

Testing with WLCS

The (aspirationally named!) WayLand Conformance Suite



Why conformance test?

- Wayland is a *protocol*
- Protocols are only valuable if they keep promises
- *Every* Wayland implementation is making these promises

WLCS architecture

- Compositor provides a plugin
 - Hooks to start/stop compositor, inject input, manipulate windows, etc
 - Hooks are versioned
- `wlcs` binary will load the plugin & run the tests
 - Currently have 1160 test cases
- Tests run in process
 - Can just trace execution from test to compositor in `gdb`

Sample Test

```
TEST_F(LayerSurfaceTest, specifying_zero_size_without_anchors_is_an_error)
{
    try
    {
        zwlr_layer_surface_v1_set_size(layer_surface, 0, 0);
        commit_and_wait_for_configure();
    }
    catch (wlcs::ProtocolError const& err)
    {
        EXPECT_THAT(err.interface(), Eq(&zwlr_layer_surface_v1_interface));
        // The protocol does not explicitly state what error to send here; INVALID_SIZE seems most appropriate

        EXPECT_THAT(err.error_code(), Eq(ZWLR_LAYER_SURFACE_V1_ERROR_INVALID_SIZE));
        return;
    }
    FAIL() << "Expected protocol error not raised";
}
```

Availability & licensing

- <https://packages.debian.org/wlcs>
 - <https://packages.ubuntu.com/wlcs>
 - <https://packages.fedoraproject.org/pkgs/wlcs/wlcs/>
 - <https://pkgs.alpinelinux.org/packages?name=wlcs>
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- GPLv2 and GPLv3
 - No CLA

Go forth and test!

[github/MirServer/wlcs](https://github.com/MirServer/wlcs)
[#mir-server:matrix.org](https://matrix.org)
discourse.ubuntu.com