State of the Shell

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Welcome!

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Mutter

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Explicit buffer readiness

- Heavy OpenGL less likely to negatively effect compositor framerate
- Smoother overall experience

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Experimental HDR mode

What we now have

- Not proper HDR
- Meant to make it easy to test the HDR kernel support

Then what?

- Dull down the shell on HDR monitors

KMS thread

- Real time scheduled
- Cursor updates bypasses main thread
- Building block for future improvements

Experimental VRR

- Dor Askayo
- Lots of usability issues to figure out, including better kernel behavior
- Want to have at least something first

No more GTK3*

- No GTK at all in compositor process
- X11 window decorations handled in dedicated GTK4 client
- New tray icon implementation
- * GTK3 still used for some tests

Plumbing input with libei

- More extensible remote desktop input support
- Capture input

Input improvements

- Grabs
  - Active
  - Implicit
- Gestures

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Fractional scaling

- Now also communicated to Wayland clients via a new protocol
- Example: 1920x1080@125%
  - 1536x864x2^2 = 5308416
  - 1920x1080 = 2073600
  - 2073600 / 5308416 ≈ 0.39
- Pixel alignment – sharper results for non-fullscreen windows and subsurfaces (@msizanoen1)

YUV support

- New optimal fast paths now possible
- Good for performance / battery life everywhere
- Especially good for embedded and mobile
- Crucially good for development for embedded systems
- Future work: more formats, direct-scanout improvements (libliftoff)

Special Mentions

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Special Mentions

- Triple buffering by Daniel van Vugt
- Better default (fractional) scale selection by Adrian Vovk
- Improvements for remote login by Pascal Nowack and Joan Torres

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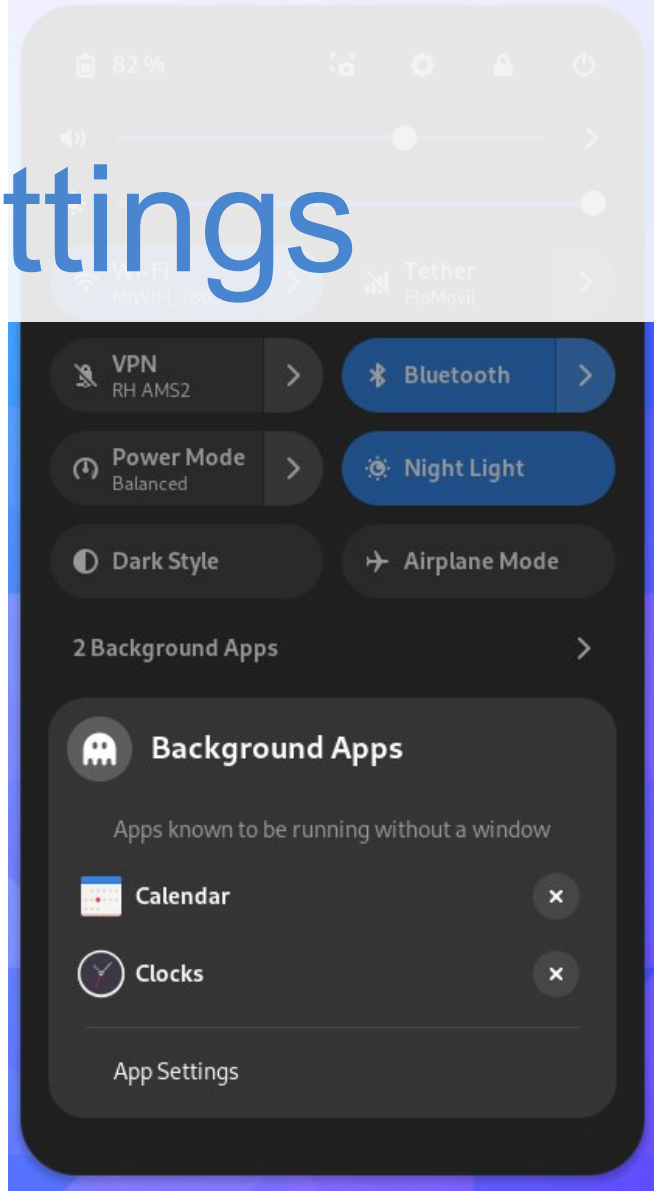
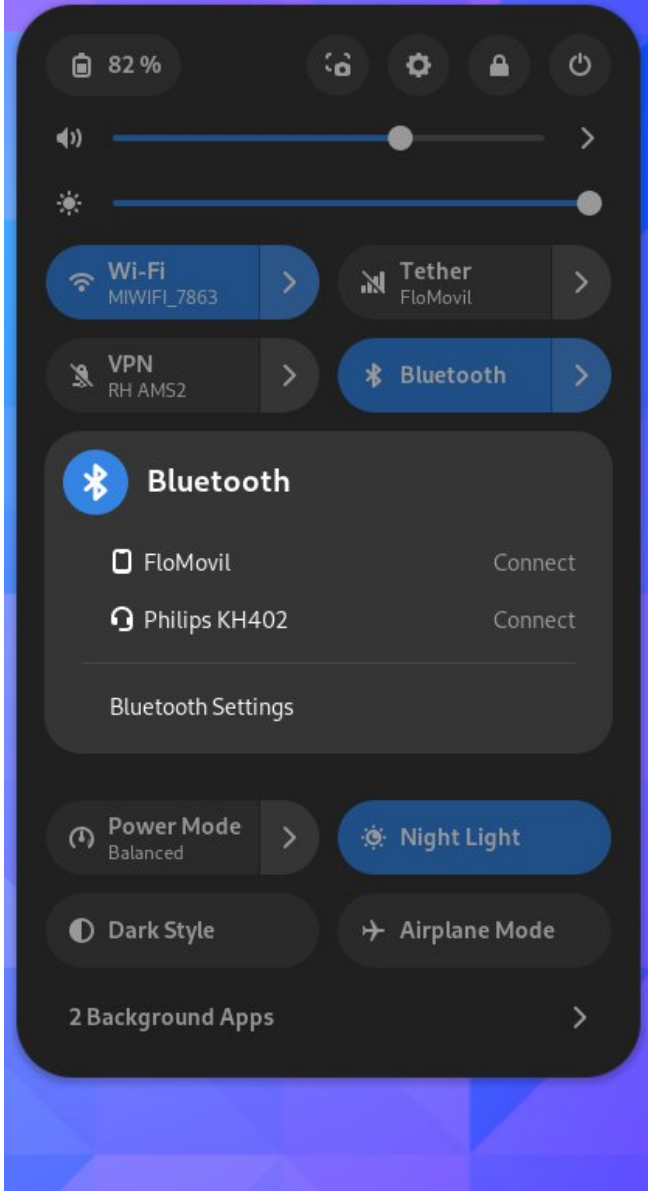
Quick Settings

- Split buttons
- Subtitles
- Bluetooth devices menu
- Background apps





Recording improvements

- Screen recorder aware of predicted frame times
- More stable recordings

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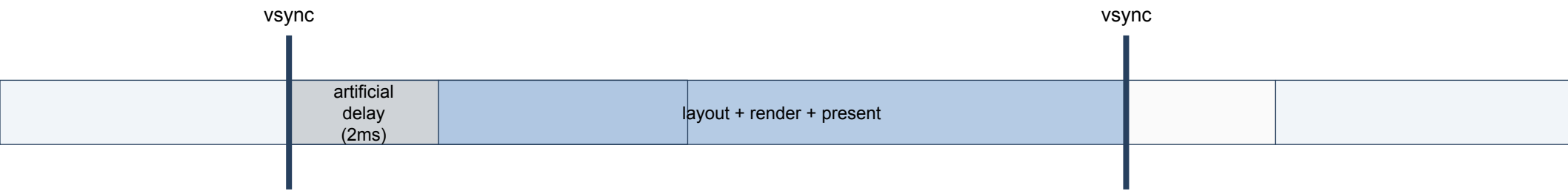

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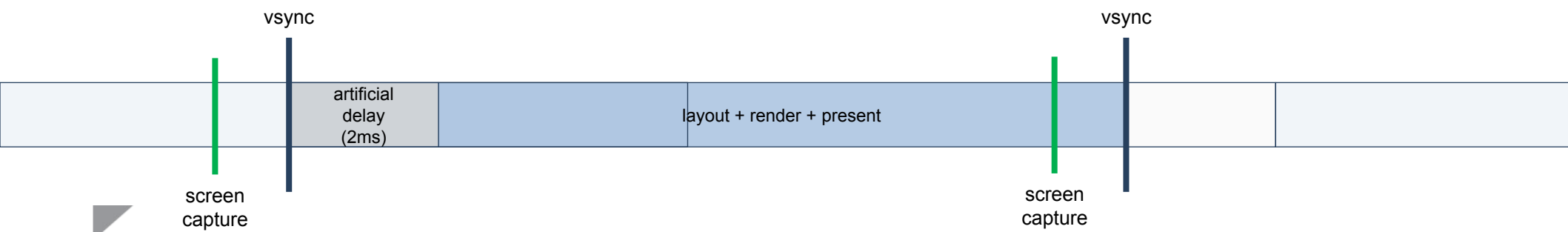

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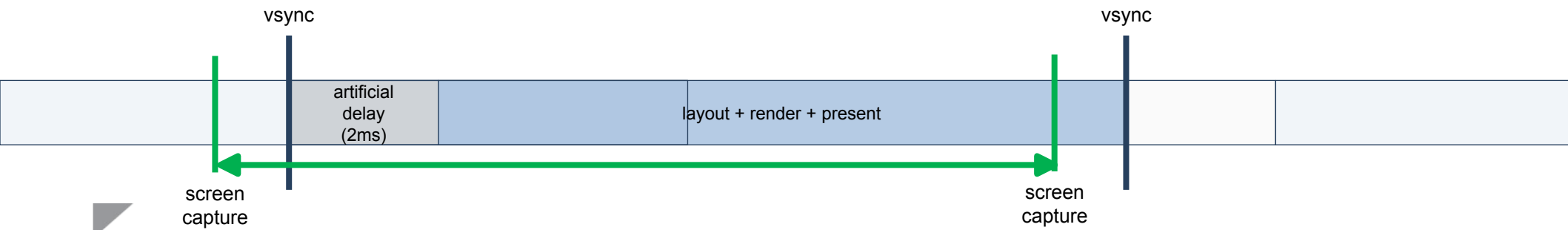

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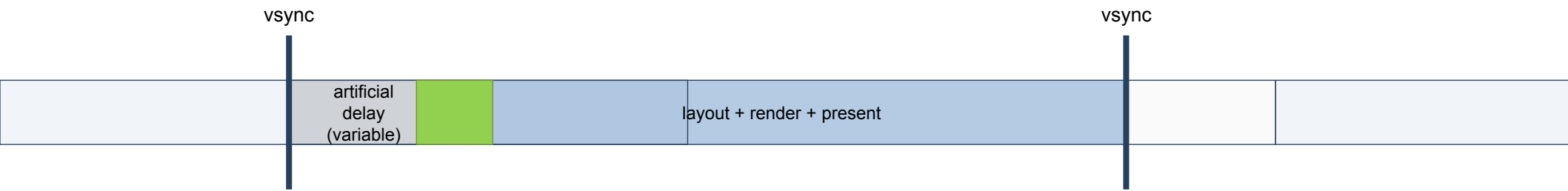

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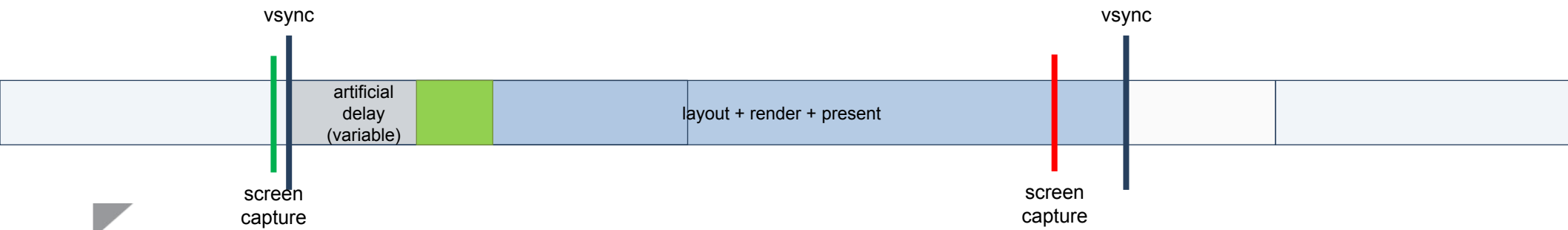

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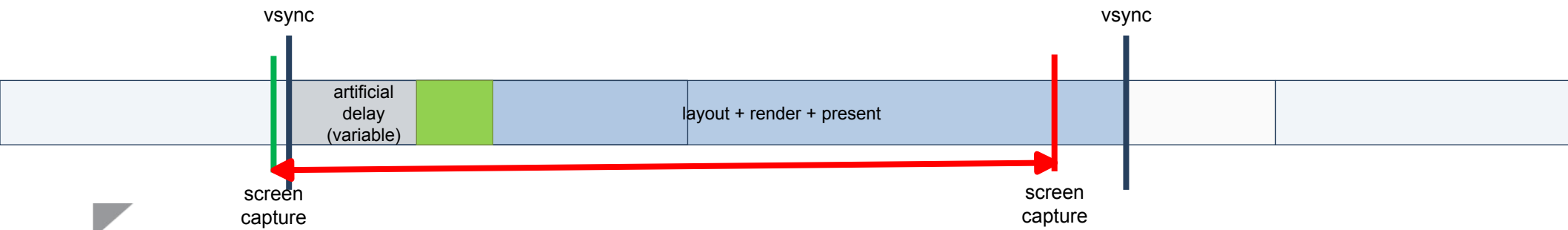
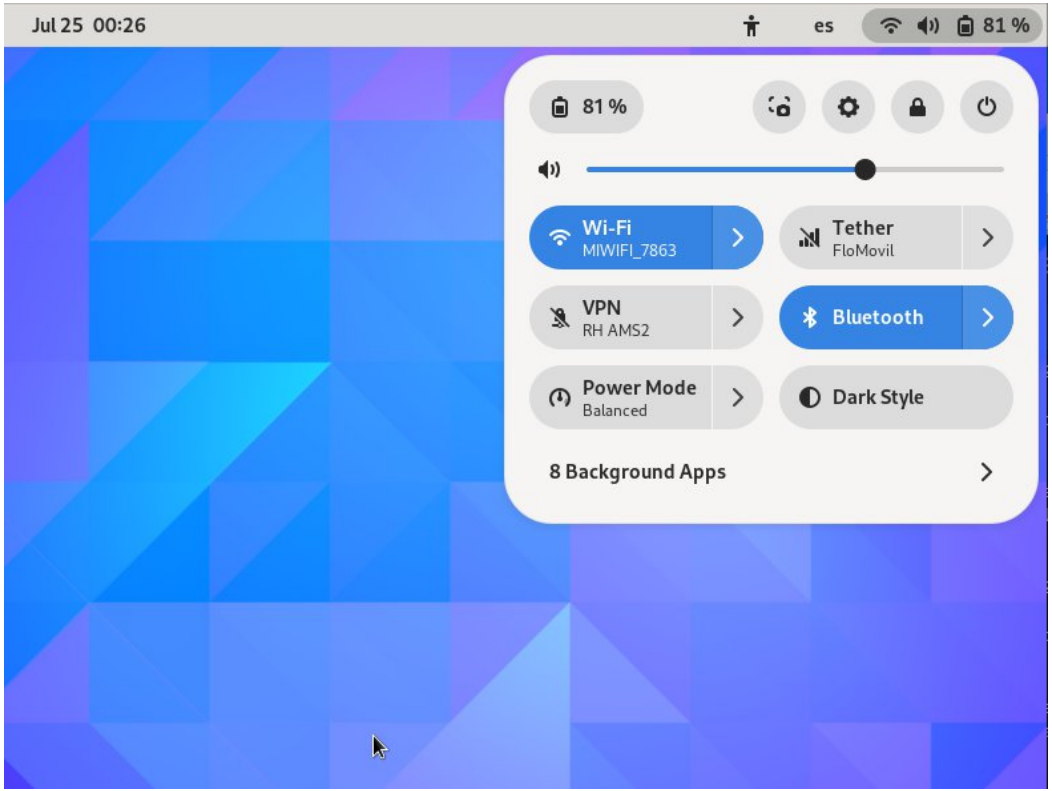


Recording improvements

- Use OpenGL to enable DMABuf sharing
- Frame timing improvements
- Camera indicator

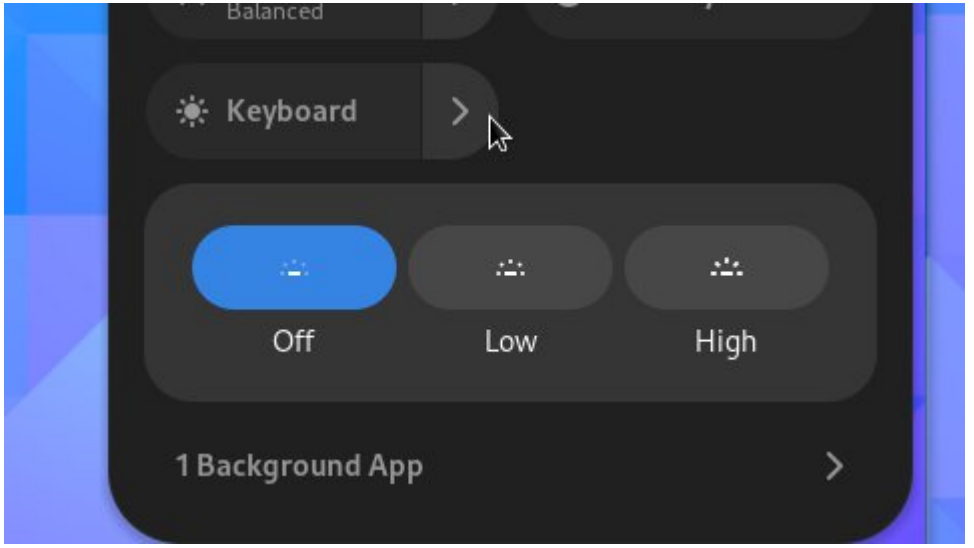
Light Theme

- Follows “prefer-light” system setting
- Use “light-style” extension to make it default
- Replaces “classic” styling



Keyboard backlight

- *Usually* accessible via keyboard
- New quick settings toggle when it isn’t



“GNOME breaks extensions every release”

The Internet

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ESM

- EcmaScript modules is the standard for imports in JS
- Familiarity, tooling support
- To a lesser extent: Some more compatibility with “foreign” modules
- Implemented by the JavaScript engine itself (except for GIR support)
- Caveat: ES modules and gjs’ custom imports are incompatible in practice

Special Mentions

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Special Mentions

- Improved Drag n’ Drop in the app grid
- Overhauled keyboard layout previews
- Auto-generated toolbox images with up-to-date dependencies
- Running GNOME Shell in CI for tests

Q&A

Thank You!

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Title

- Bullet point 1
- Bullet point 2

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