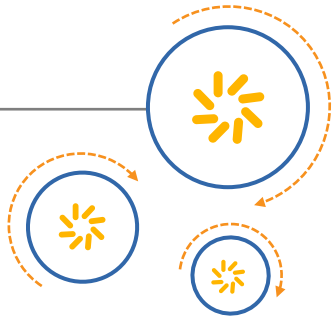
Qualcomm Technologies, Inc.



Qualcomm® Snapdragon™ Display Triage Tool

User Guide

80-P9417-1 B

November 16, 2016

Qualcomm Technologies, Inc.
5775 Morehouse Drive
San Diego, CA 92121
U.S.A.

Revision history

Revision	Date	Description
A	November 2016	Initial release
B	November 2016	Minor formatting

Contents

1 Introduction

1.1 Purpose

This document provides information about reserve parameters for AF tuning.

1.2 Conventions

Function declarations, function names, type declarations, attributes, and code samples appear in a different font, for example, `#include`.

Code variables appear in angle brackets, for example, `<number>`.

Commands to be entered appear in a different font, for example, **`copy a:*.* b:`**.

1.3 Technical assistance

For assistance or clarification on information in this document, submit a case to Qualcomm Technologies, Inc. (QTI) at https://createpoint.qti.qualcomm.com/.

If you do not have access to the CDMATech Support website, register for access or send email to support.cdmatech@qti.qualcomm.com.

2 Overview

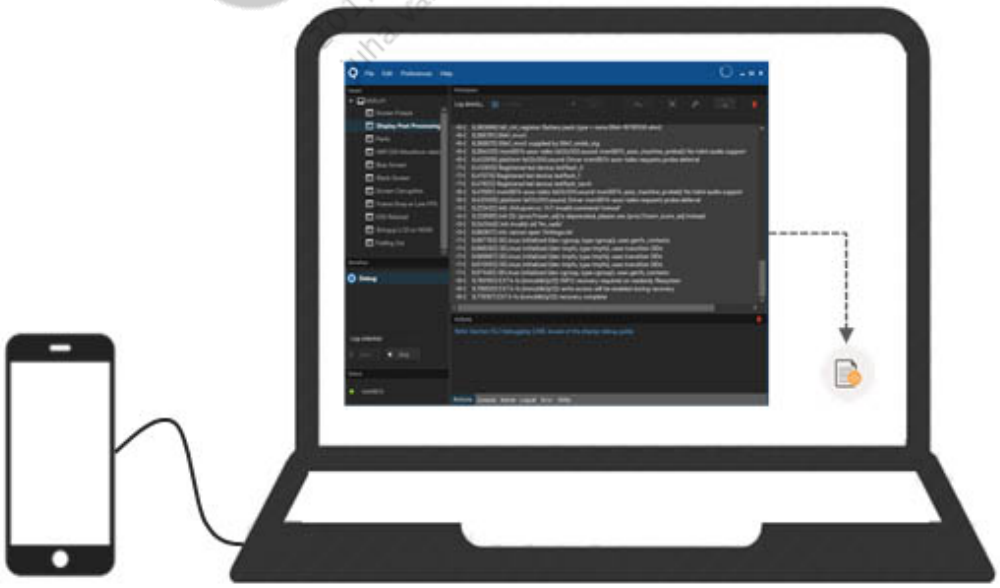
The Qualcomm® Snapdragon™ Triage tool, used on the MSM8998, MSM8996, MSM8953, and MSM8937 targets is a PC-based debug tool, which addresses the following common concerns while debugging display issues:

- Errors occurring in the manual generation of logs
- Delays in enabling the right set of logs
- Confusion about which log is the correct one for a specific issue

The tool provides the following solutions:

- Provide a simple UI that allows the user to select an issue and generate the appropriate log
- Reduces the number of queries for documents by identifying the most relevant ones
- Allows an automated process to replace an error-prone manual process

The tool runs on Windows 7, Windows 8, and Windows 10. Customers are advised to use the tool whenever possible to reduce manual effort.



3 Prerequisites and setup

3.1 Installation

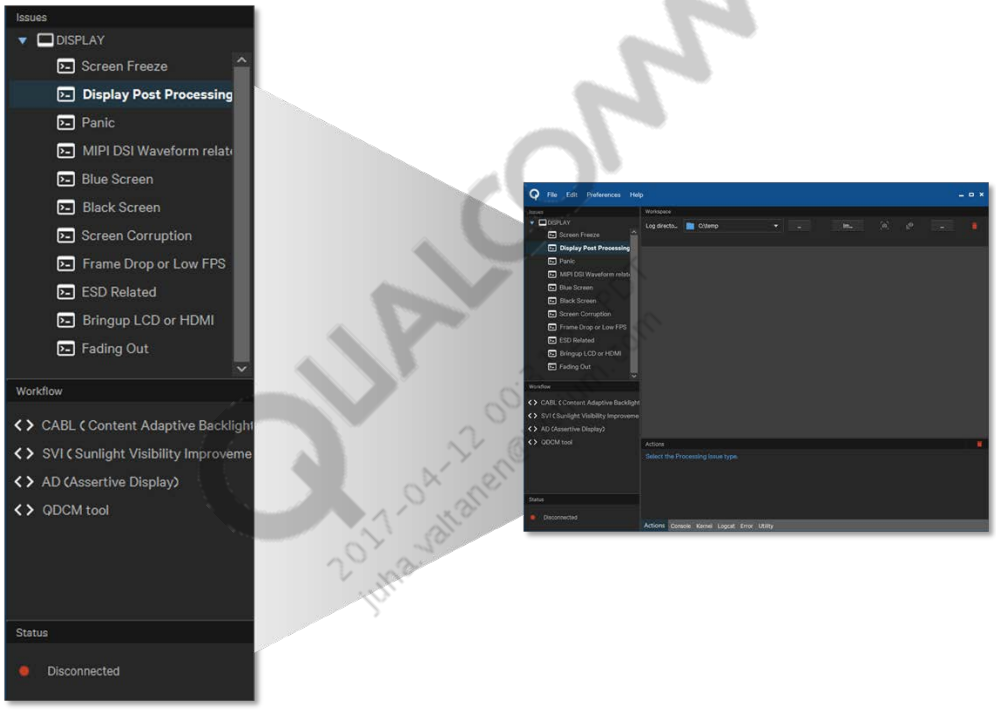
To install the tool:

1. Install JDK 8.
2. Verify if the Java version is updated in the command prompt in the screen shown below.

3. Run the smart utility installed that is shared on CreatePoint, which generates in .exe under C:\Program Files (x88)\Qualcomm\SmartUtility Application.
4. Run the .exe file.

4 Tool description

This chapter describes the various sections in the UI of the tool to understand its operation described in the later sections.



4.1 Display triage tool user interface

Issues panel

- Lists the issues that are available for the user to pick for debugging
- A list is populated based on the most commonly observed issues
- Contact sdtt.help@quicinc.com if any new issue needs to be added

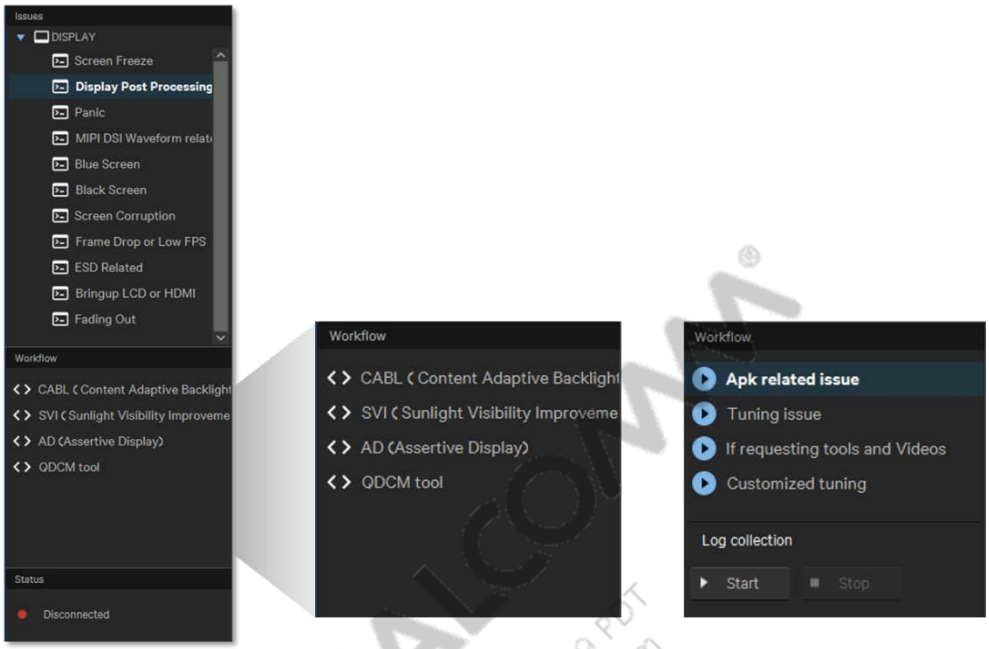
Workflow panel

- Based on issue that is chosen each issue can have different set of options to choose from
- Each option can further have more commands to try is displayed when the option is clicked

Status window

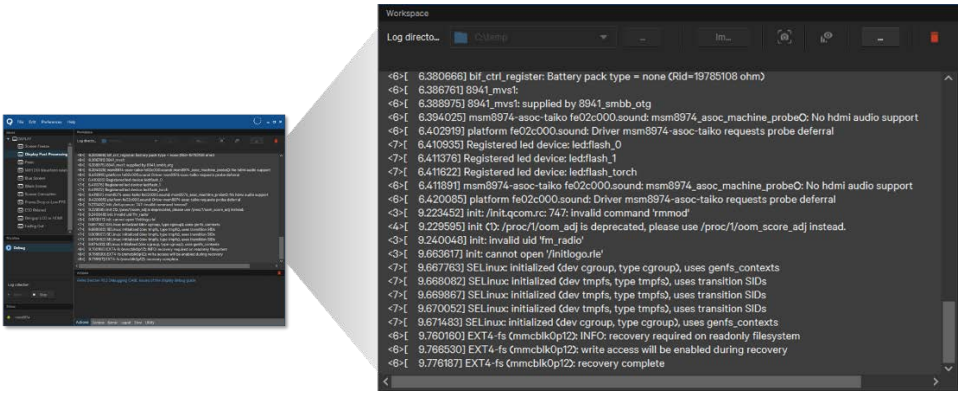
Shows the device connection status based on the `adb` device status.

Tool issues and workflow panel synergy

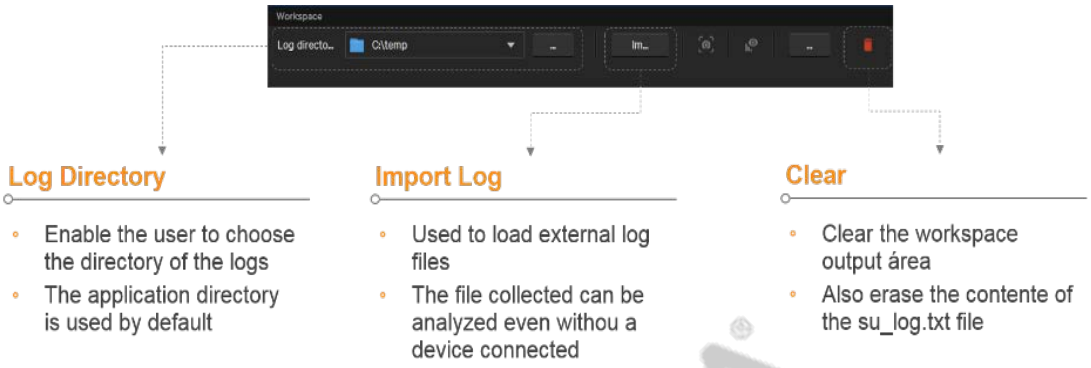


- Works in a drill-down manner
- Once an issue is selected, a set of options is opened in the Workflow panel
- Workflow panel contains all the options related to the issue
- User can access an option to see the commands related to the particular issue for that chipset
- Workflow contents are refreshed automatically when the option is clicked

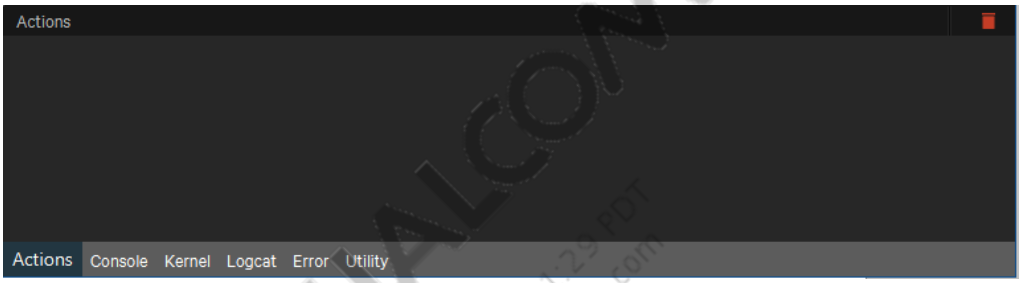
Tool workspace



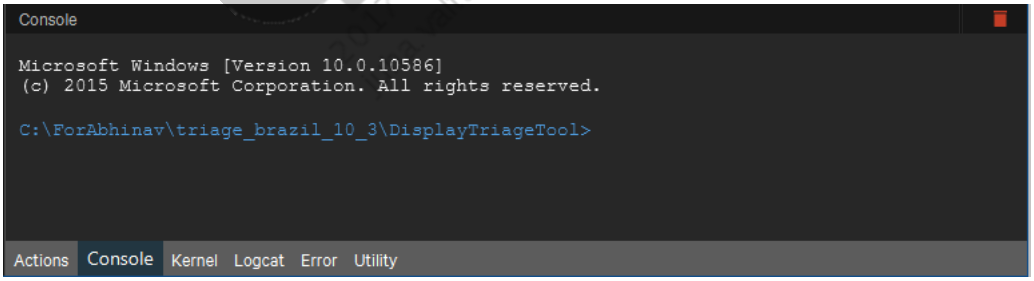
- Logs of the output of the commands being executed on the device
- Screenshot, Systrace, import log options are available under this tab



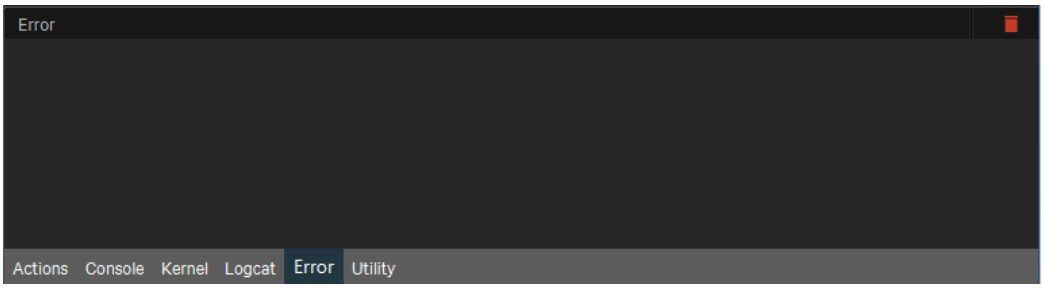
Important console tabs



- Actions tab prompts texts guiding the user through debugging an issue
- It provides specific instructions to be performed after each command by the user for each issue



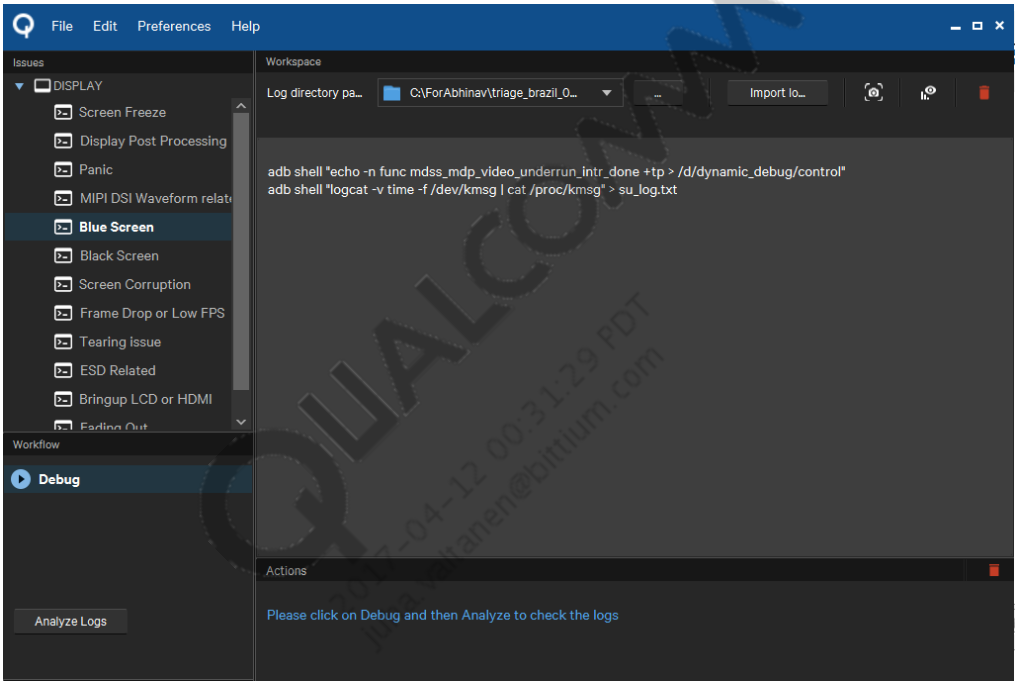
- The console tab opens a terminal where commands can be entered directly



- Any tool error in operation will be displayed under the Error tab.

5 Tool operation for live debugging

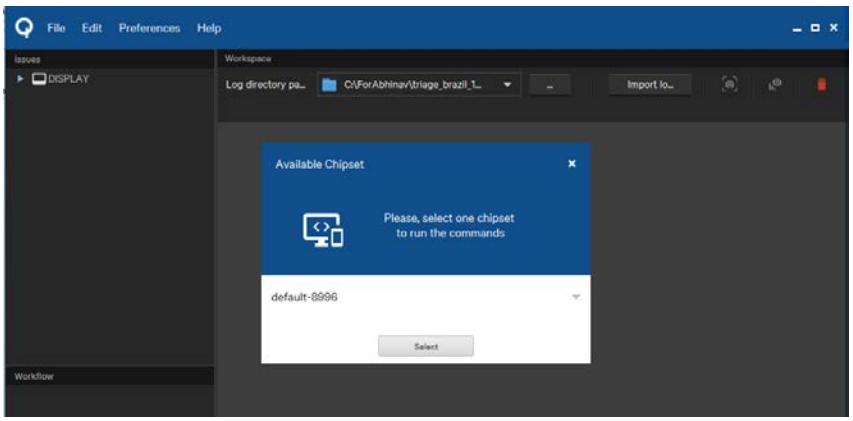
If installed correctly, the tool shows the following window when launched:



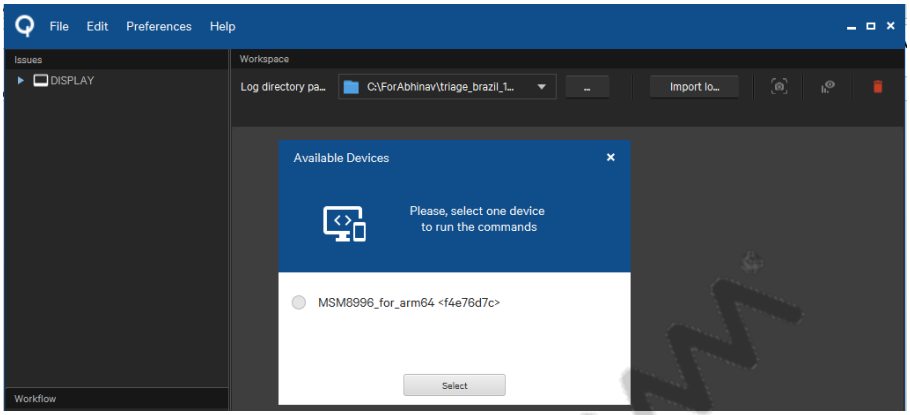
5.1 Sample usage for a display issue

To use the tool:

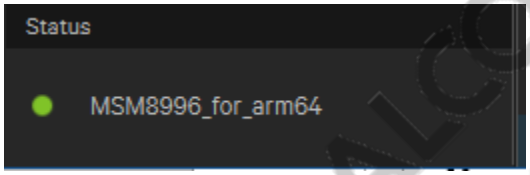
1. Click Preferences, select Chipset, and choose the relevant chipset.



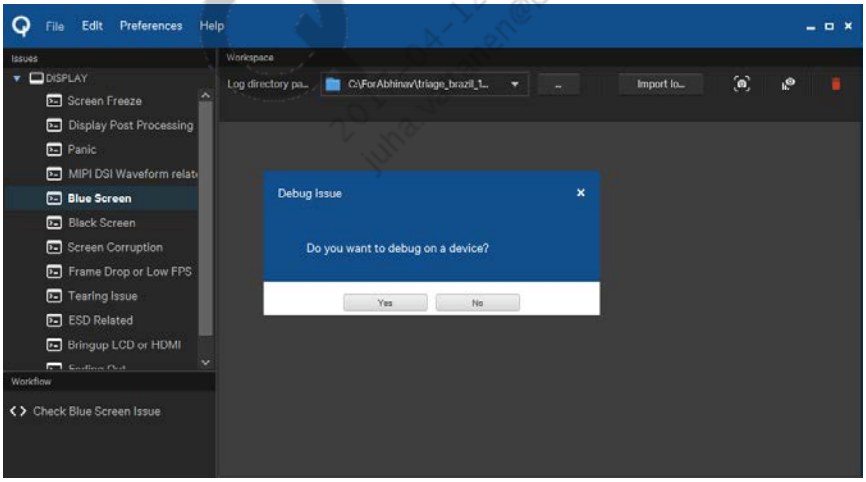
2. Select the specific device on which the tool is run by enumerating it with adb.



Once the device is selected, a green button displays along with the unique device ID.

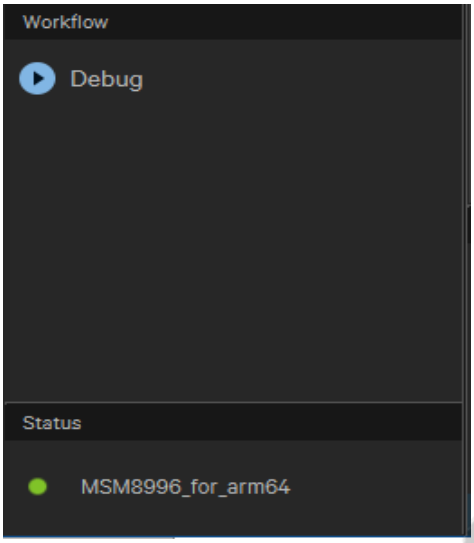


3. Expand the list of issues and select the one that needs addressing. In the following example, Blue Screen has been selected.

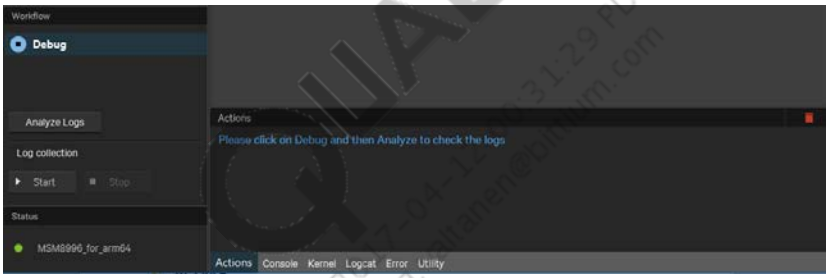


4. Choose whether the online or offline debug option is intended.

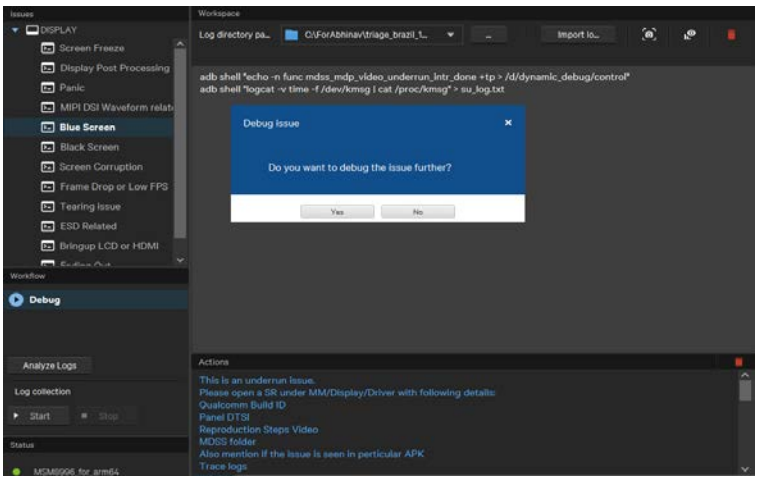
5. Click Debug in the following workspace window.



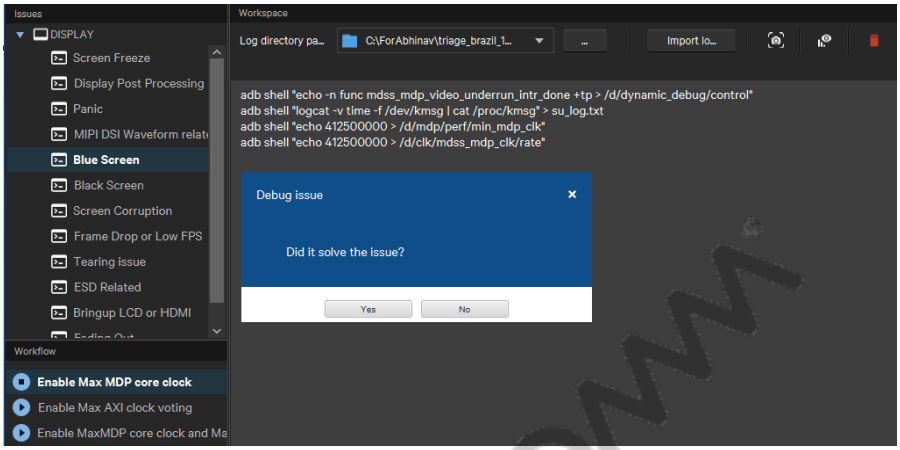
6. Reproduce the issue and click Start to capture the logs after the logs are enabled.



7. Click Stop and click Analyze Logs after the issue is reproduced. In the following example, the tool has searched and discovers an underrun issue.



8. Click Yes and read the instructions listed in the workflow window, selecting an option to debug further.



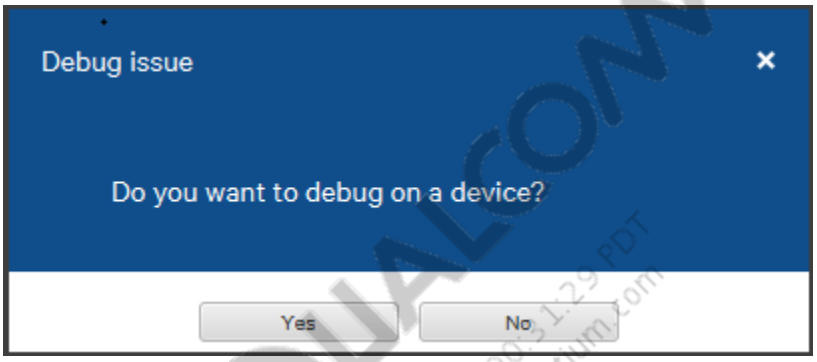
Once an option is chosen, select whether the issue has been fixed. If Yes is selected, more specific logs can be enabled. Selecting No presents a list of remaining options.

9. After specific logging is enabled, reproduce the issue. Once logs are captured for this issue, attach the `su_log.txt` and `user_actions.txt` to the SR. These files are placed in the same location as the working directory of the tool.

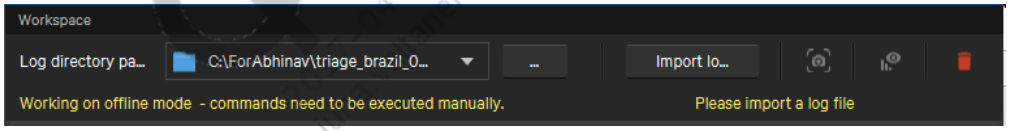
6 Tool operation from logs (offline)

The steps for the Offline mode operation are similar to that of Live mode operation. However with the following variations:

1. Select No for the prompt "Do you want to debug on a device?"



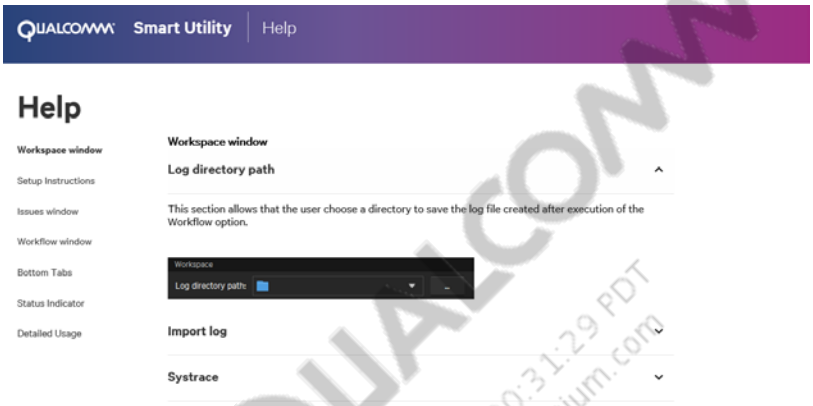
The tool shows the message in yellow.



2. Import a log file for the tool to analyze. The remaining steps are identical to live operation with the exception that the commands are not executed ON the device but only shown to the user to execute them when they have the device.

7 Troubleshooting

The Help section explains control window of the triage tool and also the step-to-step procedure to debug an issue in both On-Device and Offline mode.



For further help, use the email list sdtt.help@quicinc.com

You may provide feedback about the tool using the email list sdtt.feedback@quicinc.com