

INTEGRATING THE KWORKFLOW SYSTEM WITH THE LORE ARCHIVES

Enhancing the Linux kernel developer interaction with mailing lists

LINUX KERNEL DEVELOPMENT

The **Linux kernel** is collaboratively developed by a global network of people using **public mailing lists** as a medium for distributing changes (**patches**) to the community for review.

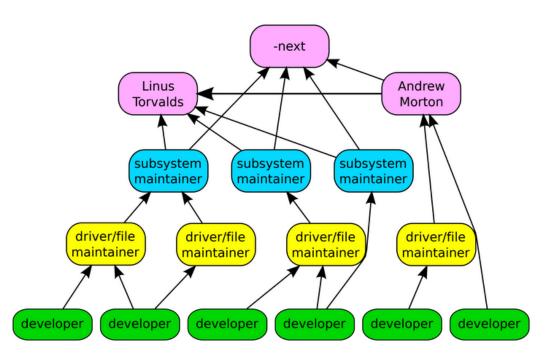
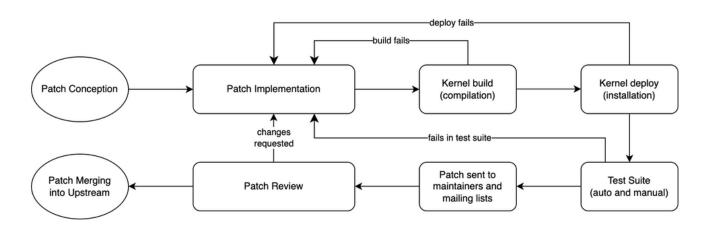


Figure 1. Patch way until merging into the Linux mainline

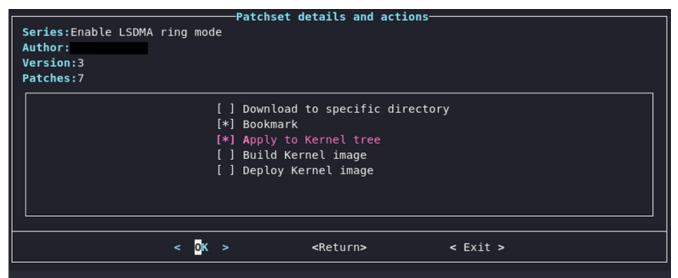
Updated registers of the mailing lists are accessible in the Lore archives, which delivers an **on-demand approach** to consulting the flow of patches.



KW PATCH-HUB CAPABILITIES

90	٧1	#4	1	riscv: Add kernel-mode FPU support for amdgpu
91	V1	#1	i	drm/amdgpu: Fix cat debugfs amdgpu_regs_didt causes kernel null pointer
9 2	Vl	#8	I	DC Patches Nov 20 2023
93	٧2	#1	- İ	drm/amdgpu: fix memory overflow in the IB test
94	٧2	#4	- È	Revert "drm/prime: Unexport helpers for fd/handle conversion"
95	V1	#1	- È	drm/radeon: Fix eDP for single-display iMac11,1
96	٧1	#1	- Ì	dma-buf: Correct the documentation of name and exp_name symbols
97	٧1	#2	1	drm/amdgpu/gmc: check if AGP is disabled in amdgpu_gmc_agp_addr()
98	٧1	#1	1	drm/amdgpu: add init_registers for nbio v7.11
99	٧1	#1	1	gpu: display: remove unnecessary braces to fix coding style
100	٧3	#7	1	Enable LSDMA ring mode
	t(+)			

Figure 4. Consult latest patchsets





Select Linux kernel source tree						
Directories						
.						
amd-gfx						
linux						
staging						
/home/davidbtadokoro/Documents/kernels/linux						



KWORFKLOW

KWorkflow (kw) is a system, under the GPL v2, that **streamlines** and **optimizes** the workflows of Linux kernel developers by providing **features** in a **unified environment**.

To enhance the interaction with mailing lists, we developed **kw patch-hub**, a terminal-based user interface to the Lore archives integrated with the kw environment.

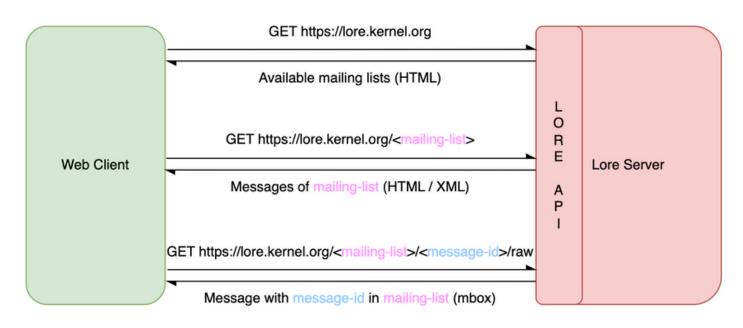


Figure 3. Lore API requests and responses leveraged by kw patch-hub



Figure 6. Utilize the feature to configure itself

KW PATCH-HUB ARCHITECTURE

Using the Model-View-Controller (MVC) architectural pattern and the Finite-State Machine (FSM) model grants low coupling, providing extensibility and maintainability.

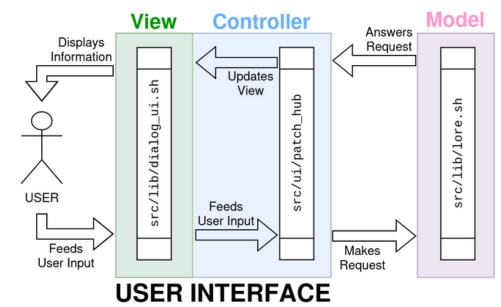


Figure 7. kw patch-hub architecture

NEXT STEPS

- Optimize the listing of patchsets
- More integrations with the kw environment
- Support replying of patches with commit tags and inline comments

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