to create groups of users that can be assigned to metrics collection rules and alert rules.

Only the users in the group are allowed to edit or delete the metrics collection rules and alert rules assigned to this group.  
Other users can only view and trigger these rules.

## [Add User Group](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/settings_user_group?id=add-user-group)

To create a new user group:

1. Click **Add** in the top right-hand corner.
2. Specify the following settings:
   * **User Group Name** – ID of the user group.
   * **Owner** – eBay aliases of the group owners, separated by commas.
   * **Email** – DL or email of the group.
   * **Slack** – Slack channel of the group.
   * **Users** – Members of the group, separated by commas.
3. When ready, click **OK** to save the user group.

Once you have created a user group, its members can start assigning it to the metrics collection rules and alert rules in the [**Metrics Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/monitoring_metrics_manager) and [**Alert Rule Manager**](https://shepherd-api-adsshepherd.vip.ebay.com/docs/#/guide/alert_rule_manager).