

Debugging with Logcat

In IntelliJ IDEA, debugging of Android applications is provided through support of the [logcat](#) functionality that stores a log of system debug output. The messages include a stack trace when the emulator throws an error, so you can [navigate to the exception location](#) in the source code.

The *logcat* functionality is handled by the [Android Debugging Bridge](#) (adb). This service supports interaction between your development environment, Android devices, emulators and other tools, for example, [DDMS](#). Some of these tools may conflict with IntelliJ IDEA when the *logcat* functionality is enabled. Therefore, before switching from IntelliJ IDEA to an adb-managed tool, you need to [disable logcat](#) or exit IntelliJ IDEA.

In IntelliJ IDEA, the *logcat* functionality is available through the **Logcat** tab of the **Android** tool window. By default, the tab is activated automatically every time an application is deployed and launched successfully. You can suppress automatic showing of the tab by clearing the **Show logcat automatically** check box in the **Run/Debug configuration: Android Application** dialog box.

To [improve the visibility](#) of information in the tool window, you can restrict the range of messages to be displayed to a certain severity.

On this page:

- [Toggling the Logcat functionality on and off](#)
- [Showing and hiding the Logcat tab automatically](#)
- [Defining the range of messages to display](#)
- [Showing only messages that refer to a specific process](#)
- [Showing only messages with a certain priority](#)
- [Creating and applying filter configurations](#)

Toggling the Logcat functionality on and off

- To enable logcat, choose **Tools | Android | Enable ADB Integration** on the main menu.
- To disable logcat, choose **Tools | Android | Disable ADB Integration** on the main menu.

Showing and hiding the Logcat tab automatically

By default, the **Logcat** tab is activated automatically every time an application is deployed and launched successfully. You can suppress automatic showing of the tab by clearing the **Show logcat automatically** check box in the **Run/Debug configuration: Android Application** dialog box.

1. Start creating an Android run/debug configuration, see [Creating an Android Run/Debug Configuration](#).
2. On the [Run/Debug Configuration: Android](#) page that opens, specify the configuration name and choose the module to apply the current configuration to.
3. Switch to the **Logcat** tab.
4. Clear the **Show logcat automatically** check box.

Defining the range of messages to display

At any time during a debug session, you can switch to the **Android** tool window and define the range of messages to display. This can be done in three ways:

- By restricting the displayed messages to those that refer to a specific process.
- By appointing the relevant message priority in the **Log Level** area.

- By filtering out messages according to user-defined filter configurations.

Showing only messages that refer to a specific process

1. Open the **Devices / Logcat** tab and press the **Only show logcat for selected process** toggle button .
2. From the **Device** drop-down list, choose the physical device or the emulator where the debugged application is running.
3. From the list that shows all the processes that are currently running on the chosen device, select the process you are interested in. The **Logcat** pane shows only the messages that refer to the selected process.

Once you have pressed the toggle button, you do not need to release it and press anew to view the log on another process. Just keep the toggle button pressed and switch between processes and view the log for them.

Showing only messages with a certain priority

- Open the **Devices / Logcat** tab and choose the **priority**  of messages to display from the **Log Level** drop-down list on the toolbar. The available options are:
 - **Verbose**
 - **Debug**
 - **Info**
 - **Warn**
 - **Error**
 - **Assert**

Creating and applying filter configurations

A *filter configuration* is a set of *filtering parameters*. Applying *filter configurations* provides more flexible control over the type and amount of information displayed than just specifying the information type by choosing a *message priority* in the **Log level** drop-down list.

Open the **Devices / Logcat** tab and configure a list of filter configurations and appoint the relevant one to apply in the **Filters** are on the toolbar:

- To have a filter applied, choose it from the **Filter** drop-down list.
- To have all the log information displayed, choose **No Filters** from the drop-down list.
- To create a new *filter configuration*, choose **Edit Filter Configuration**. In the **Create New Logcat Filter** dialog box that opens, click the **Add** toolbar button **+** and specify the *filtering parameters* based on various factors:
 - **Log Tag**: use this parameter to have only messages from a certain **component** displayed. Type the regular expression to specify the *tag* that indicates the relevant system component, such as *activity*, *activity*, etc.. For more details, see [Filtering Log Output](#).
 - **Log Message**: use this parameter to have only messages that contain certain elements or character strings displayed. Type the regular expression that defines specify the character string to detect.
 - **Package Name**: use this parameter to have only messages that refer to a specific Java package (class path) displayed.
 - **PID**: use this parameter to have only messages that refer to a specific process (process ID) displayed.
 - **Log Level**: use this parameter to have only messages with a certain *priority* displayed, see [Filtering Log Output](#) for details.

To update a filter, select it in the list and change the filtering parameters.

- To remove a filter configuration from the list, choose **Edit Filter Configuration**. In the **Create New Logcat Filter** dialog box that opens, select the filter and click the **Delete** toolbar button **-**.

See Also

Concepts:

- [Running, Debugging and Testing](#)

Procedures:

- [Monitoring the Debug Information](#)
- [Debugging a Running Application](#)
- [Android](#)

Reference:

- [Android Tool Window](#)
- [Android Reference](#)

Web Resources:

- [Developer Community](#)