# Unified Alert System

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# 1. Summary

With CloudFS 8.0.2, Panzura now provides several mechanisms to notify, monitor, configure, and resolve cluster alerts and events.

- The Unified Alerting System is an alerting system that notifies you when an entity in your system is experiencing an issue of some degree while displaying a detailed overview of the event information.
    - Alerts are notifications that specify the events that took place.
    - Events are notifications that are generated automatically when a predefined condition occurs or when an object crosses a threshold. These events enable you to take action to prevent issues that can lead to poor performance and system unavailability. Events include an impact area, severity, and impact level.

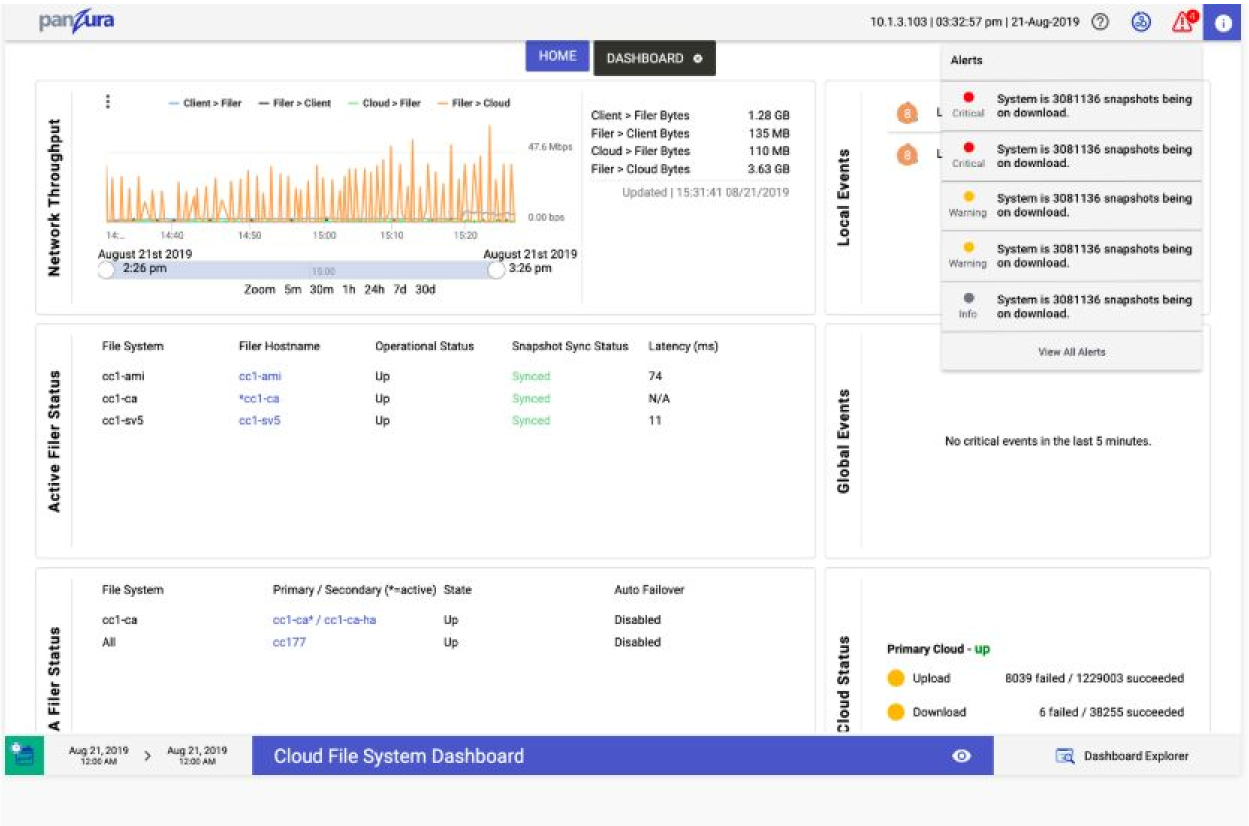
# 2. Overview

- The ***Alerts Notification Tab*** which allows you to see a quick summary of the most recent alerts.
- The ***Events Notification Dashboard*** displays a list of alerts that you can filter, sort, and search in various ways.
- You can also drill down for detailed information and corrective actions for an alert of an event with the ***Event Details*** page.
- See ***Tables 4.1-4.12 Category View*** to view a list of categories for each Policy ID’s severity level, description, cause, and resolution steps.

## 2.1 Alert Notification Tab

- The ***Alert Notification Tab*** is a dropdown button located at the top right corner of the user interface and it allows you to see a brief summary of the most recent alerts.
- The brief summaries include a color coded severity level and a description for each shown alert.
- All the events are categorized and color coded into 3 Severity levels: Red - Critical (9-10), Yellow - warning (4-8), and Grey - Informational (1-3). Their basic definitions are as follows:
    - Critical: Either a current or potential loss of availability in 24 hours, events that require immediate intervention to cure critical issues. The cluster may have the potential to stop running, or it could run into irreparable issues.
    - Warning: A "warning" alert is one that may need attention. Some warning alerts can become critical. A more serious issue may develop if this is not resolved.
    - Informational: An "informational" alert highlights a condition to be aware of or minor issue (Upgrade information, preemptive or informational).
- The description identifies which system entity is affected and the reason for the alert.
- The ***View All Alerts*** button at the bottom of the alert list navigates you to the ***Events Notification Dashboard.***
- See **Figure 1** below for a sample view of the ***Alert Notification Tab***.

**Figure 1. Alert Notification Tab**



| | |
|---|---|
| Client > Filer Bytes | 1.28 GB |
| Filer > Client Bytes | 135 MB |
| Cloud > Filer Bytes | 110 MB |
| Filer > Cloud Bytes | 3.63 GB |

Updated | 15:31:41 08/21/2019

| | |
|---|---|
| ● Critical | System is 3081136 snapshots being on download. |
| ● Critical | System is 3081136 snapshots being on download. |
| ● Warning | System is 3081136 snapshots being on download. |
| ● Warning | System is 3081136 snapshots being on download. |
| ● Info | System is 3081136 snapshots being on download. |

View All Alerts

| File System | Filer Hostname | Operational Status | Snapshot Sync Status | Latency (ms) |
|---|---|---|---|---|
| cc1-ami | cc1-ami | Up | Synced | 74 |
| cc1-ca | *cc1-ca | Up | Synced | N/A |
| cc1-sv5 | cc1-sv5 | Up | Synced | 11 |

No critical events in the last 5 minutes.

| File System | Primary / Secondary (*=active) | State | Auto Failover |
|---|---|---|---|
| cc1-ca | cc1-ca* / cc1-ca-ha | Up | Disabled |
| All | cc177 | Up | Disabled |

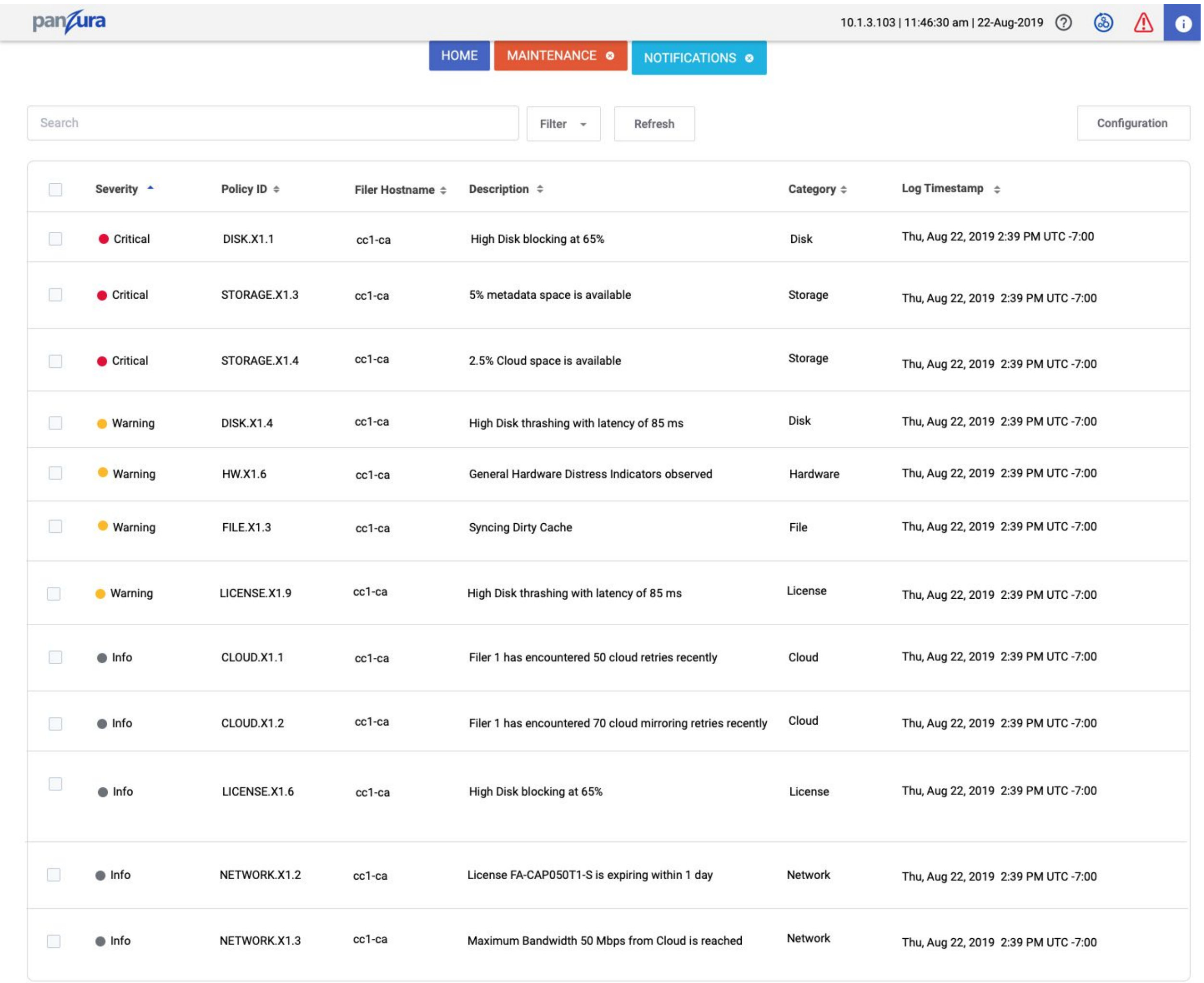
**Primary Cloud - up**

| | |
|---|---|
| ● Upload | 8039 failed / 1229003 succeeded |
| ● Download | 6 failed / 38255 succeeded |

## 2.2 Events Notification Dashboard

- To access the Events Notification Dashboard, navigate to the ***Alerts Notification Tab*** and select ***View all Alerts***.
- The ***Events Notification Dashboard*** displays a summary view of alert messages from recent system events across the registered clusters.
    - The following **Figure 2** is a sample view of the ***Events Notification Dashboard.***
- Each alert shows a quick overview of what the event entails in the ***Alert View Fields***:
    - Severity, Policy ID, Description, Category, and Log Timestamp.
    - These parameters are further described in **Table 2** below.

## Figure 2. Events Notification Dashboard



| □ | Severity | Policy ID | Filer Hostname | Description | Category | Log Timestamp |
|---|---|---|---|---|---|---|
| □ | ● Critical | DISK.X1.1 | cc1-ca | High Disk blocking at 65% | Disk | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Critical | STORAGE.X1.3 | cc1-ca | 5% metadata space is available | Storage | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Critical | STORAGE.X1.4 | cc1-ca | 2.5% Cloud space is available | Storage | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Warning | HW.X1.6 | cc1-ca | General Hardware Distress Indicators observed | Hardware | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Warning | FILE.X1.3 | cc1-ca | Syncing Dirty Cache | File | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Warning | LICENSE.X1.9 | cc1-ca | High Disk thrashing with latency of 85 ms | License | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Info | CLOUD.X1.1 | cc1-ca | Filer 1 has encountered 50 cloud retries recently | Cloud | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Info | CLOUD.X1.2 | cc1-ca | Filer 1 has encountered 70 cloud mirroring retries recently | Cloud | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Info | LICENSE.X1.6 | cc1-ca | High Disk blocking at 65% | License | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Info | NETWORK.X1.2 | cc1-ca | License FA-CAP050T1-S is expiring within 1 day | Network | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Info | NETWORK.X1.3 | cc1-ca | Maximum Bandwidth 50 Mbps from Cloud is reached | Network | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |

## Table 2. Alert View Fields

| Parameter | Description | Value |
|---|---|---|
| Selection Box | Check this box to select individual alerts | N/A |
| Severity | Displays the severity level of this condition. The three color coded levels (also mentioned above in the **Alert Notification Tab** section) are as follows:<br>*Critical*<br>An actionable critical situation has been detected, and action is required immediately. The cluster may have the potential to stop running, or it could run into irreparable issues, or potential loss of system availability in 24 hours. Level: 9-10.<br>*Warning*<br>An actionable issue has been detected, and user intervention is required. A more serious issue may develop if this is not resolved soon. Level: 4-8.<br>*Informational*<br>An actionable minor problem has been detected. It should be resolved relatively soon and not to be ignored. Level: 1-3. | Critical, Warning, Informational |
| Policy ID | Displays the entity (cluster, host, VM, etc…) affected followed by a letter and error numbers that correspond to that specific event. The first part of the Policy ID tells you what system area is affected. The last 3 characters of the Policy ID help you identify the level, description, and cause of the event. Additional information in **Tables 4.1-4.12** | Policy ID (name of affected entity and corresponding letter and error numbers)<br>*Example*: CLOUD.X1.1 |
| Filer Hostname | Identifies which Filer has encountered this event | Filer name |

| | | |
|---|---|---|
| Description | Describes the issue and reason for the alert. | Event description |
| Category | Each event has different categories that identifies which system entity has been  affected. | ● CLOUD<br>● CLOUDFS<br>● CONFIG<br>● DISK<br>● FILESYSTEM<br>● HOST<br>● LICENSE<br>● NETWORK<br>● STORAGE<br>● SYSTEM |
| Log Timestamp | Displays date and time when the alert occurred. | Date and time |

## 2.3 Actions on the Event Notification Dashboard

- Continuing on the ***Event Notification Dashboard***, you can customize the order and scope of listed alerts, display the details for individual alerts, configure alert policies, refresh to see updated alerts, and search for specific alerts.

- The list of actions that can be taken place on the alerts are as follows:

  - Search: Navigate towards the search bar above the list of alerts. Enter a search string to search for specific alerts.

  - Sort: Click on the parameter at the top of the list and below the search bar that you would like to sort by. You can sort by ascending or descending, Severity, Policy ID, Description, Category, and Timestamp.

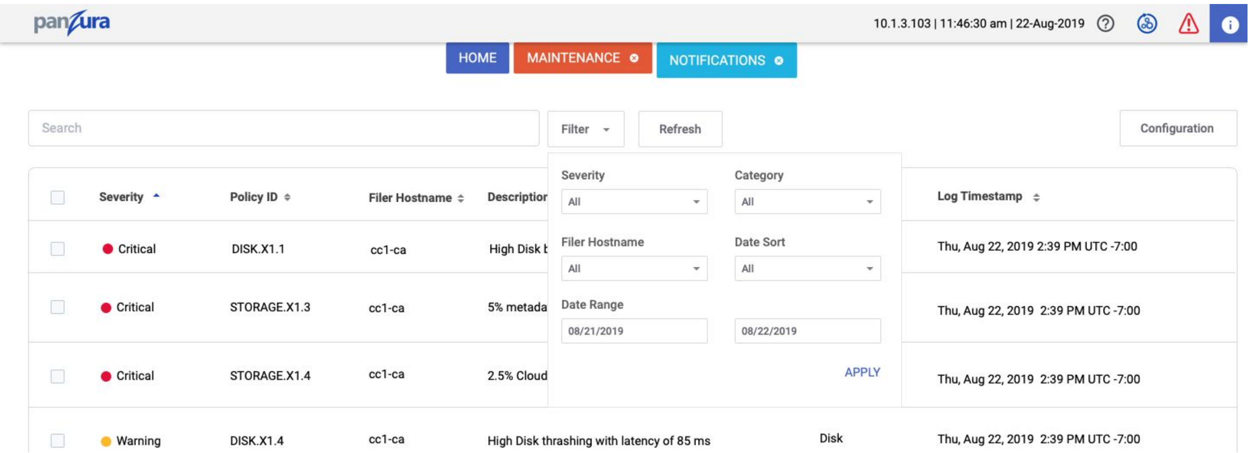
  - Filter: Click the ***Filter*** button, next to the search bar, for a dropdown menu that allows you to filter the alerts in five ways: Severity, Filer Hostname, Data Sort, Category, or Date Range.

  - Refresh: Click the ***Refresh*** button, to the right of the *Filter* button, to get the most updated and recent view of the ***Event Notification Dashboard***

- ○ <u>Configure</u>: By clicking the ***Configuration*** button, you will be navigated to the configuration tab where you can arrange and customize your alert policies.

- The following **Figure 2.2** is a sample view of the Search, Sort, Filter, and Refresh actions on the ***Event Notification Dashboard***

**Figure 2.2. Actions on the Events Notification Dashboard**



Severity: All
Category: All
Filer Hostname: All
Date Sort: All
Date Range: 08/21/2019 – 08/22/2019
APPLY

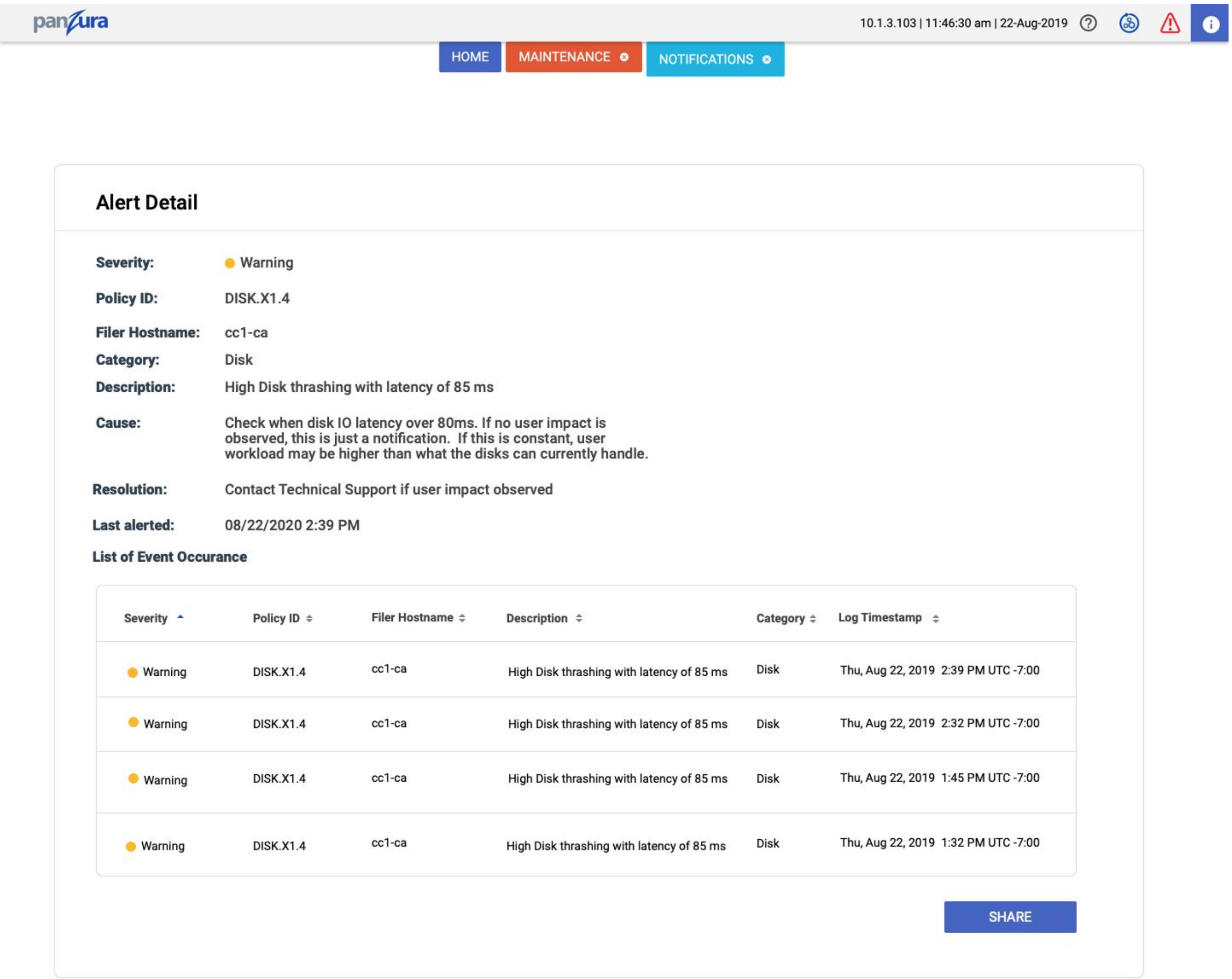
| □ | Severity | Policy ID | Filer Hostname | Description | | Log Timestamp |
|---|---|---|---|---|---|---|
| □ | ● Critical | DISK.X1.1 | cc1-ca | High Disk t | | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Critical | STORAGE.X1.3 | cc1-ca | 5% metada | | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Critical | STORAGE.X1.4 | cc1-ca | 2.5% Cloud | | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| □ | ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |

## 2.4 Alert Details

- Navigate to the ***Event Notification Dashboard*** and click on an individual event to access the ***Alert Details*** page for that specific alert. Clicking on an alert message in the dashboard or anywhere else the alert title appears, such as in a search list, displays detailed information about that alert.
- The ***Alert Details*** page displays a detailed view that provides additional context and resolution instructions for an individual alert about issues related to its corresponding event(s).
- Each cause includes a ***Resolution*** section that describes the recommended corrective action to be taken by the user to resolve and/or troubleshoot the issue.

- See the following Figure 3 for an example of ***Alert Details*** page and **Table 3** for its corresponding **Alert Detail View Fields.**
- See **Tables 4.1-4.11 Policy ID Details** to view a list of categories for Alert Details. You can view each alert's severity level, description, cause, and resolution steps.

**Figure 3. Alerts Details**



Alert Detail

**Severity:** ● Warning

**Policy ID:** DISK.X1.4

**Filer Hostname:** cc1-ca

**Category:** Disk

**Description:** High Disk thrashing with latency of 85 ms

**Cause:** Check when disk IO latency over 80ms. If no user impact is observed, this is just a notification. If this is constant, user workload may be higher than what the disks can currently handle.

**Resolution:** Contact Technical Support if user impact observed

**Last alerted:** 08/22/2020 2:39 PM

**List of Event Occurance**

| Severity | Policy ID | Filer Hostname | Description | Category | Log Timestamp |
|---|---|---|---|---|---|
| ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 2:39 PM UTC -7:00 |
| ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 2:32 PM UTC -7:00 |
| ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 1:45 PM UTC -7:00 |
| ● Warning | DISK.X1.4 | cc1-ca | High Disk thrashing with latency of 85 ms | Disk | Thu, Aug 22, 2019 1:32 PM UTC -7:00 |

## 2.5 Event Details

Table 3. Alert Detail View Fields

| Parameter | Description | Value |
|---|---|---|
| Severity | Displays the severity level of this condition. The three color coded levels (also mentioned above in the **Alert Notification Tab** section) are as follows:<br>*Critical*<br>An actionable critical situation has been detected, and action is required immediately. The cluster may have the potential to stop running, or it could run into irreparable issues, or potential loss of system availability in 24 hours. Level: 9-10.<br>*Warning*<br>An actionable issue has been detected, and user intervention is required. A more serious issue may develop if this is not resolved soon. Level: 4-8.<br>*Informational*<br>An actionable minor problem has been detected. It should be resolved relatively soon and not to be ignored. Level: 1-4. | Critical, Warning, Informational |
| Policy ID | Displays the entity (cluster, host, VM, etc…) affected followed by a letter and error numbers that correspond to that specific event. The first part of the Policy ID tells you what system area is affected. The last 3 characters of the Policy ID help you identify the level, description, and cause of the event. Additional information in **Tables** | Policy ID (name of affected entity and corresponding letter and error numbers)<br>*Example*: CLOUD.X1.1 |

|  | **4.1-4.12** |  |
|---|---|---|
| Category | Each event has different categories that identifies which system entity has been  affected. | ● CLOUD<br>● CLOUDFS<br>● CONFIG<br>● DISK<br>● FILESYSTEM<br>● HOST<br>● LICENSE<br>● NETWORK<br>● STORAGE<br>● SYSTEM |
| Description | Describes the issue and reason for the alert. | Event description |
| Filer Hostname | Identifies which Filer has encountered this event | Filer name |
| Cause | Describes what is most likely causing the issue to the entity. | Issue cause |
| Resolution | Describes how to resolve the issue that is causing the alert and problems to the affected entity. | Resolution description |
| Last Alerted | Displays date and time when the alert last occurred. | Date and time |
| List of Occurences | Lists each alert notification for the same event that has occurred | Severity, Policy ID, Description, Category, Log Timestamp |
| Graph | Displayed on the right hand of the UI. The graph shows a latency time line chart that allows you to see when the latency levels have hit a critical, warning , or just informational point. | Latency time line chart |

**Below details mentioned are event details listed on a per Category basis**

# 4.1: Cloud Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 2 | CLOUD.X1.1 | CLOUD.X1.1: ${NAME} cloud ${LINES} retries have occurred recently | CLOUD.X1.1: Alert when intermittent cloud upload retries have occurred in the last 5 minutes | CLOUD.X1.1: If the event persists, check the Network Path between the Filer and the Object Store |
| 2 | CLOUD.X1.2 | CLOUD.X1.2: ${NAME} cloud ${LINES} retries have occurred recently | CLOUD.X1.2: Alert when intermittent cloud mirror upload retries have occurred in the last 5 minutes | CLOUD.X1.2: If the event persists, check the Network Path between the Filer and the Object Store |
| 5 | CLOUD.X1.3 | CLOUD.X1.3: ${NAME} cloud ${LINES} upload failures have occurred recently | CLOUD.X1.3: Alert when intermittent cloud upload failures have occurred in the last 5 minutes | CLOUD.X1.3: If the event persists, check the Network Path between the Filer and the Object Store |
| 5 | CLOUD.X1.4 | CLOUD.X1.4: ${NAME} cloud ${LINES} upload failures have occurred recently | CLOUD.X1.4: Alert when intermittent cloud mirror upload failures have occurred in the last 5 minutes | CLOUD.X1.4: If the event persists, check the Network Path between the Filer and the Object Store |
| 5 | CLOUD.X1.5 | CLOUD.X1.5: ${LINES} cloud checksum failures have occurred recently | CLOUD.X1.5: Alert when intermittent cloud transport checksums fail | CLOUD.X1.5: If this event persists with repeated messages, check the logs for upload failures. If the messages are not the same, check the network connection, if they are the same, contact Panzura Technical Support |
| 9 | CLOUD.X1.6 | CLOUD.X1.6: Datapath missing IP entry for cloud | CLOUD.X1.6: Alert when the cloud datapath DNS server IP address is unavailable | CLOUD.X1.6: Check that the name servers are accurately configured. If the issue still persists, contact Panzura Technical Support |
| 9 | CLOUD.X1.7 | CLOUD.X1.7: Datapath missing local IP interface | CLOUD.X1.7: Alert when the datapath does not have an IP entry for the cloud | CLOUD.X1.7: Check that the cloud hostname is correct and can be resolved. Perform the cloud upload/download test. If the issue |

|  |  |  |  |  |
|---|---|---|---|---|
|  |  |  |  | still persists, contact Panzura Technical Support |
| 2 | CLOUD.X1.8 | CLOUD.X1.8: Download has failed to complete in ${DOWNMINUTE} minutes | CLOUD.X1.8: Alert when download requests exceed 10 minutes | CLOUD.X1.8: A user file may be inaccessible and sync may fall behind if other downloads are not progressing due to an object download failure. This may indicate a missing drive file or may indicate upload backlog at the source Filer |

## 4.2. CloudFS Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 5 | CLOUDFS.X 1.1 | CLOUDFS.X1.1: Active remote filesystem without a CCID | CLOUDFS.X1.1: Alert when the active filesystems are missing a CCID GUID | CLOUDFS.X1.1: Check that all Filers in the CloudFS show as UP from the dashboard section on the GUI |
| 2 | CLOUDFS.X 1.2 | CLOUDFS.X1.2: System is generating Master Snapshot | CLOUDFS.X1.2: Alert when a Master Snapshot is being generated | CLOUDFS.X1.2:Check for Normal Operations |
| 5 | CLOUDFS.X 1.3 | CLOUDFS.X1.3: System is ${RESULTS} snapshots behind on upload | CLOUDFS.X1.3: Alert when dirty data is over threshold snapshots behind (30 minutes) | CLOUDFS.X1.3: Data upload to the cloud is falling behind or there may be a heavy load of data ingest. If there is a momentary heavy ingest of data that is higher than cloud upload capabilities, this may be as expected. This can be compared in the dashboard. If user workload lowers and Filer does not catch up, contact Panzura Technical Support |
| 5 | CLOUDFS.X 1.4 | CLOUDFS.X1.4: System is ${RESULTS} snapshots behind on | CLOUDFS.X1.4: Alert when remote system sync for some peer file systems is more than | CLOUDFS.X1.4: Check Dashboard if problem persists, contact Panzura Technical Support |

| | | | | |
|---|---|---|---|---|
| | | download | threshold snap shots behind | |
| 6 | CLOUDFS.X1.5 | CLOUDFS.X1.5: Excessive site-to-site service latency with $0, $1ms more than ${CLOUDFS.X1.5_site2siteLatency}ms | CLOUDFS.X1.5: Alert when cross-site collaboration within applications, and cross-site file operations are slow | CLOUDFS.X1.5: This event may occur if the lock management and file open times are longer than usual due to the excess latency. Check ping times and link congestion to/from the site reporting the problem from the Diagnostic Tools and have the network team investigate the link. |
| 10 | CLOUDFS.X1.6 | CLOUDFS.X1.6: Master Snapshot has not been generated in more than twice the scheduled interval | CLOUDFS.X1.6: Alert when a Filer fails to update the master snapshot on schedule | CLOUDFS.X1.6: A validation failure or new peer syncing this filesystem may be preventing master snapshot generation. Check all peers are in sync with this filesystem, then attempt to run master snapshot from maintenance page, after hours. If it still fails, contact Panzura Technical Support |
| 7 | CLOUDFS.X1.8 | CLOUDFS.X1.8: Cloud mirrors are out of sync | CLOUDFS.X1.8: Alert when Cloud mirrors are out of sync | CLOUDFS.X1.8: Check the Cloud Mirror Status from the WebUI. Wait for sometime, if this problem persists, please check your network connection and contact Panzura Technical Support |
| 5 | CLOUDFS.X1.9 | CLOUDFS.X1.9: Delete Queue Depth | CLOUDFS.X1.9: Alert when there is 250GB or more cloud data pending deleted | CLOUDFS.X1.9: Cloud deletes for obsolete objects are taking too long. Check cloud connectivity. Upgrade to the latest PZOS version (minimum PZOS version - 8.0) |
| 7 | CLOUDFS.X1.10 | CLOUDFS.X1.10: New Cloud Mirror is fully synchronized | CLOUDFS.X1.10: Alert when cloud mirror is fully synchronised for the first time | CLOUDFS.X1.10: Check the Cloud Mirror Status from the WebUI. If synchronization rate is significantly slower than expected, please check your network connection and contact Panzura Technical Support |
| 9 | CLOUDFS.X1.11 | CLOUDFS.X1.11: Peer Filer Sync issue encountered | CLOUDFS.X1.11: Alert when Filer cannot reach all peers in the same CloudFS | CLOUDFS.X1.11: Some Filers are unable to reach peer Filers over port 22. In the WebUI go to Maintenance - Diagnostic Tools. |

| | | | | |
|---|---|---|---|---|
| | | | | For Command Type, select ping. For Parameter, enter the name/IP of a peer Filer that is showing issues and press Run. Also from Diagnostic tools, enter the name/IP of the peer Filer and port 22. Check with network team to ensure port 22 is open between the Filers |
| 5 | CLOUDFS.X1.12 | CLOUDFS.X1.12: Cloud download synchronization is not progressing | CLOUDFS.X1.12: Alert when cloud download sync processes are stuck for more than 15 minutes | CLOUDFS.X1.12: Some snapshot receive processes are taking too long to complete. If the problem persists, verify whether the cloud connectivity is good, if not, contact Panzura Technical Support for further diagnosis |
| 2 | CLOUDFS.X1.13 | CLOUDFS.X1.13: Snapshots are being retained too long | CLOUDFS.X1.13: Alert when user snapshots are being retained past their limits in the user snapshot schedule | CLOUDFS.X1.13: Expired snapshots may be getting retained for too long. Check snapshot manager under configuration for old snapshots which can be deleted. If snapshots older than the schedule are not visible, and the issue persists, contact Panzura Technical Support |
| 2 | CLOUDFS.X1.14 | CLOUDFS.X1.14: Found orphaned file systems | CLOUDFS.X1.14: Alert when there are orphaned file systems that were not deleted after decommission | CLOUDFS.X1.14: Decommissioned filesystems are no longer deleted in order to retain access to their snapshots. However, they should be declared by a decommission-cc command in the configuration. This alert indicates there may be an incorrect configuration for a previously decommissioned Filer. Contact Panzura Technical Support |
| 10 | FS.RL1.1 | FS.RL1.1: Active CC %s is unresponsive | FS.RL1.1: Alert when not all active CCs are connected | FS.RL1.14: Contact Panzura Technical Support in case this event occurs |
| 5 | SYS.WUI1.3 | SYS.WUI1.3: Domain Name conflicts with CloudFS CloudController list. | SYS.WUI1.3: Alert when a domain name conflicts in the CloudFS CloudController list | SYS.WUI1.3: Check all Filer domain names against the configured Filer list |

| | | | | |
|---|---|---|---|---|
| 2 | CLOUDFS.X1.15 | CLOUDFS.X1.15: System has finished generating Master Snapshot | CLOUDFS.X1.15: Alert when a Master Snapshot is finished generated | CLOUDFS.X1.15:Check for Normal Operations |

## 4.3. Cluster Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 9 | CLUSTER.X1.1 | CLUSTER.X1.1: PZOS versions mismatch across Filers | CLUSTER.X1.1: Alert when any Filers within the Cloudfs are running different versions | CLUSTER.X1.1: Check each Filer to validate that the current PZOS version is the same. Go to System Configuration in Maintenance and Select Upgrade to upgrade to the new PZOS version |
| 2 | CLUSTER.L1.8 | -OSE-CLUSTER.L1.8: New Panzura CloudFS $0 version $1 is available for download | CLUSTER.L1.8: Alert when there is a new software version available for upgrade | CLUSTER.L1.8: Go to System Configuration in Maintenance and Select Upgrade to download and upgrade to the new PZOS version |

## 4.4. Configuration Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 2 | CONFIG.X1.1 | CONFIG.X1.1: .startupscript has changed | CONFIG.X1.1: Alert when there are any changes visible in /mnt/.startupscript | CONFIG.X1.1: Run 'cat /mnt/.startupscript' and check for changes |
| 2 | CONFIG.X1.3 | CONFIG.X1.3: Panzura Support Assistance connection is not working. | CONFIG.X1.3: Alert when the Filer is not connecting to Support Assistance | CONFIG.X1.3: Panzura Support Assistance uses port 443 for connecting to saconnect.panzura.com. Please verify that this port and host are reachable from this Filer. If reachable and this issue persists, contact Panzura Technical Support for troubleshooting |
| 5 | SYS.WUI1.4 | SYS.WUI1.4: Hostname is not in CloudFS CloudController list. | SYS.WUI1.4: Alert when hostname is not in CloudFS Filer list | SYS.WUI1.4: It searches for incomplete Filer configurations in the CloudFS. Verify that configuration has completed for the hostname. If the event persists and user impact is observed, contact Panzura Technical Support. |

## 4.5. Disk Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 5 | DISK.X1.1 | DISK.X1.1: High Disk blocking at ${BUSY} percent | DISK.X1.1: Alert when disk IO is blocking over 85 percent | DISK.X1.1: If no user impact is observed, this is just a notification. If this is constant, user workload may be higher than what the disks can currently handle. Adding disks usually resolves disk contention. If the event persists and user impact is observed, contact Panzura Technical Support |
| 9 | DISK.X1.2 | DISK.X1.2: Extreme Disk blocking at ${BUSY} percent | DISK.X1.2: Alert when disk IO is blocking over 95 percent | DISK.X1.2: User workload may be higher than what the disks can currently handle. Adding disks usually resolves disk contention. If the event persists and user impact is observed, contact Panzura Technical Support |
| 2 | DISK.X1.3 | DISK.X1.3: High Disk thrashing with latency ${MSPT}ms | DISK.X1.3: Alert when disk IO latency is over 80ms | DISK.X1.3: If no user impact is observed, this is just a notification. If this is constant, user workload may be higher than what the disks can currently handle. Adding disks usually resolves disk contention. If the event persists and user impact is observed, contact Panzura Technical Support |
| 5 | DISK.X1.4 | DISK.X1.4: High Disk thrashing with latency ${MSPT}ms | DISK.X1.4: Alert when disk IO latency is over 160ms | DISK.X1.4: User workload may be higher than what the disks can currently handle. Adding disks usually resolves disk contention. If the event persists and user impact is observed, contact Panzura Technical Support |
| 5 | DISK.X1.5 | DISK.X1.5: Main disk(s) are resilvering | DISK.X1.5: Alert when a RAID rebuild is in progress when intermittent cloud transport checksums fail | DISK.X1.5: If the event persists and user impact including system performance is affected, contact Panzura Technical Support |
| 4 | DISK.X1.6 | DISK.X1.6: Disk IO blocking is between 40 and | DISK.X1.6: Alert when the disk IO blocking is between 40 and 80 percent | DISK.X1.6: If no user impact is observed, this is just a notification. If this is constant, user workload |

| | | | | |
|---|---|---|---|---|
| | | 85 percent | | may be higher than what the disks can currently handle. Adding disks usually resolves disk contention. If the event persists and user impact is observed, contact Panzura Technical Support |
| 8 | SYS.WUI1.5 | SYS.WUI1.5: One or more disks are degraded | SYS.WUI1.5: Alert when one or more disks are degraded | SYS.WUI1.5: Review disk/RAID status and contact Panzura Technical Support |
| 5 | DISK.L1.1 | -OSE-DISK.L1.1 : Disk is offline | DISK.L1.1: Alert when a disk goes offline or has disconnected from the Filer | DISK.L1.1: For RAID systems, re-attach and rebuild the RAID group. For non-RAID systems, a DR must be performed |
| 5 | DISK.L1.4 | -OSE-DISK.L1.4 : Disk is online | DISK.L1.4: Alert when a disk goes online or is connected to the Filer | DISK.L1.4: New disks can be added via System Configuration - Disk Expansion - Discover New. For replacing failed disks in a RAID system, attaching will automatically start the rebuild of the RAID group |

## 4.6. File Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 5 | FILE.X1.1 | FILE.X1.1: Filesystem already exists in CloudFS. Please perform Disaster Recovery from Maintenance tab | FILE.X1.1: Alert when system state requires performing Disaster Recovery | FILE.X1.1: Please perform Disaster Recovery from Maintenance tab |
| 6 | FILE.X1.3 | FILE.X1.3: Syncing dirty cache | FILE.X1.3: Alert when dirty cache is syncing after an HA take-over | FILE.X1.3: Any data that was written to the original Filer before takeover is now being copied so that it can be made available in the (lost and found) |
| 6 | FILE.X1.4 | FILE.X1.4: | FILE.X1.4: Alert when HA-takeover dirty cache has been synced | FILE.X1.4: Any data that was written to the original Filer before takeover is not available the (lost and found) |
| 8 | FILE.X1.5 | FILE.X1.5: Managed Capacity license not found or limit has been reached. Please install new Managed Capacity License | FILE.X1.5: Alert when Managed Capacity has under 1G on Filer remaining | FILE.X1.5: Check Managed Capacity on the WebUI Dashboard. Check Licenced Managed Capacity. Contact Panzura Sales for added capacity |
| 5 | FILE.X1.6 | FILE.X1.6: Active Directory Server is unable to join the Panzura Filer | FILE.X1.6: Alert when the Panzura Filer is not joined with the Active Directory server for more than 10 minutes | FILE.X1.6: Connect Filer to AD and/or review logs to see why it is unable to join the server. |
| 9 | FILE.X1.7 | FILE.X1.7: Panzura Filer XXX is unable to resolve DNS request configured by the DNS Server XXX | FILE.X1.7: Alert when the Filer is unable to resolve the DNS Request via the configured DNS Server | FILE.X1.7: Verify the DNS server is reachable and ensure it is responding to requests from the Filer. If the issue persists, contact Panzura Technical Support. |
| 3 | FILE.L1.1 | -OSE-FILE.L1.1: The Filer is importing the filesystem | FILE.L1.1: Alert when PZOS is importing the File System | FILE.L1.1: This is normal at bootup but may take considerable time. Please contact Panzura Technical Support if this continues for over 30 minutes. |

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| 5 | FILE.L1.3 | -OSE-FILE.L1.3: mountd bad exports list line $1 | FILE.L1.3: Alert when the NFS exports configuration is incorrect | FILE.L1.3: Fix the NFS exports line specified and save changes. |
| 9 | FILE.L1.4 | -OSE-FILE.L1.4: The filesystem hasn't been imported over $1times check | FILE.L1.4: Alert when the Filer is unable to import the filesystem | FILE.L1.4: If this issue persists, please contact Panzura Technical Support. |

## 4.7. Hardware Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 9 | HW.X1.1 | HW.X1.1: System Hardware Fan Failing **$0** | HW.X1.1: Alert when a Hardware Fan has failed | HW.X1.1: This checks the Server System status in the idrac for failed fans. If the event persists, generate a TSR report or Support Assistant log on the Dell Server and contact Panzura Technical Support |
| 6 | HW.X1.2 | HW.X1.2: System Hardware Chassis Intrusion Detected | HW.X1.2: Alert when the Hardware Chassis has been opened | HW.X1.2: This checks the Server System event logs in the idrac for open chassis. If the event persists, generate a TSR report or Support Assistant log on the Dell Server and contact Panzura Technical Support |
| 10 | HW.X1.3 | HW.X1.3: System Hardware Power Supply Failing | HW.X1.3: Alert when a Hardware Power Supply has failed | HW.X1.3: If the event persists, check the Server System event logs in the iDRAC WebUI for Power Supply failures and contact Panzura Technical Support. |
| 6 | HW.X1.4 | HW.X1.4: System Hardware Inlet Temperature Near Critical at $0 | HW.X1.4: Alert when the environmental temperature is approaching Vendor Critical | HW.X1.4: If the event persists, check the Server System event logs for temperature messages and contact Panzura Technical Support. |
| 9 | HW.X1.5 | HW.X1.5: System Hardware Inlet Temperature Critical at $0 | HW.X1.5: Alert when the environmental temperature is above Vendor Critical | HW.X1.5: If the event persists, ensure that the Server Room has an active A/C and contact Panzura Technical Support. |
| 7 | HW.X1.6 | HW.X1.6: System Hardware **$0** reporting distress | HW.X1.6: Alert when there are general Hardware Distress Indicators | HW.X1.6: If the event persists, check the Server system event logs for hardware errors and contact Panzura Technical Support. |

## 4.8. Host Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 7 | HOST.X1.1 | HOST.X1.1: /mnt is filling up | HOST.X1.1: Alert when the log data partition is over 70 percent capacity | HOST.X1.1: If the event persists, contact Panzura Technical Support. |
| 5 | HOST.X1.2 | HOST.X1.2: /cache is filling up | HOST.X1.2: Alert when the cloud staging partition is over 80 percent capacity | HOST.X1.2: Check Dashboard for Cache size and Dirty cache. If the Filer is at capacity and the slowness persists, consider stopping writes to Filer. |
| 9 | HOST.X1.3 | HOST.X1.3: /tmp is filling up | HOST.X1.3: Alert when the /tmp partition is over 80 percent capacity | HOST.X1.3: If the event persists, contact Panzura Technical Support. |
| 5 | HOST.X1.4 | HOST.X1.4: System CPU usage above 70 percent | HOST.X1.4: Alert when the CPU load is above 70 percent limit | HOST.X1.4: Check for stuck process/leaks or bottlenecks. |
| 9 | HOST.X1.5 | HOST.X1.5: Zombie Processes are occurring | HOST.X1.5: Alert when zombie processes are higher than normal | HOST.X1.5: Processes that are not able to terminate and are building up and consuming space need support attention. If this event persists, monitor the snapshot sync for 3-4 hours, if the snapshot has a continuous deficit, contact Panzura Technical Support immediately. |
| 9 | HOST.X1.6 | HOST.X1.6: System Clock has skewed away from the configured AD server, client authentication will fail | HOST.X1.6: Alert when the System Clock skew has drifted from AD and the drift exceeds 1 minutes | HOST.X1.6: Check that the Filer and AD use the same NTP service. If problem still persists, please contact Panzura Technical Support. |
| 5 | HOST.X1.7 | HOST.X1.7: Core or crash dumps have occurred | HOST.X1.7: Alert when there are any core or crash dumps | HOST.X1.7: If the event persists, contact Panzura Technical Support. |
| 5 | HOST.X1.9 | HOST.X1.9: System experiencing high syslog message | HOST.X1.9: Alert when PZOS is experiencing high syslog rates | HOST.X1.9: Review syslogs for high rate loggers. When no specific culprit is found, check Debug level in WebUI. |

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| | | rate | | |
| 5 | HOST.L1.9 | -OSE-HOST.L1.9: MCA memory error: $0 | HOST.L1.9: Alert when kernel memory has errors | HOST.L1.9: This may be a hardware or a VM issue. If issue persists, contact Panzura Technical Support team immediately |
| 5 | HOST.L1.2 | -OSE-HOST.L1.2: /mnt free space insufficient ($0MB)<br>-OSE-HOST.L1.2: root zpool free space insufficient ($0MB) | HOST.L1.2: Alert when the PZOS partition does not have enough space available for an upgrade | HOST.L1.2: This applies to /mnt and root / partition. Expand and reboot if possible, or rebuild and DR. |
| 5 | HOST.L1.3 | -OSE-HOST.L1.3: System rebooted by $0<br>-OSE-HOST.L1.3: System powercycled or rebooted by $0 | HOST.L1.3: Alert when the system has rebooted | HOST.L1.3: If this is an unexpected reboot, contact Panzura Technical Support. |
| 3 | FILE.L1.5 | -OSE-FILE.L1.5: zfs free space insufficient ($1 bytes available) | FILE.L1.5: Alert when local disk space is running low. | FILE.L1.5: This occurs when there is too much local write traffic and data cannot be moved to the cloud fast enough. Check cloud write bandwidth or slow high rate clients. |
| 6 | SYS.WUI1.1 | SYS.WUI1.1: * | SYS.WUI1.1: Alert when there are errors from cifsd, exportd, mountd, export_path, nanny | SYS.WUI1.1: Check configuration of shares and exports. If the event persists, contact Panzura Technical Support. |
| 6 | SYS.ICAP1.1 | SYS.ICAP1.1: ICAP: Server %s options request failed | SYS.WUI1.1: Alert when there are errors from cifsd, exportd, mountd, export_path, nanny | SYS.ICAP1.1: Check ICAP server configuration. If the event persists, contact Panzura Technical Support. |
| 2 | SYS.ICAP1.2 | SYS.ICAP1.2: ICAP: Quarantine {%s} [%d] %s | SYS.ICAP1.2: Alert when a file is quarantined via ICAP | SYS.ICAP1.2: Review logs on Anti-Virus Scanner for threat analysis. |
| 8 | SYS.ICAP1.3 | SYS.ICAP1.3: ICAP: Server %s is down | SYS.ICAP1.3: Alert when a configured ICAP Server is down or unavailable | SYS.ICAP1.3: Checks to make sure that each ICAP Server is functional and able to be used. Investigate ICAP server for signs of issues. If the ICAP server is working well and the issue persists, contact Panzura Technical Support. |

## 4.9. License Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 9 | LICENSE.X1.1 | LICENSE.X1.1: License **$0** has expired | LICENSE.X1.1: Alert when any license has expired | LICENSE.X1.1: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 2 | LICENSE.X1.2 | LICENSE.X1.2: License **$0** is expiring in under 15 days | LICENSE.X1.2: Alert when any license is within 15 days of expiration | LICENSE.X1.2: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 8 | LICENSE.X1.3 | LICENSE.X1.3: License **$0** is expiring in 5 days | LICENSE.X1.3: Alert when a license is within 5 days of expiration | LICENSE.X1.3: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 8 | LICENSE.X1.4 | LICENSE.X1.4: License **$0** is expiring in 4 days | LICENSE.X1.4: Alert when a license is within 4 days of expiration | LICENSE.X1.4: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 8 | LICENSE.X1.5 | LICENSE.X1.5: License **$0** is expiring in 3 days | LICENSE.X1.5: Alert when a license is within 3 days of expiration | LICENSE.X1.5: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 8 | LICENSE.X1.6 | LICENSE.X1.6: License **$0** is expiring in 2 days | LICENSE.X1.6: Alert when a license is within 2 days of expiration | LICENSE.X1.6: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |
| 10 | LICENSE.X1.7 | LICENSE.X1.7: License **$0** is expiring in 1 day | LICENSE.X1.7: Alert when a license is within 1 day of expiration | LICENSE.X1.7: On the WebUI, check Configuration, License Manager to review any expiring licenses. If the issue still persists, contact Panzura Technical Support. |

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| 5 | LICENSE.L1.8 | LICENSE.L1.8: Duplicate Licenses are active | LICENSE.L1.8: Alert when there are duplicate License-To-Operate licenses | LICENSE.L1.8: On the WebUI, check 'Configuration', License Manager to review if the same license is being used twice. If the issue still persists, contact Panzura Technical Support. Many licences will have overlaps during POC and license upgrades. |
| 10 | SYS.SECE1.1 | -SYS.SECE1.1: Secure Erase License not enabled on %s | SYS.SECE1.1: Alert when Secure Erase is called without Secure Erase License | SYS.SECE1.1: On the WebUI, check 'Configuration', License Manager to review if for a Secure Erase License. If the issue still persists, contact Panzura Technical Support. |

## 4.10. Network Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 5 | NETWORK.X1.1 | NETWORK.X1.1: Maximum Bandwidth ${WAN_LIMIT} to Cloud Reached | NETWORK.X1.1: Alert when bandwidth to cloud is saturating limits | NETWORK.X1.1: Filer may be consistently hitting bandwidth limits to the cloud. If current workload is expected to be normal, bandwidth limits/actual bandwidth may need to be increased. |
| 3 | NETWORK.X1.2 | NETWORK.X1.2: Maximum Bandwidth ${WAN_LIMIT} from Cloud is reached | NETWORK.X1.2: Alert when bandwidth from cloud is saturating limits | NETWORK.X1.2: Filer may be consistently hitting bandwidth limits from the cloud. If current workload is expected to be normal, bandwidth limits/actual bandwidth may need to be increased. |
| 4 | NETWORK.X1.3 | NETWORK.X1.3: Throughput throttling rate:${THRT_RATE} | NETWORK.X1.3: Alert when user network throughput is being rate limited | NETWORK.X1.3: The Filer may be running out of space for new writes. Reduce new writes to the Filer. If the issue still persists, contact Panzura Technical Support. |
| 10 | NETWORK.X1.4 | NETWORK.X1.4: ${RESULTS} | NETWORK.X1.4: Alert when the cloud connection is administratively | NETWORK.X1.4: Administrative control is managed on the WebUI at System Configuration - Diagnostic Tools - Command Type : |

|  |  |  |  |  |
|---|---|---|---|---|
|  |  |  | blocked | block-mirror-cloud with parameter: show. |
| 10 | NETWORK .X1.5 | NETWORK.X1.5: ${RESULTS} | NETWORK.X1.5: Alert when the cloud connection is administratively blocked | NETWORK.X1.5: Administrative control is managed on the WebUI at System Configuration - Diagnostic Tools - Command Type : block-mirror-cloud with parameter: show. |
| 4 | NETWORK .X1.6 | NETWORK.X1.6: Excessive TCP retries or disconnects | NETWORK.X1.6: Alert when there is an excessive amount of TCP retries or sys disconnects greater than 2 percent | NETWORK.X1.6: Check network links for bad cabling, bad NICs, and TCP offloading at the source or destination. If the issue still persists, contact Panzura Technical Support. |
| 8 | NETWORK .L1.2 | -OSE-NETWORK.L 1.2: Interface $0 $1 | NETWORK.L1.2: Alert when Network Interfaces have up/down events. | NETWORK.L1.2: Check network links for bad cabling, bad NICs, or intermediary switches. If the issue still persists, contact Panzura Technical Support. |

## 4.11. Storage Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 9 | STORAGE. X1.1 | STORAGE.X1.1: ${MTR} Bytes metadata space available | STORAGE.X1.1: Alert when system Meta-Data has no space available | STORAGE.X1.1: Check SSD Usage in the Dashboard. Add more disks or contact Panzura Technical Support |
| 5 | STORAGE. X1.2 | STORAGE.X1.2: ${MTR_PCT} percent metadata space available is under 5 percent | STORAGE.X1.2: Alert when system Meta-Data use is within 5 percent of available capacity | STORAGE.X1.2: Check SSD usage on the WebUI Dashboard. Capacity can be added with additional SSDs through System Configuration - Disk Expansion. |
| 10 | STORAGE. X1.11 | STORAGE.X1.11: No metadata space | STORAGE.X1.11: Alert when system Meta-Data | STORAGE.X1.11: Check SSD Usage in the Dashboard. Add more |

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|---|---|---|---|---|
| | | available | has no space available | disks or contact Panzura Technical Support. |
| 3 | STORAGE.X1.3 | STORAGE.X1.3: ${MTR_PCT} percent metadata space available is under 10 percent | STORAGE.X1.3: Alert when system Meta-Data use is within 5-10 percent of available | STORAGE.X1.3: Check SSD usage on the WebUI Dashboard. Capacity can be added with additional SSDs through System Configuration - Disk Expansion. |
| 5 | STORAGE.X1.4 | STORAGE.X1.4: ${CL_PCT} percent Cloud space available is under 5 percent | STORAGE.X1.4: Alert when system Cloud storage space is within 5 percent of available | STORAGE.X1.4: Check Cloud usage on the WebUI Dashboard. Check Licensed Cloud Capacity. Contact Panzura Sales for added capacity. |
| 3 | STORAGE.X1.5 | STORAGE.X1.5: ${CL_PCT} percent Cloud space available is under 10 percent | STORAGE.X1.5: Alert when system Cloud storage space is within 5-10 percent of available | STORAGE.X1.5: Check Cloud usage on the WebUI Dashboard. Check Licensed Cloud Capacity. Contact Panzura Sales for added capacity. |
| 10 | STORAGE.X1.6 | STORAGE.X1.6: ${MC_PCT} percent managed space available | STORAGE.X1.6: Alert when system Managed capacity space is within 10 percent of available | STORAGE.X1.6: Check Managed Data usage on the WebUI Dashboard. Check Licenced Managed Data Capacity. Contact Panzura Sales for added capacity. |
| 7 | STORAGE.X1.7 | STORAGE.X1.7: ${MC_PCT} percent managed space available | STORAGE.X1.7: Alert when system Managed capacity space is within threshold percent of available | STORAGE.X1.7: Check Managed Data usage on the WebUI Dashboard. Check Licenced Managed Data Capacity. Contact Panzura Sales for added capacity. |
| 3 | STORAGE.X1.8 | STORAGE.X1.8: ${MC_PCT} percent managed space available | STORAGE.X1.8: Alert when system Managed capacity space is within 25-40 percent of available | STORAGE.X1.8: Check Managed Data usage on the WebUI Dashboard. Check Licenced Managed Data Capacity. Contact Panzura Sales for added capacity. |
| 5 | STORAGE.X1.9 | STORAGE.X1.9 | STORAGE.X1.9: Verify whether the Persistent Read Cache Hit Rate is less than 90% | STORAGE.X1.9: Contact Panzura Technical Support Immediately in case this event occurs |
| 5 | STORAGE.X1.10 | STORAGE.X1.10 | STORAGE.X1.10: Verify whether the PRC Cold < 40% and PRC Hit Rate > 90% | STORAGE.X1.10: Contact Panzura Technical Support Immediately in case this event occurs |

## 4.12. System Category View

| Severity Level | Policy ID | Description | Cause | Resolution |
|---|---|---|---|---|
| 10 | SYS.HA1.1 | SYS.HA1.1: Active: Snapshots in dirty cache (%lu) exceeds max allowed (%d) | SYS.HA1.1: Alert when dirty cache exceeds max allowed for HA takeover | SYS.HA1.1: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.2 | SYS.HA1.2: Standby: Snapshots received far behind generated snapshots | SYS.HA1.2: Alert when snapshots received are too far behind generated for HA takeover | SYS.HA1.2: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.3 | SYS.HA1.3: Peer-CC thinks he is Active. Changing our state to standby | SYS.HA1.3: Alert when HA Peer-CC is Active and changing to Standby | SYS.HA1.3: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.4 | SYS.HA1.4: Peer-CC thinks he is Standby. Changing our state to Active | SYS.HA1.4: Alert when the HA standby Filer is now the active Filer and a takeover has occurred | SYS.HA1.4: If this was an unexpected takeover, contact Panzura Technical Support to review. |
| 10 | SYS.HA1.5 | SYS.HA1.5: Received autofo disabled message from the cloud | SYS.HA1.5: Alert when HA Received auto failover disabled from cloud | SYS.HA1.5: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.6 | SYS.HA1.6: Active: State Change request from Standby is Rejected Dirty Cache | SYS.HA1.6: Alert when HA Active received state change and is rejecting | SYS.HA1.6: If this event persists, check if HA received auto failover is disabled from the cloud and contact Panzura Technical Support. |
| 10 | SYS.HA1.7 | SYS.HA1.7: Received a State change trigger flag | SYS.HA1.7: Alert when HA Received State change trigger flag | SYS.HA1.7: This event is informational for Panzura Technical Support. |
| 8 | SYS.HA1.8 | SYS.HA1.8: Takeover is not Feasible %s | SYS.HA1.8: Alert when the HA auto failover takeover ability on the | SYS.HA1.8: Active HA Filer may not be able to perform a takeover. If this event persists, check if Active HA |

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| | | | Active HA failover is not feasible | received auto failover is disabled from the cloud and contact Panzura Technical Support. |
| 8 | SYS.HA1.9 | SYS.HA1.9: Active Triggering a State change : %s | SYS.HA1.9: Alert when HA Active triggering a state change | SYS.HA1.9: The active Filer will change its state to standby and stop cloud sync when the health status is displaying an error for 20 min or more than 160 errors. If the state change is unable to occur or the active Filer sync does not stop, contact Panzura Technical Support. |
| 8 | SYS.HA1.10 | SYS.HA1.10: Disabled Cloud and Sync for Active. If Takeover Not Feasible Reboot Required To Recover | SYS.HA1.10: Alert when HA Active disabled cloud and sync | SYS.HA1.10: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.11 | SYS.HA1.11: Active: Changing state to Standby | SYS.HA1.11: Alert when HA Active changing to Standby | SYS.HA1.11: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.12 | SYS.HA1.12: Cannot download the cloud state file | SYS.HA1.12: Alert when HA Cloud heart-beat download fails | SYS.HA1.12: Check network and cloud service availability to see why standby cannot download hastate-ccid-file. If the problem persists, contact Panzura Technical Support. |
| 8 | SYS.HA1.13 | SYS.HA1.13: Takeover is not Feasible: %s | SYS.HA1.13: Alert when the HA auto failover takeover ability on the HA failover is not feasible due to {cloud,FS,HA-Monitor} | SYS.HA1.13: HA Filer may not be able to perform a takeover. If this event persists, check if HA received auto failover is disabled from the cloud and contact Panzura Technical Support. |
| 10 | SYS.HA1.14 | SYS.HA1.14: Takeover is not Feasible %s | SYS.HA1.14: Alert when the HA auto failover takeover ability on the Standby HA failover is not feasible | SYS.HA1.14: Standby HA Filer may not be able to perform a takeover. If this event persists, check if Standby HA received auto failover is disabled from the cloud and contact Panzura Technical Support. |
| 8 | SYS.HA1.15 | SYS.HA1.15: Takeover is not Feasible: %s | SYS.HA1.15: Alert when the HA auto failover takeover ability on the Standby HA failover is not feasible | SYS.HA1.15: Standby HA Filer may not be able to perform a takeover. If this event persists, check if Standby HA received auto failover is disabled from the cloud and contact Panzura |

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| | | | | Technical Support. |
| 10 | SYS.HA1.16 | SYS.HA1.16: Exceeded the Peer reboot wait time.. Triggering a takeover | SYS.HA1.16: Alert when the HA Filer peer reboot time exceeds the trigger takeover time | SYS.HA1.16: The standby Filer will start a takeover because the reboot time of the Active Filer has exceeded 12 mins. |
| 10 | SYS.HA1.17 | SYS.HA1.17: Standby Initiating Takeover Action (%s) | SYS.HA1.17: Alert when HA Standby initiating takeover | SYS.HA1.17: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.18 | SYS.HA1.18: Standby: Takeover Aborted, Standby not fully up | SYS.HA1.18: Alert when HA takeover aborted, Standby not fully up | SYS.HA1.18: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.19 | SYS.HA1.19: Snapshot Sync process is still not fully up after role change-- Takeover is not feasible yet | SYS.HA1.19: Alert when HA Snapshot sync is not ready and takeover is infeasible | SYS.HA1.19: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.20 | SYS.HA1.20: Starting the takeover process | SYS.HA1.20: Alert when HA Standby is starting takeover process | SYS.HA1.20: This event is informational for Panzura Technical Support. |
| 10 | SYS.HA1.21 | SYS.HA1.21: Takeover Process did not complete | SYS.HA1.21: Alert when HA Standby takeover process did not complete | SYS.HA1.21: This event is informational for Panzura Technical Support. |
| 5 | SYS.X1.1 | SYS.X1.1: Few vnodes, $0 available | SYS.X1.1: Alert when system vnodes are not available | SYS.X1.1: Checks vnode usage as reaching max will cause slow system performance. If the issue still persists, contact Panzura Technical Support. |
| 9 | SYS.X1.2 | SYS.X1.2: No more files can be opened, $0 used | SYS.X1.2: Alert when system file handles are not available | SYS.X1.2: Go to Maintenance - Diagnostic Tools - Command Type: show-log-tail and Log File: messages , search 'table is full' in output and contact Panzura Technical Support if this output is visible. |
| 8 | SYS.X1.3 | SYS.X1.3: No more sockets can be opened, $0 used | SYS.X1.3: Alert when no system sockets are available | SYS.X1.3: Check for network saturation and contact Panzura Technical Support. |

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| 8 | SYS.X1.4 | SYS.X1.4: Memory limit $3 hit for z_memory $0 | SYS.X1.4: Alert when a system memory pool has hit limits | SYS.X1.4: Check memory pools as memory exhaustion may cause an impact to user experience. Contact Panzura Technical Support if this issue persists. |
| 9 | SYS.X1.6 | SYS.X1.6: 1GB or less memory available | SYS.X1.6: Alert when under 1GB of system memory is free | SYS.X1.6: Review Filer health in the WebUI. If this issue persists, contact Panzura Technical Support. |
| 5 | SYS.X1.7 | SYS.X1.7: High user connection load | SYS.X1.7: Alert when the max user count [CIFS or NFS] exceeds the limit for the hardware configuration | SYS.X1.7: Check local CPU, Memory, Network capacity. Increase capacity as needed. If this event occurs, contact Panzura Technical Support immediately. |
| 9 | SYS.X1.8 | SYS.X1.8: Filer is running in maintenance mode | SYS.X1.8: Alert when PZOS is running in maintenance mode | SYS.X1.8: If this event occurs, contact Panzura Technical Support immediately. |
| 6 | SYS.X1.11 | SYS.X1.11: PRC effectiveness is below 50 percent | SYS.X1.11: Alert when the performance is degraded due to a small PRC relative to the working load | SYS.X1.11: Check for new loads that might have increased cache requirements. For example: large uploads, large downloads or an increase in user count. If new loads are expected to remain, add PRC storage capacity. |
| 5 | SYS.X1.12 | SYS.X1.12: Local SMTP Service Configuration check with Filer | SYS.X1.12: Alert when there is a failure with the configured SMTP service | SYS.X1.12: Check that the SMTP configuration on the Filer matches the with SMTP service |
| 6 | SYS.X1.13 | SYS.X1.13: .startupscript_post is inconsistent | SYS.X1.13: Alert when /mnt/.startupscript_post has errors | SYS.X1.13: Either exec permissions on the /mnt/.startupscript_post file are incorrect or it has ddt-rewrite settings that are not consistent with peers. |
| 5 | SYS.X1.14 | SYS.X1.14: High swap usage | SYS.X1.14: Alert when the swap usage exceeds 0 GBs | SYS.X1.14: Filer may be using swap space due to available memory exhaustion. Go to the dashboard, create a new dashlet, and select the metrics swap_used and swap_total to view memory usage. |
| 7 | SYS.X1.15 | SYS.X1.15: Very High swap usage | SYS.X1.15: Alert when the swap usage exceeds 2 GBs | SYS.X1.15: Filer may be using swap space due to available memory exhaustion. Go to the dashboard, create a new dashlet, and select the metrics swap_used and swap_total to view memory usage. |

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| 5 | SYS.X1.18 | SYS.X1.18: Filer Disk Storage Check | SYS.X1.18: Alert when the Filer used local disk storage exceeds 65 percent | SYS.X1.18: Go to the dashboard, review the Filer health to check the normal operations state and if the issue persists, contact Panzura Technical Support. |
| 9 | SYS.X1.19 | SYS.X1.19: Filer Disk Storage exhausted | SYS.X1.19: Alert when the Filer used local disk storage exceeds 80 percent | SYS.X1.19: Local storage is used for write buffering, PRC cache and meta-data. As it fills, PZOS will rate limit users and reduce user io capacity. Add local storage to the Filer to increase capacity. If this event persists, contact Panzura Technical Support. |
| 7 | SYS.X1.20 | SYS.X1.20: Metadata has spilled to slow media | SYS.X1.20: Alert when Metadata has been written to a non SSD drive | SYS.X1.20: User performance, cloud synchronization, and peer sync will all be affected. Add SSD capacity as soon as possible. If this event persists, contact Panzura Technical Support. |
| 10 | SYS.TRP1.1 | SYS.TRP1.1: Threshold trap: IP: %s \t Trap ID: %d \t Trap Name: %s \t current_alarm_value: %d \t threshold_value: %d | SYS.TRP1.1: Verify system Threshold Traps - {pzCloudControllerHighCPUUsage, pzCloudControllerHighMemoryUsage, pzCloudControllerHighDiskUsage, pzCloudControllerHighCloudUsage, pzCloudControllerMetaDataUsage, pzSwapUsage} | SYS.TRP1.1: Contact Technical Panzura Support |
| 10 | SYS.TRP1.2 | SYS.TRP1.2: Non-Threshold trap: IP: %s \t Trap ID: %d \t Trap Name: %s | SYS.TRP1.2: Alert when metadata allocation fails - {pzTrapMetaAllocFail} | SYS.TRP1.2: Adding disks will resolve a meta-data capacity shortage. If the event persists and user impact is observed, contact Panzura Technical Support. |
| 10 | SYS.TRP1.3 | SYS.TRP1.3: Non-Threshold trap: IP: %s \t Trap ID: %d \t Trap Name: %s | SYS.TRP1.3: Alert when active Filer down - {pzTrapActiveDown} | SYS.TRP1.3: In an HA configured pair, the secondary has noticed that the primary is inactive or unavailable. If HA autofailover is not engaged, the administrator must verify the primary Filer availability or trigger an HA failover from this secondary. |

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| 9 | SYS.TRP1.4 | SYS.TRP1.4: Non-Threshold trap: Trap ID: %d \t Trap Name: %s \t desc: %s | SYS.TRP1.4: Alert on system Non-Threshold Traps - {pzAutoFailover, pzRegularFailover, pzAlertTrap, pzCloudWriteFailureTrap, pzWarnTrap, pzInfoTrap} | SYS.TRP1.4: This event is a general system information Event. It alerts when HA failover occurs, a cloud write failure occurs, etc. |
| 9 | SYS.WUI1.2 | SYS.WUI1.2: Metadata spilled over to HDD devices | SYS.WUI1.2: Alert when metadata spills over to HDD devices. | SYS.WUI1.2: This occurs on hybrid (Flash and spinning disk) systems when meta-data overflows onto spinning disk from Flash. This will impact user performance. Additional meta-data Flash capacity should be added. If the event persists and user impact is observed, contact Panzura Technical Support. |