**Summary Report**

1. \*\*System Information\*\*:

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 14 minutes

2. \*\*Chassis Temperatures\*\*:

- Ambient Temperature: 31°C (87°F)

- Outlet Temperature: 35°C (95°F)

- Fan Speeds: Normal

- Fan Power Supplies: Normal

- Power Supplies: Battery A (-52.86V), Battery B (-52.88V)

3. \*\*Active Alarms\*\*:

- Total Active Alarms: 59

- Critical Alarms: Various linkDown and power-related alarms

4. \*\*Hardware Summary\*\*:

- Management Cards (m1, m2): Running, OK status

- Fabric Cards (a, b): Running, OK status

- Line Cards (1, 3): Running, OK status

5. \*\*Card Statistics\*\*:

- CPU Utilization: Ranges from 10.31% to 23.70%

- Memory Usage: Varies per card

- Card Uptime: 3 days, 16 hours to 3 days, 16 hours

6. \*\*Fatal Data\*\*:

- No Bootrom fatal records found

- Some cards have had fatal errors in the past

7. \*\*Line Card Status\*\*:

- Various ONU ports are out of service

8. \*\*Heartbeat and Fault Monitoring\*\*:

- Heartbeat checks enabled with response times recorded

- Power fault monitoring supported

**#### System Overview Report:**

- \*\*Hardware\*\*: Zhone MXK 1419

- \*\*Software Version\*\*: MXK 3.4.2.272

- \*\*Uptime\*\*: 3 days, 16 hours, 14 minutes

#### Shelf Controller Status:

- \*\*Uptime\*\*: 3 days, 16 hours, 14 minutes

- \*\*Chassis Temperatures\*\*:

- Ambient: 31°C / 87°F

- Outlet: 35°C / 95°F

- \*\*Fan Tray Status\*\*:

- Upper Fan Tray: Normal

- Lower Fan Tray: Normal

- \*\*Power Supplies\*\*:

- Battery A: -52.86V (Normal)

- Battery B: -52.88V (Normal)

- \*\*Critical Alarms\*\*:

- System and all cards have critical alarms set

#### Cards Information:

1. \*\*Management Cards\*\*:

- m1: MXK-MC-TOP, 14U MGMT W/ TOP

- m2: MXK-MC-TOP, 14U MGMT W/ TOP

2. \*\*Fabric Cards\*\*:

- a: MXK-FC-AETG8, 14U FABRIC W/ 8x10G AE

- b: MXK-FC-AETG8, 14U FABRIC W/ 8x10G AE

3. \*\*Line Cards\*\*:

- 1: MXK-LC-GP16, LINE CARD W/ 16 GPON

- 3: MXK-LC-GP16-3, LINE CARD W/ 16 GPON and TOP

- 5: MXK-LC-AEG32, LINE CARD W/ 32 1G AE

- 9: MXK-LC-AETG16, LINE CARD W/ 16 10G AE

#### Alarm Details:

- \*\*Active Alarms\*\*: 59

- \*\*Total Alarms\*\*: 105

- \*\*Alarm Types\*\*:

- Critical: linkDown, rx power out of range

- Minor: linkDown

### Insights:

1. The system has been running without any fatal errors for the past 3 days and 16 hours.

2. Critical alarms are present for various ports and cards, indicating potential network connectivity issues.

3. The fan trays, power supplies, and temperatures are within normal operating ranges.

4. Management, fabric, and line cards are functioning correctly with no major issues reported.

5. A recent fatal error was recorded in Line Card 3 (MXK-LC-GP16-3) involving the `taskClock` task.

### Recommendations:

1. Investigate and address the critical alarms to ensure optimal network performance and reliability.

2. Monitor the system closely for any new alarms or issues, especially related to the reported fatal error in Line Card 3.

3. Regularly check the chassis temperatures, fan tray status, and power supply health to prevent any hardware failures.

4. Consider performing a detailed diagnostic check on Line Card 3 to identify and resolve the `taskClock` task-related error.

5. Schedule routine maintenance and updates to keep the system software version up-to-date for enhanced security and performance.

**\*\*Chassis Temperature Report\*\***

### Overview:

The chassis temperature monitoring system of the MXK 1419 device is providing critical insights into the environmental status of the system. The temperatures of various components within the chassis are being constantly monitored, including ambient and outlet temperatures, as well as the temperature readings of different fan trays.

### Insights:

1. \*\*Ambient Temperature:\*\*

- Current Ambient Temperature: 31°C (87°F)

- The ambient temperature indicates the overall temperature surrounding the equipment, which is within the normal operating range.

2. \*\*Outlet Temperature:\*\*

- Current Outlet Temperature: 35°C (95°F)

- The outlet temperature represents the temperature at the output of the chassis and is also within the normal operating range.

3. \*\*Fan Trays:\*\*

- Both the upper and lower fan trays are operating normally with no issues reported in terms of power supplies, fan speeds, or alarms.

4. \*\*Critical Alarms:\*\*

- The system is reporting critical alarms for various components such as system and cards m1, m2, a, and b. These critical alarms should be investigated further to ensure the proper functioning of the system.

5. \*\*Line Cards:\*\*

- The line cards (1, 3, 5, 9) are running with acceptable CPU utilization and memory usage, indicating normal operation.

6. \*\*Management Cards:\*\*

- Management cards m1 and m2 are also functioning normally with acceptable CPU and memory usage.

7. \*\*Fabric Cards:\*\*

- Fabric cards a and b are operational with normal CPU and memory utilization.

8. \*\*Environmental Monitoring:\*\*

- The uptime for the chassis is reported to be 3 days, 16 hours, and 14 minutes, indicating continuous operation without major interruptions.

### Recommendations:

1. \*\*Investigate Critical Alarms:\*\*

- Immediate attention should be given to resolving the critical alarms set for various system components to prevent any potential issues that could impact the system's performance.

2. \*\*Regular Monitoring:\*\*

- Continue monitoring the chassis temperatures and environmental status regularly to ensure optimal performance and prevent overheating issues.

3. \*\*Maintenance Check:\*\*

- Consider scheduling a maintenance check to inspect the system components, including fans, power supplies, and temperature sensors, to address any underlying issues proactively.

4. \*\*Update Firmware:\*\*

- Ensure that the firmware of all components is up to date to benefit from the latest bug fixes and enhancements that can improve system stability.

5. \*\*Cooling System Evaluation: \*\*

- Evaluate the cooling system effectiveness to ensure that the temperature levels are maintained within the specified operating range to prevent any thermal-related failures.

6. \*\*Emergency Response Plan: \*\*

- Have an emergency response plan in place in case of critical temperature spikes or system failures to minimize downtime and prevent data loss.

**### Hardware Report**

#### System Overview:

- \*\*Hardware Model\*\*: MXK 1419

- \*\*Software Version\*\*: MXK 3.4.2.272

- \*\*Uptime\*\*: 3 days, 16 hours, 14 minutes

#### Components:

1. \*\*Management Cards\*\*:

- m1: \*MXK-MC-TOP, 14U MGMT W/ TOP (RUNNING)

- m2: MXK-MC-TOP, 14U MGMT W/ TOP (RUNNING)

2. \*\*Fabric Cards\*\*:

- a: \*MXK-FC-AETG8, 14U FABRIC W/ 8x10G AE (RUNNING+TRAFFIC)

- b: MXK-FC-AETG8, 14U FABRIC W/ 8x10G AE (RUNNING+TRAFFIC)

3. \*\*Line Cards\*\*:

- 1: MXK-LC-GP16, LINE CARD W/ 16 GPON (RUNNING)

- 3: MXK-LC-GP16-3, LINE CARD W/ 16 GPON and TOP (RUNNING)

#### Critical Alarms:

- \*\*Active Alarm Count\*\*: 59

- \*\*Total Alarm Count\*\*: 105

- \*\*Critical Alarms\*\*:

- linkDown for various interfaces

- rx power out of range for ONU

#### Environmental Status:

- \*\*Chassis Temperatures\*\*:

- Ambient: 31°C (87°F)

- Outlet: 35°C (95°F)

- \*\*Fan Trays\*\*:

- Upper Fan Tray: Normal

- Lower Fan Tray: Normal

- \*\*Power Supplies\*\*:

- Battery A: -52.86V, Battery B: -52.88V (Normal)

#### Recommendations:

1. Investigate and resolve the critical alarms related to linkDown and power issues to ensure network stability.

2. Monitor and maintain proper cooling for the system to avoid overheating.

3. Regularly check and replace any faulty components like fans or power supplies to prevent hardware failures.

4. Ensure timely software updates and patches to address any known issues and improve system performance.

This hardware report provides an overview of the system components, critical alarms, and environmental status. It is recommended to address the critical issues promptly to maintain system reliability and performance.

**### Detailed Report on Cards with Insights and Recommendations**

#### Management Cards:

1. \*\*m1 (MXK-MC-TOP)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 14 minutes

- CPU Utilization: 4% usage, 11.62% memory utilization

- Status: Running and functional

2. \*\*m2 (MXK-MC-TOP)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 3 minutes

- CPU Utilization: 0% usage, 10.31% memory utilization

- Status: Running and functional

#### Fabric Cards:

3. \*\*a (MXK-FC-AETG8)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 9 minutes

- CPU Utilization: 9% usage, 23.70% memory utilization

- Status: Running and functional

4. \*\*b (MXK-FC-AETG8)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 7 minutes

- CPU Utilization: 9% usage, 23.68% memory utilization

- Status: Running and functional

#### Line Cards:

5. \*\*1 (MXK-LC-GP16)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 4 minutes

- CPU Utilization: 4% usage, 23.68% memory utilization

- Status: Running and functional

6. \*\*3 (MXK-LC-GP16-3)\*\*

- Software Version: MXK 3.4.2.272

- Uptime: 3 days, 16 hours, 5 minutes

- CPU Utilization: 2% usage, 23.39% memory utilization

- Status: Running and functional

#### Insights:

- All cards are running the same software version (MXK 3.4.2.272) and have been operational for over 3 days.

- Management cards m1 and m2 show low CPU utilization and memory usage, indicating optimal performance.

- Fabric cards a and b also show similar low CPU and memory usage, suggesting efficient operation.

- Line cards 1 and 3 exhibit minimal CPU usage and moderate memory utilization, indicating stable performance.

#### Recommendations:

1. \*\*Investigate Fatal Data\*\*: Investigate the fatal data records for card 3 to address the reported taskClock error.

2. \*\*Regular Monitoring\*\*: Continue monitoring CPU and memory utilization to ensure optimal performance and identify any potential issues early on.

3. \*\*Firmware Updates\*\*: Consider updating the firmware to ensure the system is running on the latest version for enhanced stability and security.

**Fault Report**

Based on the log content provided, here is a summary of the faults seen along with insights and recommendations:

1. \*\*Faults Detected:\*\*

- Various linkDown alarms for different interfaces (both critical and minor).

- Chassis temperature readings are normal, but there are critical alarms set for system and various cards.

- Fatal error records found for taskClock on slot 3.

2. \*\*Insights:\*\*

- The system is experiencing multiple linkDown alarms across different interfaces, indicating connectivity issues.

- Critical alarms set for system and cards may indicate potential hardware or software issues that need attention.

- The fatal error record for taskClock on slot 3 suggests a specific issue with that slot which requires investigation.

3. \*\*Recommendations:\*\*

- \*\*Network Connectivity:\*\*

- Investigate the linkDown alarms to identify and resolve the connectivity issues affecting the network.

- Check for any physical cable or port issues that could be causing the linkDown alarms.

- \*\*Hardware and Software Issues:\*\*

- Address the critical alarms set for system and cards by reviewing the specific alarms and taking necessary actions.

- Perform a detailed diagnostic check on the cards reporting critical alarms to identify and rectify any hardware faults.

- \*\*Investigate Fatal Error on Slot 3:\*\*

- Given the fatal error record on slot 3, conduct a thorough analysis to determine the root cause of the taskClock error.

- Check for any software updates or patches that could potentially resolve the fatal error issue.