

Unified Load Balancer Metrics Reference, Release 2026.03

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CONTENTS

PREFACE

About this Guide v

CHAPTER 1

Understanding ULB Metrics Monitoring 1

Feature Description 1

How it Works 2

Configuring Metrics Collection 2

Configuration Example 3

CHAPTER 2

ULB Metrics 5

ULB Metrics Reference 5

ULB Agent Metrics Category 5

ULB Operator Metrics Category 16

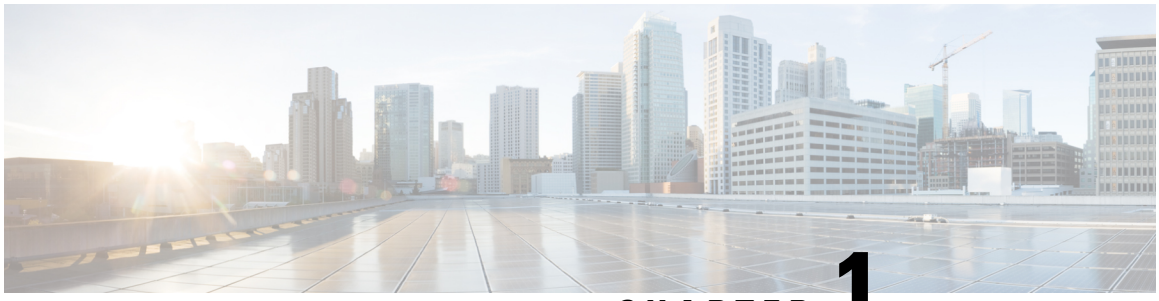


About this Guide

Note The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. While any existing biased terms are being substituted, exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

This guide describes the metrics supported by Unified Load Balancer (ULB). This guide also provides information on how to gather the statistics or counters from its microservices.

About this Guide



CHAPTER 1

Understanding ULB Metrics Monitoring

- Feature Description, on page 1
- How it Works, on page 2
- Configuring Metrics Collection, on page 2

Feature Description

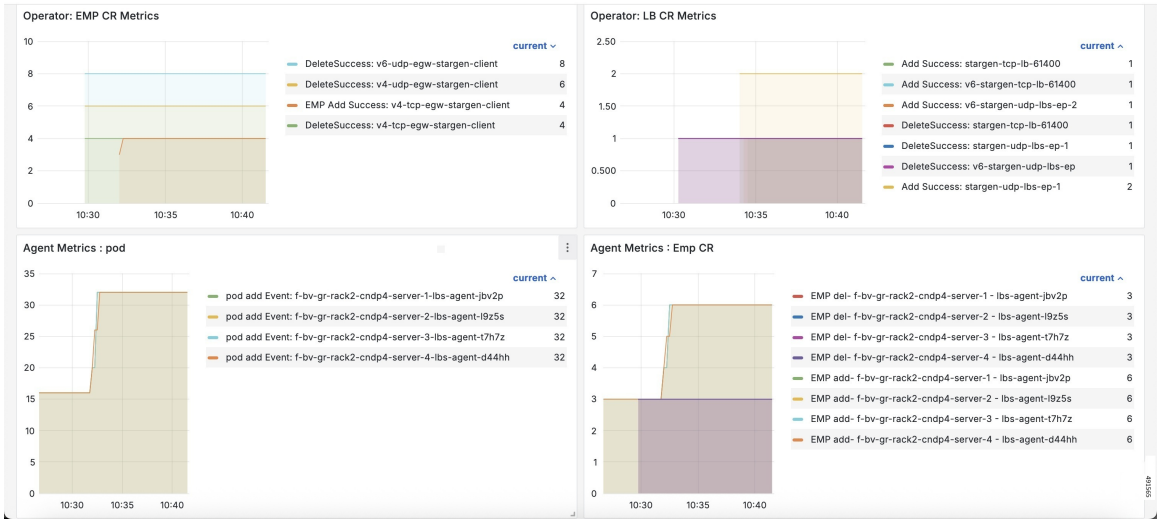
You can a monitor wide range of application and system statistics, and key performance indicators (KPI) within the ULB infrastructure. KPIs are useful to gain insight into the overall health of the ULB environment. Statistics offer a simplified representation of the ULB configurations and utilization-specific data.

The ULB integrates with Prometheus, a third-party monitoring and alerting solution to capture and preserve the performance data. This data is reported as statistics and can be viewed in the web-based dashboard. Grafana provides a graphical or text-based representation of statistics and counters, which the Prometheus database collects. The Grafana dashboard projects a comprehensive set of quantitative and qualitative data that encourages you to analyze ULB metrics in the reporting tool of your choice and take informed decisions.

By default, the monitoring solution is enabled, which indicates that Prometheus continually monitors your ULB environment and the Prometheus data source is associated with Grafana. You must have the administrative privileges to access Grafana. However, to view a specific dashboard, run the Prometheus queries. The queries are available in the built-in and custom format.

The following snapshot is a sample of the Grafana dashboard.

Figure 1: Grafana Dashboard



How it Works

KPIs constitute of metrics, such as statistics and counters. These metrics represent the performance improvement or degradation. By default, Prometheus is enabled on the system where ULB is deployed, and configured with Grafana. Prometheus dynamically starts monitoring the data sources that are available on the system. For new dashboard panels, execute queries in Prometheus.

For more information about Prometheus, consult the Prometheus documentation.

Configuring Metrics Collection

The labels of each ULB metrics are classified into these three categories:

- Production
- Debug
- Trace level

The ULB data metrics are controlled through the CLI command for performance optimization.

To collect the necessary ULB data metrics use this sample configuration:

```
config
  infra metrics verbose { application } [ level { debug | off | production
 | trace } | metrics metrics_name [ level { debug | off | production | trace
 } | pod pod_name | level { debug | off | production | trace }  ] ]
  end
```

NOTES:

- **infra metrics verbose { application }**: Enable the metric collection. This configuration helps to collect the required application metrics and labels. By default, this command captures the trace labels of metrics.

- **level { debug | off | production | trace }**: Specify the application metrics category to capture the required application metrics and labels.
  - **debug**: Capture all the labels that are classified as production and debug categories.
  - **off**: Disable the application level metrics collection.

    For example, configuring the **infra metrics verbose application svc_byte_count level off** command disables the svc_byte_count application metrics.
  - **production**: Capture the labels that are classified as production category.
  - **trace**: Capture all the labels that are classified as production, debug, and trace categories. This option is the default configuration.



Note It is recommended to use level production for a highly scaled and production environment. You should use the debug and trace levels only in lab trials and debugging environment.

If the level trace is enabled in production or a highly scalable environment, service metrics timeout can be observed in the Grafana dashboard.

- If production and debug classification is empty for a metrics, then all the labels are classified as trace.
- **metrics** *metrics_name*: Specify the metrics name to capture only the labels that correspond to the given metrics. The metric-level configuration takes precedence over the application-level configuration. If the metrics level is not configured, the labels are captured at the application level.

Data-path metrics collection

To enable or disable the collection of the data-path metrics, use this sample configuration:

This configuration is needed to enable or disable the data level ULB statistics:

```
config
   [no] metrics service-stats
   end
```

NOTES:

[no] metrics service-stats: This CLI configures the flag to enable metrics collection by eBPF. This CLI is disabled by default.

Configuration Example

The following is an example configuration to enable only production level for all the application metrics.

```
infra metrics verbose application level production
```

The following is an example configuration to enable debug level for svc_byte_count application metrics and production level for all other application metrics.

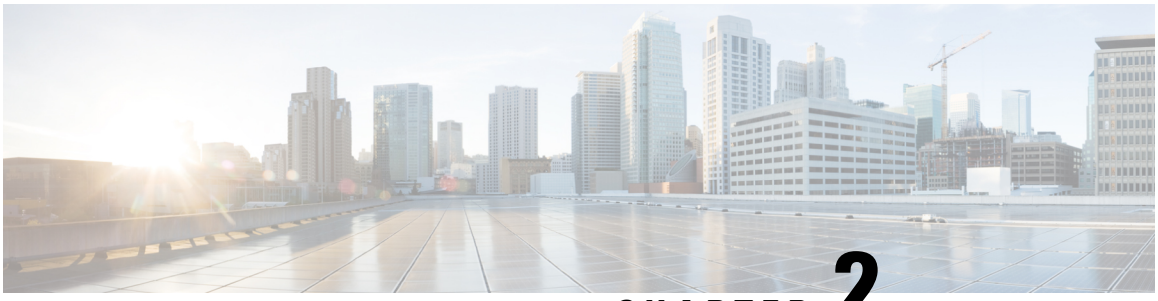
```
infra metrics verbose application level production metrics svc_byte_count
 level debug
```

The following is an example configuration to enable production level for svc_byte_count application metrics.

```
infra metrics verbose application metrics svc_byte_count level production
```

The following is an example configuration to disable svc_byte_count application metrics and debug level for all other application metrics.

```
infra metrics verbose application level debug metrics svc_byte_count level
 off
```



CHAPTER 2

ULB Metrics

- ULB Metrics Reference, on page 5

ULB Metrics Reference

ULB Agent Metrics Category

egressmanagementpolicy_customresource_add_event_total

Description: Total number egressmanagementpolicies custom resource add event received

Sample Query: `'sum(egressmanagementpolicy_customresource_add_event_total) by (pod)'`

Labels:

egressmanagementpolicy_customresource_modify_event_total

Description: Total number egressmanagementpolicies custom resource modify event received

Sample Query: `'sum(egressmanagementpolicy_customresource_modify_event_total) by (pod)'`

Labels:

egressmanagementpolicy_customresource_delete_event_total

Description: Total number egressmanagementpolicies custom resource delete event received

Sample Query: `'sum(egressmanagementpolicy_customresource_delete_event_total) by (pod)'`

Labels:

pod_add_event_total

Description: Total number pod add event received

Sample Query: `'sum(pod_add_event_total) by (pod)'`

Labels:

pod_modify_event_total

Description: Total number pod modify event received

Sample Query: `'sum(pod_modify_event_total) by (pod)'`

Labels:

pod_delete_event_total

Description: Total number pod delete event received

Sample Query: `'sum(pod_delete_event_total) by (pod)'`

Labels:

pod_add_event_ignored_total

Description: Total number pod add event ignored

Sample Query: `'sum(pod_add_event_ignored_total) by (pod)'`

Labels:

pod_modify_event_ignored_total

Description: Total number pod modify event ignored

Sample Query: `'sum(pod_modify_event_ignored_total) by (pod)'`

Labels:

pod_delete_event_ignored_total

Description: Total number pod delete event ignored

Sample Query: `'sum(pod_delete_event_ignored_total) by (pod)'`

Labels:

node_add_event_total

Description: Total number node add event received

Sample Query: `'sum(node_add_event_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

node_modify_event_total

Description: Total number node modify event received

Sample Query: `'sum(node_modify_event_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

node_delete_event_total

Description: Total number node delete event received

Sample Query: `'sum(node_delete_event_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

node_add_event_ignored_total

Description: Total number node add event ignored

Sample Query: `'sum(node_add_event_ignored_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

node_modify_event_ignored_total

Description: Total number node modify event ignored

Sample Query: `'sum(node_modify_event_ignored_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

node_delete_event_ignored_total

Description: Total number node delete event ignored

Sample Query: `'sum(node_delete_event_ignored_total) by (pod)'`

Labels:

- Label: `component`

  Label Description: The component specifies node event type

  Example: neighbor

loadbalancer_customresource_add_event_total

Description: Total number load balancer custom resource add event received

Sample Query: `'sum(loadbalancer_customresource_add_event_total) by (pod)'`

Labels:

loadbalancer_customresource_modify_event_total

Description: Total number load balancer custom resource modify event received

Sample Query: `'sum(loadbalancer_customresource_modify_event_total) by (pod)'`

Labels:

loadbalancer_customresource_delete_event_total

Description: Total number load balancer custom resource delete event received

Sample Query: `'sum(loadbalancer_customresource_delete_event_total) by (pod)'`

Labels:

loadbalancer_pod_add_event_total

Description: Total number load balancer pod add event received

Sample Query: `'sum(loadbalancer_pod_add_event_total) by (pod)'`

Labels:

loadbalancer_pod_modify_event_total

Description: Total number load balancer pod modify event received

Sample Query: `'sum(loadbalancer_pod_modify_event_total) by (pod)'`

Labels:

loadbalancer_pod_delete_event_total

Description: Total number load balancer pod delete event received

Sample Query: `'sum(loadbalancer_pod_delete_event_total) by (pod)'`

Labels:

loadbalancer_pod_add_event_ignored_total

Description: Total number load balancer pod add event received ignored

Sample Query: `'sum(loadbalancer_pod_add_event_ignored_total) by (pod)'`

Labels:

loadbalancer_pod_modify_event_ignored_total

Description: Total number load balancer pod modify event received ignored

Sample Query: `'sum(loadbalancer_pod_modify_event_ignored_total) by (pod)'`

Labels:

loadbalancer_pod_delete_event_ignored_total

Description: Total number load balancer pod delete event received ignored

Sample Query: `'sum(loadbalancer_pod_delete_event_ignored_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_add_event_total

Description: Total number service outbound route custom resource add event received

Sample Query: `'sum(serviceoutboundroute_customresource_add_event_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_modify_event_total

Description: Total number service outbound route custom resource modify event received

Sample Query: `'sum(serviceoutboundroute_customresource_modify_event_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_delete_event_total

Description: Total number service outbound route custom resource delete event received

Sample Query: `'sum(serviceoutboundroute_customresource_delete_event_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_add_event_ignored_total

Description: Total number service outbound route custom resource add event received ignored

Sample Query: `'sum(serviceoutboundroute_customresource_add_event_ignored_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_modify_event_ignored_total

Description: Total number service outbound route custom resource modify event received ignored

Sample Query: `'sum(serviceoutboundroute_customresource_modify_event_ignored_total) by (pod)'`

Labels:

serviceoutboundroute_customresource_delete_event_ignored_total

Description: Total number service outbound route custom resource delete event received ignored

Sample Query: `'sum(serviceoutboundroute_customresource_delete_event_ignored_total) by (pod)'`

Labels:

svc_packet_count

Description: Total number of packets per service ip address

Sample Query: `'sum(svc_packet_count) by (svc_ip)'`

Labels:

- Label: `svc_ip`

  Label Description: The service ip address defined in EMP or LB CR

  Example: 120.120.120.30

- Label: `protocol`

  Label Description: The service protocol defined in EMP or LB CR

  Example: TCP, UDP

- Label: `direction`

  Label Description: The direction of the packet

  Example: IN, OUT

- Label: `svc_name`

  Label Description: The name of EMP or LB CR

  Example: emp-tcp-v4

- Label: `pod_ip`

  Label Description: The ip address of the pod

  Example: 10.4.8.113

- Label: `pod_name`

  Label Description: The name of the pod

  Example: udp-client-1

- Label: `pod_port`

  Label Description: The port used by pod to send receive packets

  Example: 55000

svc_byte_count

Description: Total number of bytes per service ip address

Sample Query: `'sum(svc_byte_count) by (pod_ip)'`

Labels:

- Label: `svc_ip`

  Label Description: The service ip address defined in EMP or LB CR

  Example: 120.120.120.30

- Label: `protocol`

Label Description: The service protocol defined in EMP or LB CR

Example: TCP, UDP

- Label: `direction`

  Label Description: The direction of the packet

  Example: IN, OUT

- Label: `svc_name`

  Label Description: The name of EMP or LB CR

  Example: emp-tcp-v4

- Label: `pod_ip`

  Label Description: The ip address of the pod

  Example: 10.4.8.113

- Label: `pod_name`

  Label Description: The name of the pod

  Example: udp-client-1

- Label: `pod_port`

  Label Description: The port used by pod to send receive packets

  Example: 55000

egress_packet_count

Description: Total number egress packet sent

Sample Query: `'sum(egress_packet_count) by (pod_ip)'`

Labels:

- Label: `egress_ip`

  Label Description: The Egress ip address defined in EMP CR

  Example: 120.120.120.30

- Label: `protocol`

  Label Description: The service protocol defined in EMP CR

  Example: TCP, UDP

- Label: `pod_ip`

  Label Description: The ip address of the pod

  Example: 10.4.8.113

- Label: `source_port`

  Label Description: The port used by pod to send receive packets

  Example: 55000

ulb_dp_rx_total

Description: Total packets received for a configured ULB service, classified by service ip, service port, reporting interface, and protocol

Sample Query: `'sum by (app_namespace, resource_name, service_ip, service_port, protocol, ifname, source) (rate(ulb_dp_rx_total[5m]))'`

Labels:

- Label: `app_namespace`

  Label Description: Namespace of the associated ULB Custom resource.

  Example: test-lbs-pods

- Label: `resource_name`

  Label Description: Name of the associated ULB Custom resource.

  Example: example-loadbalancer

- Label: `service_ip`

  Label Description: Service IP configured for the associated ULB Custom resource; dual-stack or multihomed services produce a separate series for each service IP.

  Example: 192.0.2.58

- Label: `service_port`

  Label Description: Service port configured for the associated ULB Custom resource.

  Example: 8080

- Label: `protocol`

  Label Description: Protocol configured for the associated ULB Custom resource. Supported CRD protocol values are UDP, TCP, SCTP, GTPC, GTPU, and PFCP

  Example: udp, tcp, sctp, gtpc, gtpu, pfcp

- Label: `ifname`

  Label Description: Linux interface on which the datapath stats were recorded.

  Example: ens192.1001

- Label: `source`

  Label Description: Packet-source classification based on the Ethernet source MAC: peer when the MAC is not in the ULB cluster-node MAC map, or node when it is.

  Example: peer, node

ulb_dp_session_total

Description: Total new connections or sessions observed by ULB

Sample Query: `'sum by (app_namespace, resource_name, service_ip, service_port, protocol, ifname) (rate(ulb_dp_session_total[5m]))'`

Labels:

- Label: `app_namespace`

  Label Description: Namespace of the associated ULB Custom resource.

  Example: test-lbs-pods

- Label: `resource_name`

  Label Description: Name of the associated ULB Custom resource.

  Example: example-loadbalancer

- Label: `service_ip`

  Label Description: Service IP configured for the associated ULB Custom resource; dual-stack or multihomed services produce a separate series for each service IP.

  Example: 192.0.2.58

- Label: `service_port`

  Label Description: Service port configured for the associated ULB Custom resource.

  Example: 8080

- Label: `protocol`

  Label Description: Protocol configured for the associated ULB Custom resource. Supported CRD protocol values are UDP, TCP, SCTP, GTPC, GTPU, and PFCP

  Example: udp, tcp, sctp, gtpc, gtpu, pfcp

- Label: `ifname`

  Label Description: Linux interface on which the datapath stats were recorded.

  Example: ens192.1001

ulb_dp_forward_total

Description: A cumulative eBPF datapath snapshot of instrumented ULB forwarding-path events.

Sample Query: `'sum by (app_namespace, resource_name, service_ip, service_port, protocol, ifname, path) (rate(ulb_dp_forward_total[5m]))'`

Labels:

- Label: `app_namespace`

  Label Description: Namespace of the associated ULB Custom resource.

  Example: test-lbs-pods

- Label: `resource_name`

  Label Description: Name of the associated ULB Custom resource.

  Example: example-loadbalancer

- Label: `service_ip`

  Label Description: Service IP configured for the associated ULB Custom resource; dual-stack or multihomed services produce a separate series for each service IP.

Example: 192.0.2.58

- Label: `service_port`

  Label Description: Service port configured for the associated ULB Custom resource.

  Example: 8080

- Label: `protocol`

  Label Description: Protocol configured for the associated ULB Custom resource. Supported CRD protocol values are UDP, TCP, SCTP, GTPC, GTPU, and PFCP

  Example: udp, tcp, sctp, gtpc, gtpu, pfcp

- Label: `ifname`

  Label Description: Linux interface on which the datapath stats were recorded.

  Example: ens192.1001

- Label: `path`

  Label Description: Instrumented forwarding event: forward_to_local_pod = CT-miss forwarding to a local backend pod; forward_to_local_pod_fp = CT-hit fast-path forwarding to a local backend pod; forward_to_remote_pod = CT-miss ingress forwarding to a pod on a remote node; forward_to_remote_pod_fp = CT-hit fast-path ingress forwarding to a pod on a remote node; forward_to_peer = CT-miss path forwarding toward a remote node or client; forward_to_peer_fp = CT-hit fast-path forwarding toward a remote node or client; cloned_pkts = SCTP INIT packets for which peer-node cloning is attempted; the counter increments once per packet.

  Example: forward_to_local_pod, forward_to_local_pod_fp, forward_to_remote_pod, forward_to_remote_pod_fp, forward_to_peer, forward_to_peer_fp, cloned_pkts

ulb_dp_ebpf_failures

Description: A cumulative eBPF datapath snapshot of instrumented failure events by reason.

Sample Query: `'sum by (app_namespace, resource_name, service_ip, service_port, protocol, ifname, reason) (rate(ulb_dp_ebpf_failures[5m]))'`

Labels:

- Label: `app_namespace`

  Label Description: Namespace of the associated ULB Custom resource.

  Example: test-lbs-pods

- Label: `resource_name`

  Label Description: Name of the associated ULB Custom resource.

  Example: example-loadbalancer

- Label: `service_ip`

  Label Description: Service IP configured for the associated ULB Custom resource; dual-stack or multihomed services produce a separate series for each service IP.

  Example: 192.0.2.58

- Label: `service_port`

  Label Description: Service port configured for the associated ULB Custom resource.

  Example: 8080

- Label: `protocol`

  Label Description: Protocol configured for the associated ULB Custom resource. Supported CRD protocol values are UDP, TCP, SCTP, GTPC, GTPU, and PFCP

  Example: udp, tcp, sctp, gtpc, gtpu, pfcp

- Label: `ifname`

  Label Description: Linux interface on which the datapath stats were recorded.

  Example: ens192.1001

- Label: `reason`

  Label Description: Recognized failure reason: rx_invalid_pkt = invalid RX packet; rx_revalidate_failed = RX revalidation failure; rx_parse_error = RX parser failure; rx_no_svc_ip_mapping = no service-IP mapping; rx_no_endpoint = no selected endpoint; rx_ep_info_missing = missing endpoint metadata; rx_policy_drop = policy drop; rx_tail_call_failed = RX tail-call failure; rx_ct_lookup = RX connection-tracking lookup failure; tx_invalid_pkt = invalid TX packet; tx_fib_lookup = TX FIB lookup failure; tx_redirect_peer = peer-redirection failure; tx_redirect_neigh = neighbor-redirection failure; tx_ingress_ct_update = ingress connection-tracking update failure; tx_egress_ct_seed = egress connection-tracking seed failure; tx_egress_service_lookup = egress service lookup by source tuple failed; tx_sor_rewrite = service outbound route L2 rewrite failure; tx_invalid_dest_mac = invalid remote destination MAC drop.

  Example: rx_invalid_pkt, rx_revalidate_failed, rx_parse_error, rx_no_svc_ip_mapping, rx_no_endpoint, rx_ep_info_missing, rx_policy_drop, rx_tail_call_failed, rx_ct_lookup, tx_invalid_pkt, tx_fib_lookup, tx_redirect_peer, tx_redirect_neigh, tx_ingress_ct_update, tx_egress_ct_seed, tx_egress_service_lookup, tx_sor_rewrite, tx_invalid_dest_mac

bpf_map_add_entry_total

Description: Total number of BPF map entries added

Sample Query: `'sum(bpf_map_add_entry_total) by (pod)'`

Labels:

bpf_map_modify_entry_total

Description: Total number of BPF map entries modified

Sample Query: `'sum(bpf_map_modify_entry_total) by (pod)'`

Labels:

bpf_map_delete_entry_total

Description: Total number of BPF map entries deleted

Sample Query: `'sum(bpf_map_delete_entry_total) by (pod)'`

Labels:

ULB Operator Metrics Category

loadbalancer_custom_resource_add_success_total

Description: Total number loadbalancer custom resource add request received Success

Sample Query: `'sum(loadbalancer_custom_resource_add_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

loadbalancer_custom_resource_add_fail_total

Description: Total number loadbalancer custom resource add request received Failed

Sample Query: `'sum(loadbalancer_custom_resource_add_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

Label Description: Name of the CR

Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

loadbalancer_custom_resource_modify_success_total

Description: Total number loadbalancer custom resource modify request received Success

Sample Query: `'sum(loadbalancer_custom_resource_modify_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

loadbalancer_custom_resource_modify_fail_total

Description: Total number loadbalancer custom resource modify request received Failed

Sample Query: `'sum(loadbalancer_custom_resource_modify_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

loadbalancer_custom_resource_delete_success_total

Description: Total number loadbalancer custom resource delete request received Success

Sample Query: `'sum(loadbalancer_custom_resource_delete_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

Label Description: Any issues encountered while processing the custom resource LB or EMP

Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

loadbalancer_custom_resource_delete_fail_total

Description: Total number loadbalancer custom resource delete request received Failed

Sample Query: `'sum(loadbalancer_custom_resource_delete_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_add_success_total

Description: Total number egressmanagementpolicies custom resource add request received Success

Sample Query: `'sum(egressmanagementpolicies_custom_resource_add_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_add_fail_total

Description: Total number egressmanagementpolicies custom resource add request received Failed

Sample Query: `'sum(egressmanagementpolicies_custom_resource_add_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

Label Description: Any issues encountered while processing the custom resource LB or EMP

Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_modify_success_total

Description: Total number egressmanagementpolicies custom resource modify request received Success

Sample Query: `'sum(egressmanagementpolicies_custom_resource_modify_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_modify_fail_total

Description: Total number egressmanagementpolicies custom resource modify request received Failed

Sample Query: `'sum(egressmanagementpolicies_custom_resource_modify_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_delete_success_total

Description: Total number egressmanagementpolicies custom resource delete request received Success

Sample Query: `'sum(egressmanagementpolicies_custom_resource_delete_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

Label Description: Backend pod name

Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

egressmanagementpolicies_custom_resource_delete_fail_total

Description: Total number egressmanagementpolicies custom resource delete request received Failed

Sample Query: `'sum(egressmanagementpolicies_custom_resource_delete_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

service_modify_total_not_loadbalancer_owner

Description: Total number of service modify request whose owner is not LB crd

Sample Query: `'sum(service_modify_total_not_loadbalancer_owner) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

service_delete_total_not_loadbalancer_owner

Description: Total number of service delete request whose owner is not LB crd

Sample Query: `'sum(service_delete_total_not_loadbalancer_owner) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `Error`

Label Description: Any issues encountered while processing the custom resource LB or EMP

Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

service_modify_total_not_egressmanagementpolicies_owner

Description: Total number of service modify request whose owner is not EMP crd

Sample Query: `'sum(service_modify_total_not_egressmanagementpolicies_owner) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

service_delete_total_not_egressmanagementpolicies_owner

Description: Total number of service delete request whose owner is not EMP crd

Sample Query: `'sum(service_delete_total_not_egressmanagementpolicies_owner) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where custom resource is added

  Example: example-namespace

- Label: `Kind`

  Label Description: Denote whether the resource is LB CR or EMP CR

  Example: EgressManagementPolicy, LoadBalancer

- Label: `CrName`

  Label Description: Name of the CR

  Example: example-lb-cr

- Label: `SvcName`

  Label Description: Service name

  Example: service-1

- Label: `BackendPodName`

  Label Description: Backend pod name

  Example: pod-1, pod-2

- Label: `Error`

  Label Description: Any issues encountered while processing the custom resource LB or EMP

  Example: services testudpemp-pod-1 is forbidden: exceeded quota: service-quota, requested: services=1, used: services=2, limited: services=2

ulbnetworkpolicy_nad_add_success_total

Description: Total number of NAD add requests for UlbNetworkPolicy Success

Sample Query: `'sum(ulbnetworkpolicy_nad_add_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where UlbNetworkPolicy custom resource is created

  Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

  Label Description: Name of the UlbNetworkPolicy CR

  Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) created

  Example: nad-directservice-ip1

- Label: `Error`

Label Description: Any issues encountered while processing the NAD

Example: failed to create NAD: resource already exists

ulbnetworkpolicy_nad_add_fail_total

Description: Total number of NAD add requests for UlbNetworkPolicy Failed

Sample Query: `'sum(ulbnetworkpolicy_nad_add_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where UlbNetworkPolicy custom resource is created

  Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

  Label Description: Name of the UlbNetworkPolicy CR

  Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) that failed to create

  Example: nad-directservice-ip1

- Label: `Error`

  Label Description: Any issues encountered while processing the NAD

  Example: failed to create NAD: resource already exists

ulbnetworkpolicy_nad_modify_success_total

Description: Total number of NAD modify requests for UlbNetworkPolicy Success

Sample Query: `'sum(ulbnetworkpolicy_nad_modify_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where UlbNetworkPolicy custom resource is created

  Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

Label Description: Name of the UlbNetworkPolicy CR

Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) modified

  Example: nad-directservice-ip1

- Label: `Error`

  Label Description: Any issues encountered while processing the NAD

  Example: failed to update NAD: resource not found

ulbnetworkpolicy_nad_modify_fail_total

Description: Total number of NAD modify requests for UlbNetworkPolicy Failed

Sample Query: `'sum(ulbnetworkpolicy_nad_modify_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where UlbNetworkPolicy custom resource is created

  Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

  Label Description: Name of the UlbNetworkPolicy CR

  Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) that failed to modify

  Example: nad-directservice-ip1

- Label: `Error`

  Label Description: Any issues encountered while processing the NAD

  Example: failed to update NAD: resource not found

ulbnetworkpolicy_nad_delete_success_total

Description: Total number of NAD delete requests for UlbNetworkPolicy Success

Sample Query: `'sum(ulbnetworkpolicy_nad_delete_success_total) by (CrName)'`

Labels:

- Label: `NameSpace`

Label Description: The namespace where UlbNetworkPolicy custom resource is created

Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

  Label Description: Name of the UlbNetworkPolicy CR

  Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) deleted

  Example: nad-directservice-ip1

- Label: `Error`

  Label Description: Any issues encountered while processing the NAD

  Example: failed to delete NAD: resource not found

ulbnetworkpolicy_nad_delete_fail_total

Description: Total number of NAD delete requests for UlbNetworkPolicy Failed

Sample Query: `'sum(ulbnetworkpolicy_nad_delete_fail_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where UlbNetworkPolicy custom resource is created

  Example: example-namespace

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbNetworkPolicy

- Label: `CrName`

  Label Description: Name of the UlbNetworkPolicy CR

  Example: example-ulbnetworkpolicy

- Label: `NadName`

  Label Description: Name of the Network Attachment Definition (NAD) that failed to delete

  Example: nad-directservice-ip1

- Label: `Error`

  Label Description: Any issues encountered while processing the NAD

  Example: failed to delete NAD: resource not found

ulbclusterpolicy_add_success_total

Description: Total number of UlbClusterPolicy add requests Success

Sample Query: `'sum(ulbclusterpolicy_add_success_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

  Example: failed to add cluster policy: invalid configuration

ulbclusterpolicy_add_fail_total

Description: Total number of UlbClusterPolicy add requests Failed

Sample Query: `'sum(ulbclusterpolicy_add_fail_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

  Example: failed to add cluster policy: invalid configuration

ulbclusterpolicy_modify_success_total

Description: Total number of UlbClusterPolicy modify requests Success

Sample Query: `'sum(ulbclusterpolicy_modify_success_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

  Example: failed to modify cluster policy: invalid configuration

ulbclusterpolicy_modify_fail_total

Description: Total number of UlbClusterPolicy modify requests Failed

Sample Query: `'sum(ulbclusterpolicy_modify_fail_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

  Example: failed to modify cluster policy: invalid configuration

ulbclusterpolicy_delete_success_total

Description: Total number of UlbClusterPolicy delete requests Success

Sample Query: `'sum(ulbclusterpolicy_delete_success_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

Example: failed to delete cluster policy: invalid configuration

ulbclusterpolicy_delete_fail_total

Description: Total number of UlbClusterPolicy delete requests Failed

Sample Query: `'sum(ulbclusterpolicy_delete_fail_total) by (CrName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `Error`

  Label Description: Any issues encountered while processing the UlbClusterPolicy

  Example: failed to delete cluster policy: invalid configuration

ulbclusterpolicy_node_allocation_success_total

Description: Total number of UlbClusterPolicy node allocation requests Success

Sample Query: `'sum(ulbclusterpolicy_node_allocation_success_total) by (NodeName, PoolName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `NodeName`

  Label Description: Name of the node for which allocation was performed

  Example: worker-node-1

- Label: `PoolName`

  Label Description: Name of the IP pool

  Example: pool-1

- Label: `Error`

  Label Description: Any issues encountered during node allocation

ulbclusterpolicy_node_allocation_fail_total

Description: Total number of UlbClusterPolicy node allocation requests Failed

Sample Query: `'sum(ulbclusterpolicy_node_allocation_fail_total) by (NodeName, PoolName)'`

Labels:

- Label: `Kind`

  Label Description: The kind of custom resource

  Example: UlbClusterPolicy

- Label: `CrName`

  Label Description: Name of the UlbClusterPolicy CR

  Example: example-ulbclusterpolicy

- Label: `NodeName`

  Label Description: Name of the node for which allocation failed

  Example: worker-node-1

- Label: `PoolName`

  Label Description: Name of the IP pool

  Example: pool-1

- Label: `Error`

  Label Description: Any issues encountered during node allocation

  Example: insufficient IP addresses in pool

loadbalancer_custom_resource_bpf_mode_total

Description: Total number of LoadBalancer custom resources using BPF mode

Sample Query: `'sum(loadbalancer_custom_resource_bpf_mode_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where LoadBalancer custom resource is created

  Example: example-namespace

- Label: `CrName`

  Label Description: Name of the LoadBalancer CR

  Example: example-lb-cr

egressmanagementpolicies_custom_resource_bpf_mode_total

Description: Total number egressmanagementpolicies custom resource using BPF mode

Sample Query: `'sum(egressmanagementpolicies_custom_resource_bpf_mode_total) by (CrName)'`

Labels:

- Label: `NameSpace`

  Label Description: The namespace where EgressManagementPolicy custom resource is created

  Example: example-namespace

- Label: `CrName`

  Label Description: Name of the EgressManagementPolicy CR

  Example: example-emp-cr