

# Alerts for CDP Private Cloud Data Services

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## KubePodCrashLooping

Reference information for KubePodCrashLooping used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Pod is crash looping.

### PromQL Expression

```
rate(kube_pod_container_status_restarts_total{component="kube-state-metrics",appType="{{ $app.code }}"}[15m]) > 0
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubePodNotReady

Reference information for KubePodNotReady used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Pod has been in a non-ready state for more than 15 minutes.

### PromQL Expression

```
sum by (namespace, pod, appType, appId, appName, workloadId) (max by(namespace, pod, owner_kind, appType, appId, appName, workloadId) (kube_pod_status_phase{component="kube-state-metrics", phase=~"Pending|Unknown",appType="{{ $app.code }}"}) * on(namespace, pod) group_left(owner_kind) max by(namespace, pod, owner_kind, appType, appId, appName, workloadId) (kube_pod_owner{owner_kind!="Job",appType="{{ $app.code }}"})) > 0
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeDeploymentGenerationMismatch

Reference information for KubeDeploymentGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Deployment generation mismatch due to possible roll-back

### PromQL Expression

```
kube_deployment_status_observed_generation{component="kube-state-metrics",appType="{{ $app.code }}" } !=  
kube_deployment_metadata_generation{component="kube-state-metrics",appType="{{ $app.code }}" }
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDeploymentReplicasMismatch

Reference information for KubeDeploymentReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Deployment has not matched the expected number of replicas.

**PromQL Expression**

```
( kube_deployment_spec_replicas{component="kube-state-metrics",appType="{{ $app.code }}" } !
= kube_deployment_status_replicas_available{component="kube-state-
metrics",appType="{{ $app.code }}" } ) and
( changes(kube_deployment_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" }[5m]) == 0 )
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeStatefulSetReplicasMismatch

Reference information for KubeStatefulSetReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Deployment has not matched the expected number of replicas.

**PromQL Expression**

```
( kube_statefulset_status_replicas_ready{component="kube-state-
metrics",appType="{{ $app.code }}" } != kube_statefulset_status_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } ) and
( changes(kube_statefulset_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" }[5m]) == 0 )
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeStatefulSetGenerationMismatch

Reference information for KubeStatefulSetGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

StatefulSet generation mismatch due to possible roll-back

### PromQL Expression

```
kube_statefulset_status_observed_generation{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_statefulset_metadata_generation{component="kube-state-
metrics",appType="{{ $app.code }}" }
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeStatefulSetUpdateNotRolledOut

Reference information for KubeStatefulSetUpdateNotRolledOut used as part of Pulse in CDP Private Cloud Data Services.

### Summary

StatefulSet update has not been rolled out.

### PromQL Expression

```
max without (revision) ( kube_statefulset_status_current_revision{component="kube-
state-metrics",appType="{{ $app.code }}" } unless
kube_statefulset_status_update_revision{component="kube-state-
metrics",appType="{{ $app.code }}" } ) * ( kube_statefulset_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_statefulset_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" } )
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeDaemonSetRolloutStuck

Reference information for KubeDaemonSetRolloutStuck used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet rollout is stuck.

**PromQL Expression**

```
kube_daemonset_status_number_ready{component="kube-state-
metrics",appType="{{ $app.code }}" } /
kube_daemonset_status_desired_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } < 1.00
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeContainerWaiting

Reference information for KubeContainerWaiting used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Pod container waiting longer than 1 hour

**PromQL Expression**

```
sum by (namespace, pod, container, appType, appId, appName, workloadId)
(kube_pod_container_status_waiting_reason{component="kube-state-
metrics",appType="{{ $app.code }}"}) > 0
```

**Time Period**

1h

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDaemonSetNotScheduled

Reference information for KubeDaemonSetNotScheduled used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

DaemonSet pods are not scheduled.

**PromQL Expression**

```
kube_daemonset_status_desired_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } -
kube_daemonset_status_current_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

10m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDaemonSetMisScheduled

Reference information for KubeDaemonSetMisScheduled used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet pods are misscheduled.

### PromQL Expression

```
kube_daemonset_status_number_misscheduled{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeCronJobRunning

Reference information for KubeCronJobRunning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

CronJob did not complete in time

### PromQL Expression

```
time() - kube_cronjob_next_schedule_time{component="kube-state-metrics",appType="{{ $app.code }}" } > 3600
```

### Time Period

1h

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeJobCompletion

Reference information for KubeJobCompletion used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Job did not complete in time

### PromQL Expression

```
kube_job_spec_completions{component="kube-state-metrics",appType="{{ $app.code }}" } -  
kube_job_status_succeeded{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

### Time Period

1h

### Severity

critical



**Source**

```
environments/{{ $app.code }}
```

## KubeJobFailed

Reference information for KubeJobFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Job failed to complete.

**PromQL Expression**

```
kube_job_failed{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

```
environments/{{ $app.code }}
```

## KubeHpaReplicasMismatch

Reference information for KubeHpaReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

HPA has not matched desired number of replicas.

**PromQL Expression**

```
(kube_horizontalpodautoscaler_status_desired_replicas{component="kube-state-metrics",appType="{{ $app.code }}" } !=  
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-metrics",appType="{{ $app.code }}"}) and  
changes(kube_horizontalpodautoscaler_status_current_replicas{appType="{{ $app.code }}" }  
[15m]) == 0
```

**Time Period**

15m

**Severity**

critical

**Source**

```
environments/{{ $app.code }}
```

## KubeHpaMaxedOut

Reference information for KubeHpaMaxedOut used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

HPA is running at max replicas

**PromQL Expression**

```
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-metrics",appType="{{ $app.code }}" } ==
```

```
kube_horizontalpodautoscaler_spec_max_replicas{component="kube-state-
metrics",appType="{{ $app.code }}"}
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeQuotaExceeded

Reference information for KubeQuotaExceeded used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Namespace quota has exceeded the limits.

**PromQL Expression**

```
kube_resourcequota{component="kube-state-metrics", type="used",appType="{{ $app.code }}" } /
ignoring(instance, job, type) (kube_resourcequota{component="kube-state-metrics",
type="hard",appType="{{ $app.code }}" } > 0) > 0.90
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## MonitoringPlatformTopologyConfigurationDurationHigh

Reference information for MonitoringPlatformTopologyConfigurationDurationHigh used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

The avg monitoring platform reconfiguration time is longer than 5 minutes

**PromQL Expression**

```
rate(monitring_platform_topology_configuration_duration_seconds_sum[10m]) /
rate(monitring_platform_topology_configuration_duration_seconds_count[10m]) > 300
```

**Time Period**

15m

**Severity**

warning

**Source**

controlplane/

## MonitoringPlatformUpgradeFailed

Reference information for MonitoringPlatformUpgradeFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

The monitoring components of an environment were failed to be updated to the latest version.

**PromQL Expression**

```
monitoring_platform_upgrade_failed == 1
```

**Time Period**

0s

**Severity**

critical

**Source**

controlplane/

## MonitoringPlatformProvisionFailed

Reference information for MonitoringPlatformProvisionFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Provisioning of monitoring components for an environment have failed.

**PromQL Expression**

```
monitoring_platform_provision_failed > 0
```

**Time Period**

5m

**Severity**

critical

**Source**

controlplane/

## MonitoringDbAccessUnavailable

Reference information for MonitoringDbAccessUnavailable used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Ping failed to the monitoring database.

**PromQL Expression**

```
monitoring_db_unavailable == 1
```

**Time Period**

0s

**Severity**

warning

**Source**

controlplane/

## AlertAdministrationConfigurationFailed

Reference information for AlertAdministrationConfigurationFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Alert administration configuration failed.

**PromQL Expression**

alert\_administration\_configuration\_failed == 1

**Time Period**

2m

**Severity**

critical

**Source**

controlplane/

## AlertManagerConfigurationDurationHigh

Reference information for AlertManagerConfigurationDurationHigh used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

The avg alert manager reconfiguration time is longer than 5 minutes.

**PromQL Expression**

$$\text{rate}(\text{alert\_administration\_alert\_manager\_configuration\_duration\_seconds\_sum}[10\text{m}]) / \text{rate}(\text{alert\_administration\_alert\_manager\_configuration\_duration\_seconds\_count}[10\text{m}]) > 300$$
**Time Period****Severity**

warning

**Source**

controlplane/

## AlertAdministrationTopologyStreamReceiveFailedRatioHigh

Reference information for AlertAdministrationTopologyStreamReceiveFailedRatioHigh used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Failed to receive topology stream messages.

**PromQL Expression**

$$(\text{rate}(\text{alert\_administration\_topology\_stream\_receive\_failed\_total}[5\text{m}]) / \text{rate}(\text{alert\_administration\_topology\_stream\_receive\_total}[5\text{m}])) * 100 > 10$$
**Time Period**

5m

**Severity**

warning

**Source**

controlplane/

## AlertAdministrationBuiltInRuleLoadingFailed

Reference information for AlertAdministrationBuiltInRuleLoadingFailed used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Failed to load built-in alert rules

### PromQL Expression

alert\_administration\_built\_in\_rule\_loading\_failed == 1

### Time Period

0s

### Severity

critical

### Source

controlplane/

## AlertAdministrationCmImportFailed

Reference information for AlertAdministrationCmImportFailed used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Failed to import CM alert settings

### PromQL Expression

alert\_administration\_cm\_import\_failed == 1

### Time Period

0s

### Severity

warning

### Source

controlplane/

## AlertRuleConfigurationDurationHigh

Reference information for AlertRuleConfigurationDurationHigh used as part of Pulse in CDP Private Cloud Data Services.

### Summary

The avg alert rule reconfiguration time is longer than 5 minutes.

### PromQL Expression

```
rate(alert_administration_alert_rules_configuration_duration_seconds_sum[10m]) /
rate(alert_administration_alert_rules_configuration_duration_seconds_count[10m]) > 300
```

**Time Period**

0s

**Severity**

warning

**Source**

controlplane/

## PrometheusConfigmapReloadFailed

Reference information for PrometheusConfigmapReloadFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Configmap reloader in Prometheus pod is failing to load the updated configmap.

**PromQL Expression**

```
configmap_reload_last_reload_error == 1
```

**Time Period**

30s

**Severity**

critical

**Source**

environments/infra

## EnvironmentPrometheusConnectionCheckFailed

Reference information for EnvironmentPrometheusConnectionCheckFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Environment Prometheus is inaccessible from Control Plane.

**PromQL Expression**

```
platform_environment_prometheus_connection_request_failed > 0
```

**Time Period**

5m

**Severity**

warning

**Source**

controlplane/

## PrometheusNotConnectedToAlertmanager

Reference information for PrometheusNotConnectedToAlertmanager used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus is not connected to alertmanager

**PromQL Expression**

`max_over_time(prometheus_notifications_alertmanagers_discovered[5m]) < 1`

**Time Period**

10m

**Severity**

critical

**Source**

environments/infra

## PrometheusAlertmanagerNotificationFailing

Reference information for PrometheusAlertmanagerNotificationFailing used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Alertmanager is failing to send notifications

**PromQL Expression**

`rate(alertmanager_notifications_failed_total[10m]) > 0`

**Time Period**

0s

**Severity**

critical

**Source**

environments/infra

## PrometheusAlertmanagerConfigurationReloadFailure

Reference information for PrometheusAlertmanagerConfigurationReloadFailure used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Alertmanager is failing to reload configuration

**PromQL Expression**

`alertmanager_config_last_reload_successful != 1`

**Time Period**

0s

**Severity**

warning

**Source**

environments/infra

## ControlPlanePrometheusBadConfig

Reference information for ControlPlanePrometheusBadConfig used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Failed Prometheus configuration reload.

### PromQL Expression

`max_over_time(prometheus_config_last_reload_successful[5m]) == 0`

### Time Period

10m

### Severity

critical

### Source

controlplane/

## ControlPlanePrometheusNotificationQueueRunningFull

Reference information for ControlPlanePrometheusNotificationQueueRunningFull used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus alert notification queue predicted to run full in less than 30m.

### PromQL Expression

`( predict_linear(prometheus_notifications_queue_length[5m], 60 * 30) > min_over_time(prometheus_notifications_queue_capacity[5m]) )`

### Time Period

15m

### Severity

warning

### Source

controlplane/

## ControlPlanePrometheusErrorSendingAlertsToSomeAlertmanagers

Reference information for ControlPlanePrometheusErrorSendingAlertsToSomeAlertmanagers used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has encountered more than 1% errors sending alerts to a specific Alertmanager.

### PromQL Expression

`( rate(prometheus_notifications_errors_total[5m]) / rate(prometheus_notifications_sent_total[5m]) ) * 100 > 1`

### Time Period

15m



**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusErrorSendingAlertsToAnyAlertmanager

Reference information for ControlPlanePrometheusErrorSendingAlertsToAnyAlertmanager used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus encounters more than 3% errors sending alerts to any Alertmanager.

**PromQL Expression**

```
min without (alertmanager) ( rate(prometheus_notifications_errors_total{alertmanager!~``}[5m]) /
rate(prometheus_notifications_sent_total{alertmanager!~``}[5m]) ) * 100 > 3
```

**Time Period**

15m

**Severity**

critical

**Source**

controlplane/

## ControlPlanePrometheusTSDBReloadsFailing

Reference information for ControlPlanePrometheusTSDBReloadsFailing used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has issues reloading blocks from disk.

**PromQL Expression**

```
increase(prometheus_tsdb_reloads_failures_total[3h]) > 0
```

**Time Period**

4h

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusTSDBCompactionsFailing

Reference information for ControlPlanePrometheusTSDBCompactionsFailing used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has issues compacting blocks.

**PromQL Expression**

```
increase(prometheus_tsdb_compactions_failed_total[3h]) > 0
```

**Time Period**

4h

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusNotIngestingSamples

Reference information for ControlPlanePrometheusNotIngestingSamples used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus is not ingesting samples.

**PromQL Expression**

```
( rate(prometheus_tsdb_head_samples_appended_total[5m]) <= 0 and ( sum without(scrape_job)
(prometheus_target_metadata_cache_entries) > 0 or sum without(rule_group)
(prometheus_rule_group_rules) > 0 ) )
```

**Time Period**

10m

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusDuplicateTimestamps

Reference information for ControlPlanePrometheusDuplicateTimestamps used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus is dropping samples with duplicate timestamps.

**PromQL Expression**

```
rate(prometheus_target_scrapes_sample_duplicate_timestamp_total[5m]) > 0
```

**Time Period**

10m

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusOutOfOrderTimestamps

Reference information for ControlPlanePrometheusOutOfOrderTimestamps used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus drops samples with out-of-order timestamps.

### PromQL Expression

$\text{rate}(\text{prometheus\_target\_scrapes\_sample\_out\_of\_order\_total}[5\text{m}]) > 0$

### Time Period

10m

### Severity

warning

### Source

controlplane/

## ControlPlanePrometheusRemoteStorageFailures

Reference information for ControlPlanePrometheusRemoteStorageFailures used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus fails to send samples to remote storage.

### PromQL Expression

$(\text{rate}(\text{prometheus\_remote\_storage\_samples\_failed\_total}[5\text{m}]) / (\text{rate}(\text{prometheus\_remote\_storage\_samples\_failed\_total}[5\text{m}]) + \text{rate}(\text{prometheus\_remote\_storage\_samples\_total}[5\text{m}])) * 100 > 1$

### Time Period

0s

### Severity

critical

### Source

controlplane/

## ControlPlanePrometheusRemoteWriteBehind

Reference information for ControlPlanePrometheusRemoteWriteBehind used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus remote write is behind.

### PromQL Expression

$(\text{max\_over\_time}(\text{prometheus\_remote\_storage\_highest\_timestamp\_in\_seconds}[5\text{m}]) - \text{ignoring}(\text{remote\_name}, \text{url}) \text{ group\_right } \text{max\_over\_time}(\text{prometheus\_remote\_storage\_queue\_highest\_sent\_timestamp\_seconds}[5\text{m}])) > 120$

### Time Period

0s

**Severity**

critical

**Source**

controlplane/

## ControlPlanePrometheusRemoteWriteDesiredShards

Reference information for ControlPlanePrometheusRemoteWriteDesiredShards used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus remote write desired shards calculation wants to run more than configured max shards.

### PromQL Expression

```
( max_over_time(prometheus_remote_storage_shards_desired[5m]) >
max_over_time(prometheus_remote_storage_shards_max[5m]) )
```

### Time Period

15m

### Severity

warning

### Source

controlplane/

## ControlPlanePrometheusPrometheusRuleFailures

Reference information for ControlPlanePrometheusPrometheusRuleFailures used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus is failing rule evaluations.

### PromQL Expression

```
increase(prometheus_rule_evaluation_failures_total[5m]) > 0
```

### Time Period

15m

### Severity

critical

### Source

controlplane/

## ControlPlanePrometheusMissingRuleEvaluations

Reference information for ControlPlanePrometheusMissingRuleEvaluations used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus is missing rule evaluations due to slow rule group evaluation.

**PromQL Expression**

```
increase(prometheus_rule_group_iterations_missed_total[5m]) > 0
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
controlplane/
```

## ControlPlanePrometheusTargetLimitHit

Reference information for ControlPlanePrometheusTargetLimitHit used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has dropped targets because some scrape configs have exceeded the targets limit.

**PromQL Expression**

```
increase(prometheus_target_scrape_pool_exceeded_target_limit_total[5m]) > 0
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
controlplane/
```

## ControlPlanePrometheusLabelLimitHit

Reference information for ControlPlanePrometheusLabelLimitHit used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has dropped targets because some scrape configs have exceeded the labels limit.

**PromQL Expression**

```
increase(prometheus_target_scrape_pool_exceeded_label_limits_total[5m]) > 0
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
controlplane/
```

## ControlPlanePrometheusScrapeBodySizeLimitHit

Reference information for ControlPlanePrometheusScrapeBodySizeLimitHit used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has dropped some targets that exceeded body size limit.

**PromQL Expression**

`increase(prometheus_target_scrapes_exceeded_body_size_limit_total[5m]) > 0`

**Time Period**

15m

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusScrapeSampleLimitHit

Reference information for ControlPlanePrometheusScrapeSampleLimitHit used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has failed scrapes that have exceeded the configured sample limit.

**PromQL Expression**

`increase(prometheus_target_scrapes_exceeded_sample_limit_total[5m]) > 0`

**Time Period**

15m

**Severity**

warning

**Source**

controlplane/

## ControlPlanePrometheusTargetSyncFailure

Reference information for ControlPlanePrometheusTargetSyncFailure used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has failed to sync targets.

**PromQL Expression**

`increase(prometheus_target_sync_failed_total[30m]) > 0`

**Time Period**

5m

**Severity**

critical

**Source**

controlplane/

## PrometheusRemoteWriteConfigurationDurationHigh

Reference information for PrometheusRemoteWriteConfigurationDurationHigh used as part of Pulse in CDP Private Cloud Data Services.

### Summary

The avg prometheus remote-write reconfiguration time is longer than 5 minutes

### PromQL Expression

```
rate(remote_write_reconcile_duration_seconds_sum[10m]) /
rate(remote_write_reconcile_duration_seconds_count[10m]) > 300
```

### Time Period

15m

### Severity

warning

### Source

controlplane/

## RemoteWriteConfigurationFailed

Reference information for RemoteWriteConfigurationFailed used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Remote-write configuration failed.

### PromQL Expression

```
max_over_time(monitored_remote_write_configuration_failed[2m]) > 0
```

### Time Period

0s

### Severity

critical

### Source

controlplane/

## TargetDown

Reference information for TargetDown used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Target Down

### PromQL Expression

```
100 * (count(up == 0) BY (job, namespace, service, appType, appName) / count(up) BY (job,
namespace, service, appType, appName)) > 10
```

### Time Period

10m

### Severity

warning

**Source**

environments/de

## DataLakeClusterHealthIsBad

Reference information for DataLakeClusterHealthIsBad used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Data lake cluster health is bad

### PromQL Expression

cm\_cluster\_health == 7

### Time Period

0s

### Severity

critical

### Source

environments/

## DataLakeClusterHealthIsConcerning

Reference information for DataLakeClusterHealthIsConcerning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Data lake cluster health is concerning

### PromQL Expression

cm\_cluster\_health == 6

### Time Period

0s

### Severity

warning

### Source

environments/

## DataLakeClusterIsStopped

Reference information for DataLakeClusterIsStopped used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Data lake cluster health is stopped

### PromQL Expression

cm\_cluster\_health == 3 or cm\_cluster\_health == 4

### Time Period

0s



**Severity**

warning

**Source**

environments/

## DataLakeDidNotStart

Reference information for DataLakeDidNotStart used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Data lake cluster did not start

**PromQL Expression**

cm\_cluster\_health == 2

**Time Period**

15m

**Severity**

warning

**Source**

environments/

## DataLakeHealthUnknownOrDisabled

Reference information for DataLakeHealthUnknownOrDisabled used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Data lake cluster health is unknown or disabled

**PromQL Expression**

cm\_cluster\_health == 0 or cm\_cluster\_health == 1

**Time Period**

10m

**Severity**

warning

**Source**

environments/

## HiveJvmPauseTimeCritical

Reference information for HiveJvmPauseTimeCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Hive JVM GC pause time critical

**PromQL Expression**

sum(increase(jvm\_gc\_collection\_seconds\_sum{appType="dw"}[300s])) without (gc) / 3 &gt;= 20

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## HiveJvmPauseTimeWarning

Reference information for HiveJvmPauseTimeWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Hive JVM GC pause time warning

**PromQL Expression**

$$\text{sum}(\text{increase}(\text{jvm\_gc\_collection\_seconds\_sum}\{\text{appType}=\text{"dw"}\}[300\text{s}])) \text{ without } (\text{gc}) / 3 > 10$$
**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## HiveJvmThreadsDeadlocked

Reference information for HiveJvmThreadsDeadlocked used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Hive JVM threads deadlocked

**PromQL Expression**

$$\text{jvm\_threads\_deadlocked} > 0$$
**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## HiveJvmHeapPercentCritical

Reference information for HiveJvmHeapPercentCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Hive JVM heap percent critical

**PromQL Expression**

$$100 * \text{jvm\_memory\_bytes\_used}\{\text{appType}=\text{"dw"}\} / (\text{jvm\_memory\_bytes\_max}\{\text{appType}=\text{"dw"}\} > 0) > 95$$
**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## HiveJvmHeapPercentWarning

Reference information for HiveJvmHeapPercentWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Hive JVM heap percent warning

**PromQL Expression**

$$100 * \text{jvm\_memory\_bytes\_used}\{\text{appType}=\text{"dw"}\} / (\text{jvm\_memory\_bytes\_max}\{\text{appType}=\text{"dw"}\} > 0) > 80$$
**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## LargeNumberOfCompactionFailuresWarning

Reference information for LargeNumberOfCompactionFailuresWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Large number of compaction failures

**PromQL Expression**

$$\begin{aligned} & (\text{max}(\text{compaction\_num\_failed}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) + \\ & \text{max}(\text{compaction\_num\_attempted}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName})) / \\ & (\text{max}(\text{compaction\_num\_failed}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) + \\ & \text{max}(\text{compaction\_num\_attempted}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) + \\ & \text{max}(\text{compaction\_num\_succeeded}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName})) > .01 \end{aligned}$$
**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## OldestInitiatedCompactionPassedThresholdWarning

Reference information for OldestInitiatedCompactionPassedThresholdWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Oldest initiated compaction passed threshold

**PromQL Expression**

`12 * 3600 >= max(compaction_oldest_enqueue_age_in_sec{appType="dw"}) by (appId, appName, namespace, service) > 3600`

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## OldestInitiatedCompactionPassedThresholdError

Reference information for OldestInitiatedCompactionPassedThresholdError used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Oldest initiated compaction passed threshold

**PromQL Expression**

`max(compaction_oldest_enqueue_age_in_sec{appType="dw"}) by (appId, appName) > 12 * 3600`

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## OldestReadyForCleaningCompactionPassedThresholdWarning

Reference information for OldestReadyForCleaningCompactionPassedThresholdWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Oldest uncleaned compaction passed threshold

**PromQL Expression**

`max(oldest_ready_for_cleaning_age_in_sec{appType="dw"}) by (appId, appName) > 24 * 3600`

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## OldAbortedTransactionNotClearedWarning

Reference information for OldAbortedTransactionNotClearedWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Old aborted transaction not cleared

### PromQL Expression

$48 * 3600 \geq \max(\text{oldest\_aborted\_txn\_age\_in\_sec}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) > 24 * 3600$

### Time Period

0s

### Severity

warning

### Source

environments/dw

## OldAbortedTransactionNotClearedCritical

Reference information for OldAbortedTransactionNotClearedCritical used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Old aborted transaction not cleared

### PromQL Expression

$\max(\text{oldest\_aborted\_txn\_age\_in\_sec}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) > 48 * 3600$

### Time Period

0s

### Severity

critical

### Source

environments/dw

## PartitionsWithManyAbortsCritical

Reference information for PartitionsWithManyAbortsCritical used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Tables/partitions with many aborts

### PromQL Expression

$\max(\text{tables\_with\_x\_aborted\_transactions}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) > 0$

### Time Period

0s

### Severity

critical

**Source**

environments/dw

## OldestOpenNonReplTransactionPassedThresholdWarning

Reference information for OldestOpenNonReplTransactionPassedThresholdWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Oldest open transaction passed threshold

### PromQL Expression

$3 * 24 * 3600 \geq \max(\text{oldest\_open\_non\_repl\_txn\_age\_in\_sec}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) > 24 * 3600$

### Time Period

0s

### Severity

warning

### Source

environments/dw

## OldestOpenNonReplTransactionPassedThresholdCritical

Reference information for OldestOpenNonReplTransactionPassedThresholdCritical used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Oldest open transaction passed threshold

### PromQL Expression

$\max(\text{oldest\_open\_non\_repl\_txn\_age\_in\_sec}\{\text{appType}=\text{"dw"}\}) \text{ by } (\text{appId}, \text{appName}) > 3 * 24 * 3600$

### Time Period

0s

### Severity

critical

### Source

environments/dw

## LargeNumberOfActiveDeltasWarning

Reference information for LargeNumberOfActiveDeltasWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Table/partition with large number of active delta directories

### PromQL Expression

	<code>max(compaction_num_active_deltas{appType="dw"}) by (appId, appName) &gt; 200</code>
<b>Time Period</b>	0s
<b>Severity</b>	warning
<b>Source</b>	environments/dw

## LargeNumberOfSmallDeltasWarning

Reference information for LargeNumberOfSmallDeltasWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Table/partition with large number of small delta directories

### PromQL Expression

`max(compaction_num_small_deltas{appType="dw"}) by (appId, appName) > 200`

### Time Period

0s

### Severity

warning

### Source

environments/dw

## LargeNumberOfObsoleteDeltasWarning

Reference information for LargeNumberOfObsoleteDeltasWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Table/partition with large number of obsolete delta directories

### PromQL Expression

`max(compaction_num_obsolete_deltas) by (appId, appName, namespace, service) > 200`

### Time Period

0s

### Severity

warning

### Source

environments/dw

## ExcessiveAcidMetadataCompletedTxnComponentsWarning

Reference information for ExcessiveAcidMetadataCompletedTxnComponentsWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

The COMPLETED\_TXN\_COMPONENTS metadata table is too large

**PromQL Expression**

1000000 >= max(compaction\_num\_completed\_txn\_components{appType="dw"}) by (appId, appName) > 500000

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## ExcessiveAcidMetadataCompletedTxnComponentsCritical

Reference information for ExcessiveAcidMetadataCompletedTxnComponentsCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

The COMPLETED\_TXN\_COMPONENTS metadata table is too large

**PromQL Expression**

max(compaction\_num\_completed\_txn\_components{appType="dw"}) by (appId, appName) > 1000000

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## ExcessiveAcidMetadataTxnToWriteIdWarning

Reference information for ExcessiveAcidMetadataTxnToWriteIdWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

The TXN\_TO\_WRITE\_ID metadata table is too large

**PromQL Expression**

1000000 >= max(compaction\_num\_txn\_to\_writeid{appType="dw"}) by (appId, appName) > 500000

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw



## ExcessiveAcidMetadataTxnToWriteIdCritical

Reference information for ExcessiveAcidMetadataTxnToWriteIdCritical used as part of Pulse in CDP Private Cloud Data Services.

### Summary

The TXN\_TO\_WRITE\_ID metadata table is too large

### PromQL Expression

`max(compaction_num_txn_to_writeid{appType="dw"}) by (appId, appName) > 1000000`

### Time Period

0s

### Severity

critical

### Source

environments/dw

## ActivityOnTableWithDisabledAutoCompactionWarning

Reference information for ActivityOnTableWithDisabledAutoCompactionWarning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Activity on table with disabled auto-compaction

### PromQL Expression

`sum(increase(num_writes_to_disabled_compaction_table{appType="dw"}[24h])) by (appId, appName) > 0`

### Time Period

0s

### Severity

warning

### Source

environments/dw

## ExcessiveInitiatorFailuresInTheLast24hError

Reference information for ExcessiveInitiatorFailuresInTheLast24hError used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Compactor initiation failures in the last 24h

### PromQL Expression

`sum(increase(compaction_initiator_failure_counter[24h])) by (appId, appName, namespace, service) >= 5`

### Time Period

0s

**Severity**

critical

**Source**

environments/dw

## ExcessiveCleanerFailuresInTheLast24hWarning

Reference information for ExcessiveCleanerFailuresInTheLast24hWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Compactor cleaner failures in the last 24h

**PromQL Expression**

```
5 > sum(increase(compaction_cleaner_failure_counter[24h])) by (appId, appName, namespace, service) >= 2
```

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## ExcessiveCleanerFailuresInTheLast24hCritical

Reference information for ExcessiveCleanerFailuresInTheLast24hCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Compactor cleaner failures in the last 24h

**PromQL Expression**

```
sum(increase(compaction_cleaner_failure_counter[24h])) by (appId, appName, namespace, service) >= 5
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## LongRunningInitiatorCycleWarning

Reference information for LongRunningInitiatorCycleWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Long Running Initiator Cycle

**PromQL Expression**

```
12 * 3600 * 1000 >= max(compaction_initiator_cycle_duration) by (appId, appName, namespace, service) > 6 * 3600 * 1000
```

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## LongRunningInitiatorCycleCritical

Reference information for LongRunningInitiatorCycleCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Long Running Initiator Cycle

**PromQL Expression**

```
max(compaction_initiator_cycle_duration) by (appId, appName, namespace, service) > 12 * 3600 * 1000
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## ImpalaJvmPauseTimeCritical

Reference information for ImpalaJvmPauseTimeCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala JVM pause time critical

**PromQL Expression**

```
increase(impala_jvm_gc_total_extra_sleep_time_millis{appType="dw"}[5m]) / 1000 >= 60
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## ImpalaJvmGcTimeCritical

Reference information for ImpalaJvmGcTimeCritical used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala JVM GC pause time critical

**PromQL Expression**

`increase(impala_jvm_gc_time_millis{appType="dw"}[5m]) / 1000 >= 60`

**Time Period**

0s

**Severity**

critical

**Source**

environments/dw

## ImpalaJvmPauseTimeWarning

Reference information for ImpalaJvmPauseTimeWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala JVM pause time warning

**PromQL Expression**

`increase(impala_jvm_gc_total_extra_sleep_time_millis{appType="dw"}[5m]) >= 30000 and  
increase(impala_jvm_gc_total_extra_sleep_time_millis{appType="dw"}[5m]) < 60000`

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## ImpalaJvmGcTimeWarning

Reference information for ImpalaJvmGcTimeWarning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala JVM GC pause time warning

**PromQL Expression**

`increase(impala_jvm_gc_time_millis{appType="dw"}[5m]) >= 30000 and  
increase(impala_jvm_gc_time_millis{appType="dw"}[5m]) < 60000`

**Time Period**

0s

**Severity**

warning

**Source**

environments/dw

## ImpalaCatalogTimedOutCnxnRequest

Reference information for ImpalaCatalogTimedOutCnxnRequest used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Impala catalog timed out cnxn request

### PromQL Expression

`rate(impala_thrift_server_CatalogService_timedout_cnxn_requests{appType="dw"}[2m]) > 1`

### Time Period

5m

### Severity

warning

### Source

environments/dw

## ImpalaStatestoreTimedOutCnxnRequest

Reference information for ImpalaStatestoreTimedOutCnxnRequest used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Impala statestore timed out cnxn request

### PromQL Expression

`rate(impala_thrift_server_StatestoreService_timedout_cnxn_requests{appType="dw"}[2m]) > 1`

### Time Period

5m

### Severity

warning

### Source

environments/dw

## ImpalaBackendTimedOutCnxnRequest

Reference information for ImpalaBackendTimedOutCnxnRequest used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Impala backend timed out cnxn request

### PromQL Expression

`rate(impala_thrift_server_backend_timedout_cnxn_requests{appType="dw"}[2m]) > 1`

### Time Period

5m

### Severity

warning

**Source**

environments/dw

## ImpalaHs2FrontendTimedOutCnxnRequest

Reference information for ImpalaHs2FrontendTimedOutCnxnRequest used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala hs2 frontend timed out cnxn request

**PromQL Expression**

$$\text{rate}(\text{impala\_thrift\_server\_hiveserver2\_frontend\_timedout\_cnxn\_requests}\{\text{appType}=\text{"dw"}\}[2\text{m}]) > 1$$
**Time Period**

5m

**Severity**

warning

**Source**

environments/dw

## ImpalaHs2HttpFrontendTimedOutCnxnRequest

Reference information for ImpalaHs2HttpFrontendTimedOutCnxnRequest used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Impala hs2 http frontend timed out cnxn request

**PromQL Expression**

$$\text{rate}(\text{impala\_thrift\_server\_hiveserver2\_http\_frontend\_timedout\_cnxn\_requests}\{\text{appType}=\text{"dw"}\}[2\text{m}]) > 1$$
**Time Period**

5m

**Severity**

warning

**Source**

environments/dw

## PrometheusNotConnectedToAlertmanager

Reference information for PrometheusNotConnectedToAlertmanager used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus is not connected to alertmanager

**PromQL Expression**

$$\text{max\_over\_time}(\text{prometheus\_notifications\_alertmanagers\_discovered}[5\text{m}]) < 1$$
**Time Period**

	10m
<b>Severity</b>	critical
<b>Source</b>	environments/infra

## PrometheusAlertmanagerNotificationFailing

Reference information for PrometheusAlertmanagerNotificationFailing used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Alertmanager is failing to send notifications

### PromQL Expression

`rate(alertmanager_notifications_failed_total[10m]) > 0`

### Time Period

0s

### Severity

critical

### Source

environments/infra

## PrometheusAlertmanagerConfigurationReloadFailure

Reference information for PrometheusAlertmanagerConfigurationReloadFailure used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Alertmanager is failing to reload configuration

### PromQL Expression

`alertmanager_config_last_reload_successful != 1`

### Time Period

0s

### Severity

warning

### Source

environments/infra

## PrometheusConfigmapReloadFailed

Reference information for PrometheusConfigmapReloadFailed used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Configmap reloader in Prometheus pod is failing to load the updated configmap.

### PromQL Expression

```
configmap_reload_last_reload_error == 1
```

**Time Period**

```
30s
```

**Severity**

```
critical
```

**Source**

```
environments/infra
```

## EnvPrometheusBadConfig

Reference information for EnvPrometheusBadConfig used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

```
Failed Prometheus configuration reload.
```

**PromQL Expression**

```
max_over_time(prometheus_config_last_reload_successful[5m]) == 0
```

**Time Period**

```
10m
```

**Severity**

```
critical
```

**Source**

```
environments/infra
```

## EnvPrometheusNotificationQueueRunningFull

Reference information for EnvPrometheusNotificationQueueRunningFull used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

```
Prometheus alert notification queue predicted to run full in less than 30m.
```

**PromQL Expression**

```
( predict_linear(prometheus_notifications_queue_length[5m], 60 * 30) >
  min_over_time(prometheus_notifications_queue_capacity[5m]) )
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
environments/infra
```

## EnvPrometheusErrorSendingAlertsToSomeAlertmanagers

Reference information for EnvPrometheusErrorSendingAlertsToSomeAlertmanagers used as part of Pulse in CDP Private Cloud Data Services.

**Summary**



Prometheus has encountered more than 1% errors sending alerts to a specific Alertmanager.

**PromQL Expression**

```
( rate(prometheus_notifications_errors_total[5m]) / rate(prometheus_notifications_sent_total[5m]) ) * 100 > 1
```

**Time Period**

15m

**Severity**

warning

**Source**

environments/infra

## EnvPrometheusErrorSendingAlertsToAnyAlertmanager

Reference information for EnvPrometheusErrorSendingAlertsToAnyAlertmanager used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus encounters more than 3% errors sending alerts to any Alertmanager.

**PromQL Expression**

```
min without (alertmanager) ( rate(prometheus_notifications_errors_total{alertmanager!~`}[5m]) / rate(prometheus_notifications_sent_total{alertmanager!~`}[5m]) ) * 100 > 3
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/infra

## EnvPrometheusTSDBReloadsFailing

Reference information for EnvPrometheusTSDBReloadsFailing used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus has issues reloading blocks from disk.

**PromQL Expression**

```
increase(prometheus_tsdb_reloads_failures_total[3h]) > 0
```

**Time Period**

4h

**Severity**

warning

**Source**

environments/infra

## EnvPrometheusTSDBCompactionsFailing

Reference information for EnvPrometheusTSDBCompactionsFailing used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has issues compacting blocks.

### PromQL Expression

`increase(prometheus_tsdb_compactions_failed_total[3h]) > 0`

### Time Period

4h

### Severity

warning

### Source

environments/infra

## EnvPrometheusNotIngestingSamples

Reference information for EnvPrometheusNotIngestingSamples used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus is not ingesting samples.

### PromQL Expression

`( rate(prometheus_tsdb_head_samples_appended_total[5m]) <= 0 and ( sum without(scrape_job) (prometheus_target_metadata_cache_entries) > 0 or sum without(rule_group) (prometheus_rule_group_rules) > 0 ) )`

### Time Period

10m

### Severity

warning

### Source

environments/infra

## EnvPrometheusDuplicateTimestamps

Reference information for EnvPrometheusDuplicateTimestamps used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus is dropping samples with duplicate timestamps.

### PromQL Expression

`rate(prometheus_target_scrapes_sample_duplicate_timestamp_total[5m]) > 0`

### Time Period

10m

**Severity**

warning

**Source**

environments/infra

## EnvPrometheusOutOfOrderTimestamps

Reference information for EnvPrometheusOutOfOrderTimestamps used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus drops samples with out-of-order timestamps.

**PromQL Expression**

$$\text{rate}(\text{prometheus\_target\_scrapes\_sample\_out\_of\_order\_total}[5\text{m}]) > 0$$
**Time Period**

10m

**Severity**

warning

**Source**

environments/infra

## EnvPrometheusRemoteStorageFailures

Reference information for EnvPrometheusRemoteStorageFailures used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus fails to send samples to remote storage.

**PromQL Expression**

$$\left( \frac{\text{rate}(\text{prometheus\_remote\_storage\_samples\_failed\_total}[5\text{m}])}{\text{rate}(\text{prometheus\_remote\_storage\_samples\_failed\_total}[5\text{m}]) + \text{rate}(\text{prometheus\_remote\_storage\_samples\_total}[5\text{m}])} \right) * 100 > 1$$
**Time Period**

0s

**Severity**

critical

**Source**

environments/infra

## EnvPrometheusRemoteWriteBehind

Reference information for EnvPrometheusRemoteWriteBehind used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus remote write is behind.

**PromQL Expression**

```
( max_over_time(prometheus_remote_storage_highest_timestamp_in_seconds[5m]) -
  ignoring(remote_name, url) group_right
  max_over_time(prometheus_remote_storage_queue_highest_sent_timestamp_seconds[5m]) ) > 120
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/infra

## EnvPrometheusRemoteWriteDesiredShards

Reference information for EnvPrometheusRemoteWriteDesiredShards used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus remote write desired shards calculation wants to run more than configured max shards.

**PromQL Expression**

```
( max_over_time(prometheus_remote_storage_shards_desired[5m]) >
  max_over_time(prometheus_remote_storage_shards_max[5m]) )
```

**Time Period**

15m

**Severity**

warning

**Source**

environments/infra

## EnvPrometheusPrometheusRuleFailures

Reference information for EnvPrometheusPrometheusRuleFailures used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Prometheus is failing rule evaluations.

**PromQL Expression**

```
increase(prometheus_rule_evaluation_failures_total[5m]) > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/infra

## EnvPrometheusMissingRuleEvaluations

Reference information for EnvPrometheusMissingRuleEvaluations used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus is missing rule evaluations due to slow rule group evaluation.

### PromQL Expression

`increase(prometheus_rule_group_iterations_missed_total[5m]) > 0`

### Time Period

15m

### Severity

warning

### Source

environments/infra

## EnvPrometheusTargetLimitHit

Reference information for EnvPrometheusTargetLimitHit used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has dropped targets because some scrape configs have exceeded the targets limit.

### PromQL Expression

`increase(prometheus_target_scrape_pool_exceeded_target_limit_total[5m]) > 0`

### Time Period

15m

### Severity

warning

### Source

environments/infra

## EnvPrometheusLabelLimitHit

Reference information for EnvPrometheusLabelLimitHit used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has dropped targets because some scrape configs have exceeded the labels limit.

### PromQL Expression

`increase(prometheus_target_scrape_pool_exceeded_label_limits_total[5m]) > 0`

### Time Period

15m

### Severity

warning

### Source

environments/infra

## EnvPrometheusScrapeBodySizeLimitHit

Reference information for EnvPrometheusScrapeBodySizeLimitHit used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has dropped some targets that exceeded body size limit.

### PromQL Expression

`increase(prometheus_target_scrapes_exceeded_body_size_limit_total[5m]) > 0`

### Time Period

15m

### Severity

warning

### Source

environments/infra

## EnvPrometheusScrapeSampleLimitHit

Reference information for EnvPrometheusScrapeSampleLimitHit used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has failed scrapes that have exceeded the configured sample limit.

### PromQL Expression

`increase(prometheus_target_scrapes_exceeded_sample_limit_total[5m]) > 0`

### Time Period

15m

### Severity

warning

### Source

environments/infra

## EnvPrometheusTargetSyncFailure

Reference information for EnvPrometheusTargetSyncFailure used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Prometheus has failed to sync targets.

### PromQL Expression

`increase(prometheus_target_sync_failed_total[30m]) > 0`

### Time Period

5m

### Severity

critical

**Source**

environments/infra

## KubePodCrashLooping

Reference information for KubePodCrashLooping used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Pod is crash looping.

**PromQL Expression**

```
rate(kube_pod_container_status_restarts_total{component="kube-state-metrics",appType="{{ $app.code }}"}[15m]) > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubePodNotReady

Reference information for KubePodNotReady used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Pod has been in a non-ready state for more than 15 minutes.

**PromQL Expression**

```
sum by (namespace, pod, appType, appId, appName, workloadId) (max by(namespace, pod, owner_kind, appType, appId, appName, workloadId) (kube_pod_status_phase{component="kube-state-metrics", phase=~"Pending|Unknown",appType="{{ $app.code }}"}) * on(namespace, pod) group_left(owner_kind) max by(namespace, pod, owner_kind, appType, appId, appName, workloadId) (kube_pod_owner{owner_kind!="Job",appType="{{ $app.code }}"})) > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDeploymentGenerationMismatch

Reference information for KubeDeploymentGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Deployment generation mismatch due to possible roll-back

**PromQL Expression**

```
kube_deployment_status_observed_generation{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_deployment_metadata_generation{component="kube-state-
metrics",appType="{{ $app.code }}" }
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDeploymentReplicasMismatch

Reference information for KubeDeploymentReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Deployment has not matched the expected number of replicas.

**PromQL Expression**

```
( kube_deployment_spec_replicas{component="kube-state-metrics",appType="{{ $app.code }}" } !
= kube_deployment_status_replicas_available{component="kube-state-
metrics",appType="{{ $app.code }}" } ) and
( changes(kube_deployment_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" }[5m]) == 0 )
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeStatefulSetReplicasMismatch

Reference information for KubeStatefulSetReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Deployment has not matched the expected number of replicas.

**PromQL Expression**

```
( kube_statefulset_status_replicas_ready{component="kube-state-
metrics",appType="{{ $app.code }}" } != kube_statefulset_status_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } ) and
( changes(kube_statefulset_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" }[5m]) == 0 )
```

**Time Period**

15m

**Severity**



	critical
<b>Source</b>	environments/{{ \$app.code }}

## KubeStatefulSetGenerationMismatch

Reference information for KubeStatefulSetGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

StatefulSet generation mismatch due to possible roll-back

### PromQL Expression

```
kube_statefulset_status_observed_generation{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_statefulset_metadata_generation{component="kube-state-
metrics",appType="{{ $app.code }}" }
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeStatefulSetUpdateNotRolledOut

Reference information for KubeStatefulSetUpdateNotRolledOut used as part of Pulse in CDP Private Cloud Data Services.

### Summary

StatefulSet update has not been rolled out.

### PromQL Expression

```
max without (revision) ( kube_statefulset_status_current_revision{component="kube-
state-metrics",appType="{{ $app.code }}" } unless
kube_statefulset_status_update_revision{component="kube-state-
metrics",appType="{{ $app.code }}" } ) * ( kube_statefulset_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_statefulset_status_replicas_updated{component="kube-state-
metrics",appType="{{ $app.code }}" } )
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeDaemonSetRolloutStuck

Reference information for KubeDaemonSetRolloutStuck used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet rollout is stuck.

### PromQL Expression

```
kube_daemonset_status_number_ready{component="kube-state-
metrics",appType="{{ $app.code }}" } /
kube_daemonset_status_desired_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } < 1.00
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeContainerWaiting

Reference information for KubeContainerWaiting used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Pod container waiting longer than 1 hour

### PromQL Expression

```
sum by (namespace, pod, container, appType, appId, appName, workloadId)
(kube_pod_container_status_waiting_reason{component="kube-state-
metrics",appType="{{ $app.code }}"}) > 0
```

### Time Period

1h

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeDaemonSetNotScheduled

Reference information for KubeDaemonSetNotScheduled used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet pods are not scheduled.

### PromQL Expression

```
kube_daemonset_status_desired_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } -
kube_daemonset_status_current_number_scheduled{component="kube-state-
metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

10m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeDaemonSetMisScheduled

Reference information for KubeDaemonSetMisScheduled used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

DaemonSet pods are misscheduled.

**PromQL Expression**

```
kube_daemonset_status_number_misscheduled{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeCronJobRunning

Reference information for KubeCronJobRunning used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

CronJob did not complete in time

**PromQL Expression**

```
time() - kube_cronjob_next_schedule_time{component="kube-state-metrics",appType="{{ $app.code }}" } > 3600
```

**Time Period**

1h

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeJobCompletion

Reference information for KubeJobCompletion used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Job did not complete in time

**PromQL Expression**

```
kube_job_spec_completions{component="kube-state-metrics",appType="{{ $app.code }}" } -
kube_job_status_succeeded{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

1h

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeJobFailed

Reference information for KubeJobFailed used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Job failed to complete.

**PromQL Expression**

```
kube_job_failed{component="kube-state-metrics",appType="{{ $app.code }}" } > 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeHpaReplicasMismatch

Reference information for KubeHpaReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

HPA has not matched desired number of replicas.

**PromQL Expression**

```
(kube_horizontalpodautoscaler_status_desired_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } !=
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" }) and
changes(kube_horizontalpodautoscaler_status_current_replicas{appType="{{ $app.code }}" }
[15m]) == 0
```

**Time Period**

15m

**Severity**

critical

**Source**

environments/{{ \$app.code }}

## KubeHpaMaxedOut

Reference information for KubeHpaMaxedOut used as part of Pulse in CDP Private Cloud Data Services.

### Summary

HPA is running at max replicas

### PromQL Expression

```
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" } ==
kube_horizontalpodautoscaler_spec_max_replicas{component="kube-state-
metrics",appType="{{ $app.code }}" }
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## KubeQuotaExceeded

Reference information for KubeQuotaExceeded used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Namespace quota has exceeded the limits.

### PromQL Expression

```
kube_resourcequota{component="kube-state-metrics", type="used",appType="{{ $app.code }}" } /
ignoring(instance, job, type) (kube_resourcequota{component="kube-state-metrics",
type="hard",appType="{{ $app.code }}" } > 0) > 0.90
```

### Time Period

15m

### Severity

critical

### Source

environments/{{ \$app.code }}

## OzoneUnhealthy

Reference information for OzoneUnhealthy used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Ozone Unhealthy

### PromQL Expression

```
cm_service_health{service_type="OZONE"} != 2
```

### Time Period

10m

**Severity**

warning

**Source**

environments/infra

## MachineLearningKubernetesCriticalPodCrashLooping

Reference information for MachineLearningKubernetesCriticalPodCrashLooping used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Critical Machine Learning Pod is crash looping

**PromQL Expression**

```
increase(kube_pod_container_status_restarts_total{pod=~"{ .Values.alerts.mlCriticalPodsRegexp }"}, appType="ml") [15m] > 2
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/ml

## MachineLearningKubernetesNonCriticalPodCrashLooping

Reference information for MachineLearningKubernetesNonCriticalPodCrashLooping used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning Pod is crash looping

**PromQL Expression**

```
increase(kube_pod_container_status_restarts_total{pod! ~"{ .Values.alerts.mlCriticalPodsRegexp }"}, appType="ml") [15m] > 2
```

**Time Period**

0s

**Severity**

warning

**Source**

environments/ml

## MachineLearningKubernetesCriticalPodNotHealthy

Reference information for MachineLearningKubernetesCriticalPodNotHealthy used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning Pod has been in a non-ready state for longer than an hour

**PromQL Expression**

```
min_over_time(sum by (namespace, pod) (kube_pod_status_phase{phase=~"Pending|Unknown|Failed", appType="ml", pod=~"{{ .Values.alerts.mlCriticalPodsRegexp }}"})[10m:]) > 0
```

**Time Period**

0s

**Severity**

critical

**Source**

environments/ml

## MachineLearningKubernetesNonCriticalPodNotHealthy

Reference information for MachineLearningKubernetesNonCriticalPodNotHealthy used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning Pod has been in a non-ready state for longer than an hour

**PromQL Expression**

```
min_over_time(sum by (namespace, pod) (kube_pod_status_phase{phase=~"Pending|Unknown|Failed", appType="ml", pod!~"{{ .Values.alerts.mlCriticalPodsRegexp }}"})[10m:]) > 0
```

**Time Period**

0s

**Severity**

warning

**Source**

environments/ml

## MachineLearningKubeDeploymentGenerationMismatch

Reference information for MachineLearningKubeDeploymentGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning deployment generation does not match, this indicates that the Deployment has failed but has not been rolled back

**PromQL Expression**

```
kube_deployment_status_observed_generation{component="kube-state-metrics",appType="ml"} != kube_deployment_metadata_generation{component="kube-state-metrics",appType="ml"}
```

**Time Period**

15m

**Severity**

warning

**Source**

environments/ml

## MachineLearningKubeDeploymentReplicasMismatch

Reference information for MachineLearningKubeDeploymentReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning deployment has not matched the expected number of replicas

### PromQL Expression

```
( kube_deployment_spec_replicas{component="kube-state-metrics",appType="ml"} !=
kube_deployment_status_replicas_available{component="kube-state-metrics",appType="ml"} )
and ( changes(kube_deployment_status_replicas_updated{component="kube-state-
metrics",appType="ml"}[5m]) == 0 )
```

### Time Period

15m

### Severity

warning

### Source

environments/ml

## MachineLearningKubeStatefulSetReplicasMismatch

Reference information for MachineLearningKubeStatefulSetReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning StatefulSet has not matched the expected number of replicas

### PromQL Expression

```
( kube_statefulset_status_replicas_ready{component="kube-state-metrics",appType="ml"} !
= kube_statefulset_status_replicas{component="kube-state-metrics",appType="ml"} )
and ( changes(kube_statefulset_status_replicas_updated{component="kube-state-
metrics",appType="ml"}[5m]) == 0 )
```

### Time Period

15m

### Severity

warning

### Source

environments/ml

## MachineLearningKubeStatefulSetGenerationMismatch

Reference information for MachineLearningKubeStatefulSetGenerationMismatch used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning StatefulSet generation does not match, this indicates that the StatefulSet has failed but has not been rolled back

### PromQL Expression



	<code>kube_statefulset_status_observed_generation{component="kube-state-metrics",appType="ml"} != kube_statefulset_metadata_generation{component="kube-state-metrics",appType="ml"}</code>
<b>Time Period</b>	15m
<b>Severity</b>	warning
<b>Source</b>	environments/ml

## MachineLearningKubeStatefulSetUpdateNotRolledOut

Reference information for MachineLearningKubeStatefulSetUpdateNotRolledOut used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning StatefulSet update has not been rolled out

### PromQL Expression

```
max without (revision) ( kube_statefulset_status_current_revision{component="kube-state-metrics",appType="ml"} unless kube_statefulset_status_update_revision{component="kube-state-metrics",appType="ml"} ) * ( kube_statefulset_replicas{component="kube-state-metrics",appType="ml"} != kube_statefulset_status_replicas_updated{component="kube-state-metrics",appType="ml"} )
```

### Time Period

15m

### Severity

warning

### Source

environments/ml

## MachineLearningKubeDaemonSetRolloutStuck

Reference information for MachineLearningKubeDaemonSetRolloutStuck used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet rollout is stuck

### PromQL Expression

```
kube_daemonset_status_number_ready{component="kube-state-metrics",appType="ml"} / kube_daemonset_status_desired_number_scheduled{component="kube-state-metrics",appType="ml"} < 1.00
```

### Time Period

15m

### Severity

warning

### Source

environments/ml

## MachineLearningKubeContainerWaiting

Reference information for MachineLearningKubeContainerWaiting used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning container has been in waiting state for longer than 1 hour

### PromQL Expression

```
sum by (namespace, pod, container, appType, appId, appName, workloadId)
(kube_pod_container_status_waiting_reason{component="kube-state-metrics",appType="ml"}) > 0
```

### Time Period

1h

### Severity

warning

### Source

environments/ml

## MachineLearningKubeDaemonSetNotScheduled

Reference information for MachineLearningKubeDaemonSetNotScheduled used as part of Pulse in CDP Private Cloud Data Services.

### Summary

There is at least one pod in a DaemonSet that are not scheduled

### PromQL Expression

```
kube_daemonset_status_desired_number_scheduled{component="kube-state-
metrics",appType="ml"} - kube_daemonset_status_current_number_scheduled{component="kube-
state-metrics",appType="ml"} > 0
```

### Time Period

10m

### Severity

warning

### Source

environments/ml

## MachineLearningKubeDaemonSetMisScheduled

Reference information for MachineLearningKubeDaemonSetMisScheduled used as part of Pulse in CDP Private Cloud Data Services.

### Summary

DaemonSet is mis scheduled

### PromQL Expression

```
kube_daemonset_status_number_misscheduled{component="kube-state-metrics",appType="ml"} >
0
```

### Time Period

	15m
<b>Severity</b>	warning
<b>Source</b>	environments/ml

## MachineLearningKubeCronJobRunning

Reference information for MachineLearningKubeCronJobRunning used as part of Pulse in CDP Private Cloud Data Services.

### Summary

CronJob is taking more than 1h to complete

### PromQL Expression

```
time() - kube_cronjob_next_schedule_time{component="kube-state-metrics",appType="ml"} > 3600
```

### Time Period

1h

### Severity

warning

### Source

environments/ml

## MachineLearningKubeJobCompletion

Reference information for MachineLearningKubeJobCompletion used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning job is taking more than one hour to complete

### PromQL Expression

```
kube_job_spec_completions{component="kube-state-metrics",appType="ml"} - kube_job_status_succeeded{component="kube-state-metrics",appType="ml"} > 0
```

### Time Period

1h

### Severity

warning

### Source

environments/ml

## MachineLearningKubeJobFailed

Reference information for MachineLearningKubeJobFailed used as part of Pulse in CDP Private Cloud Data Services.

### Summary

Machine Learning job failed to complete

**PromQL Expression**

```
kube_job_failed{component="kube-state-metrics",appType="ml"} > 0
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
environments/ml
```

## MachineLearningKubeHpaReplicasMismatch

Reference information for MachineLearningKubeHpaReplicasMismatch used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning HPA has not matched the desired number of replicas

**PromQL Expression**

```
(kube_horizontalpodautoscaler_status_desired_replicas{component="kube-state-metrics",appType="ml"} !=
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-metrics",appType="ml"}) and
changes(kube_horizontalpodautoscaler_status_current_replicas{appType="ml"}[15m]) == 0
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
environments/ml
```

## MachineLearningKubeHpaMaxedOut

Reference information for MachineLearningKubeHpaMaxedOut used as part of Pulse in CDP Private Cloud Data Services.

**Summary**

Machine Learning HPA has been running at max replicas

**PromQL Expression**

```
kube_horizontalpodautoscaler_status_current_replicas{component="kube-state-metrics",appType="ml"} == kube_horizontalpodautoscaler_spec_max_replicas{component="kube-state-metrics",appType="ml"}
```

**Time Period**

```
15m
```

**Severity**

```
warning
```

**Source**

```
environments/ml
```