

CDP PVC Data Service alerts for version 1.5.0 of PVC-DS

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KubePodCrashLooping

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

Summary

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

PromQL Expression

```
rate(alert_administration_alert_manager_configuration_duration_seconds_sum[10m]) /  
rate(alert_administration_alert_manager_configuration_duration_seconds_count[10m]) > 300
```

Time Period

Severity

warning

Source

controlplane/

AlertAdministrationTopologyStreamReceiveFailedRatioHigh

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

Summary

Failed to receive topology stream messages.

PromQL Expression

```
(rate(alert_administration_topology_stream_receive_failed_total[5m]) /  
rate(alert_administration_topology_stream_receive_total[5m])) * 100 > 10
```

Time Period

5m

Severity

warning

Source

controlplane/

AlertAdministrationBuiltInRuleLoadingFailed

Reference information for AlertAdministrationBuiltInRuleLoadingFailed used as part of Pulse in CDP PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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/

ControlPlanePrometheusErrorSendingAlertsToSomeAlertmanager

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

Summary

Prometheus is not ingesting samples.

PromQL Expression

```
( rate(prometheus_tsdbs_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 PVC 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 PVC Data Services.

Summary

Prometheus drops samples with out-of-order timestamps.

PromQL Expression

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

Time Period

10m

Severity

warning

Source

controlplane/

ControlPlanePrometheusRemoteStorageFailures

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

Summary

Prometheus fails to send samples to remote storage.

PromQL Expression

```
( rate(prometheus_remote_storage_samples_failed_total[5m]) /
  ( rate(prometheus_remote_storage_samples_failed_total[5m]) +
    rate(prometheus_remote_storage_samples_total[5m]) ) ) * 100 > 1
```

Time Period

0s

Severity

critical

Source

controlplane/

ControlPlanePrometheusRemoteWriteBehind

Reference information for ControlPlanePrometheusRemoteWriteBehind used as part of Pulse in CDP PVC 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

controlplane/

ControlPlanePrometheusRemoteWriteDesiredShards

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

Summary

Remote-write configuration failed.

PromQL Expression

$\max_over_time(\text{monitoring_remote_write_configuration_failed}[2m]) > 0$

Time Period

0s

Severity

critical

Source

controlplane/

TargetDown

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

Summary

Target Down

PromQL Expression

$100 * (\text{count}(\text{up} == 0) \text{ BY } (\text{job}, \text{namespace}, \text{service}, \text{appType}, \text{appName}) / \text{count}(\text{up}) \text{ BY } (\text{job}, \text{namespace}, \text{service}, \text{appType}, \text{appName})) > 10$

Time Period

10m

Severity

warning

Source

environments/de

DataLakeClusterHealthIsBad

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

Summary

Data lake cluster health is bad

PromQL Expression

$\text{cm_cluster_health} == 7$

Time Period

0s

Severity

critical

Source

environments/

DataLakeClusterHealthIsConcerning

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

Summary

Hive JVM GC pause time critical

PromQL Expression

sum(increase(jvm_gc_collection_seconds_sum{appType="dw"}[300s])) without (gc) / 3 >= 20

Time Period

0s

Severity

critical

Source

environments/dw

HiveJvmPauseTimeWarning

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

Summary

Hive JVM GC pause time warning

PromQL Expression

sum(increase(jvm_gc_collection_seconds_sum{appType="dw"}[300s])) without (gc) / 3 > 10

Time Period

0s

Severity

warning

Source

environments/dw

HiveJvmThreadsDeadlocked

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

Summary

Hive JVM threads deadlocked

PromQL Expression

jvm_threads_deadlocked > 0

Time Period

0s

Severity

critical

Source

environments/dw

HiveJvmHeapPercentCritical

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

Summary

Large number of compaction failures

PromQL Expression

```
(max(compaction_num_failed{appType="dw"}) by (appId, appName) +
max(compaction_num_attempted{appType="dw"}) by (appId, appName)) /
(max(compaction_num_failed{appType="dw"}) by (appId, appName) +
max(compaction_num_attempted{appType="dw"}) by (appId, appName) +
max(compaction_num_succeeded{appType="dw"}) by (appId, appName)) > .01
```

Time Period

0s

Severity

warning

Source

environments/dw

OldestInitiatedCompactionPassedThresholdWarning

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

Summary

Oldest initiated compaction passed threshold

PromQL Expression

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

Time Period

0s

Severity

critical

Source

environments/dw

OldestReadyForCleaningCompactionPassedThresholdWarning

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

Summary

Oldest uncleaned compaction passed threshold

PromQL Expression

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

Time Period

0s

Severity

warning

Source

environments/dw

OldAbortedTransactionNotClearedWarning

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

Summary

Oldest open transaction passed threshold

PromQL Expression

```
max(oldest_open_non_repl_txn_age_in_sec{appType="dw"}) by (appId, appName) > 3 * 24 * 3600
```

Time Period

0s

Severity

critical

Source

environments/dw

LargeNumberOfActiveDeltasWarning

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

Summary

Table/partition with large number of active delta directories

PromQL Expression

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

Time Period

0s

Severity

warning

Source

environments/dw

LargeNumberOfSmallDeltasWarning

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

Summary

Impala hs2 frontend timed out cnxn request

PromQL Expression

```
rate(impala_thrift_server_hiveserver2_frontend_timedout_cnxn_requests{appType="dw"}[2m]) > 1
```

Time Period

5m

Severity

warning

Source

environments/dw

ImpalaHs2HttpFrontendTimedOutCnxnRequest

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

Summary

Impala hs2 http frontend timed out cnxn request

PromQL Expression

```
rate(impala_thrift_server_hiveserver2_http_frontend_timedout_cnxn_requests{appType="dw"}[2m]) > 1
```

Time Period

5m

Severity

warning

Source

environments/dw

PrometheusNotConnectedToAlertmanager

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

Summary

Prometheus drops samples with out-of-order timestamps.

PromQL Expression

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

Time Period

10m

Severity

warning

Source

environments/infra

EnvPrometheusRemoteStorageFailures

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

Summary

Prometheus fails to send samples to remote storage.

PromQL Expression

```
( rate(prometheus_remote_storage_samples_failed_total[5m]) /
  ( rate(prometheus_remote_storage_samples_failed_total[5m]) +
    rate(prometheus_remote_storage_samples_total[5m]) ) ) * 100 > 1
```

Time Period

0s

Severity

critical

Source

environments/infra

EnvPrometheusRemoteWriteBehind

Reference information for EnvPrometheusRemoteWriteBehind used as part of Pulse in CDP PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 PVC 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 }}