

Pure Wayland toolkit plan proposal

XWayland server provides limited capabilities for X11 desktop applications (see [X11 Application Support](#) and [JDK-8269245](#)). In order to get full support of the desktop features we need to implement a pure wayland client toolkit for java. Wayland architecture in [many ways](#) differs from X11, so we cannot reuse XAWT even for basic capabilities. The new toolkit should be implemented from scratch. Here are some major chunks of work:

- Event handling
 - Dispatch native events on EDT, to avoid potential race conditions when the state is updated both from EDT and toolkit thread. See the full proposal [here](#)
- Graphics devices support
 - Onscreen/offscreen Wayland surface management
 - Adopt OGL pipeline for rendering on Wayland surfaces
 - Implement a new rendering pipeline based on Vulkan (for better performance)
- java.awt.Robot
 - Sending input events
 - Reading screen data (at least current java application windows)
- Client-side decorations for windows
 - Swing internal frames rendering code can be reused