



KOHA IN 2025 (AND LATER)



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PART 1

Is your Koha up to date ?

KOHA HISTORY (TECHNICAL)



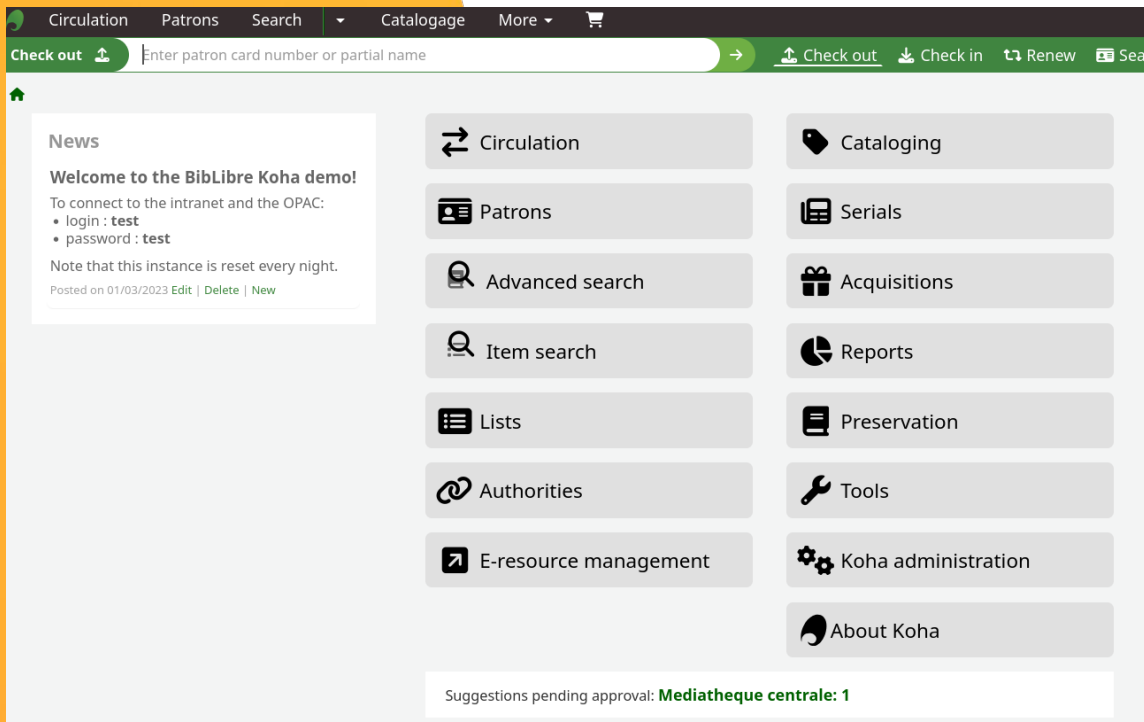
- In 2000 Koha v1.0 was
 - 45k lines of code, 5 modules
 - Run on an apache server using CGI
 - Not translatable
 - Not supporting MARC format
 - Without search engine (SQL search)
 - Running on a webserver without javascript in the browser
 - Used by a few small/medium libraries
- A very (very) light application !

The image is a screenshot of the Koha Catalogue Search page. It features a search form with fields for 'Item Number', 'Keywords', 'Title', 'Author', 'Dewey', 'Class', and 'Subject'. There are radio buttons for 'Normal' and 'Exact' search, and a 'Clear Fields' button. A green box on the left contains 'HELP' text about searching and a link to 'Catalogue Maintenance'. A green button labeled 'OK Start Search' is on the right. The page has a purple header with 'KOHIA: HLT INTRANET' and a navigation bar with links to 'Catalogue', 'Members', 'Acquisitions', 'Reports', 'Circulation', and 'Home'. The footer contains a list of links: 'Home || Circulation || Catalogue || Members || Acquisitions || Reports || Help || OPAC || Library Website'.



KOHA HISTORY (TECHNICAL)

- In 2025 Koha is
 - 1.7M lines of code, 15 modules
 - Used by libraries of any size (including consortia)
 - **Translatable**, supporting MARC formats





KOHA HISTORY (TECHNICAL)

- In 2025 Koha is
 - using **Elasticsearch** as search engine (feature and performance)
 - Running as **starman** service (performance)
 - Using **memcache** as caching system (performance)
 - **Responsive** interface
 - Providing multiple **REST APIs** to communicate with external apps/tools
 - Connected with many external tools



CONSEQUENCES

- A strong release workflow needed
- It requires much more resources to run
- It requires larger skills to setup, maintain, update



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STRONG WORKFLOW

- The Koha community has defined a workflow for years
 - How to add something into Koha
 - Create a ticket in bugzilla
 - Submit a patch with your changes
 - The patch is tested (signed-off) by someone else
 - The patch is checked by a skilled developer (QA, verifying the code quality)
 - The patch is “pushed” in the code by the Release Manager



STRONG WORKFLOW

- The Koha community has defined a workflow for years
 - How to release a new version
 - A version with new feature every 6 months (may and November, thus the version number)
 - Several version maintained
 - Bugfix release every month
 - Originally 1, then 2, then 3
 - Now 4 versions maintained, including a “LTS” (Long Term Support) introduced for 22.11
 - https://wiki.koha-community.org/wiki/Koha_versioning#LTS_Releases
 - October releases : 25.05.05, 24.11.10, 24.05.15 and LTS 22.11.32



CONSEQUENCES

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RESOURCES REQUIRED

- More resource are required to run Koha
 - Even if standalone
 - Translation & much more features compared to v1 = more CPU/RAM needed
 - Use zebra as searchengine ? It's outdated, still supported, but Elasticsearch is much better... but requires a lot more resources
 - You're probably not on an isolated island
 - Links with other tools :
 - RFID, Self-checkout equipment, authentication (shibboleth, CAS, ldap), SRU/SRW & z39.50 (server and client), OAI-PMH (server and client)



RESOURCES REQUIRED

- More resource are required to run Koha
 - The homepage of the OPAC is >700KB
 - (90% is cached, so served only once per session)
 - The staff homepage is >900KB
 - (90% is cached too)
 - Koha can be considered as “frugal” though



CONSEQUENCES

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- **It requires larger skills to setup, maintain, update**



SKILLS NEEDED TO MAINTAIN

- More resource needed
 - More complexity for maintenance
- Widely used software
 - Has it's own CVE entry
 - <https://app.opencve.io/cve/?vendor=koha>

Search Results (21 CVEs found)				
CVE	Vendors	Products	Updated	CVSS v3.1
CVE-2024-24337	2 Koha, Koha-community	2 Koha, Koha Library Software	2025-09-29	8.8 High
CSV Injection vulnerability in '/members/moremember.pl' and '/admin/aqbudgets.pl' endpoints in Koha Library Management System version 23.05.05 and earlier allows attackers to inject DDE commands into csv exports via the 'Budget' and 'Patrons Member' components.				
CVE-2024-24336	2 Koha, Koha-community	2 Koha, Koha Library Software	2025-09-29	8.1 High
A multiple Cross-site scripting (XSS) vulnerability in the '/members/moremember.pl', and '/members/members-home.pl' endpoints within Koha Library Management System version 23.05.05 and earlier allows malicious staff users to carry out CSRF attacks, including unauthorized changes to usernames and passwords of users visiting the affected page, via the 'Circulation note' and 'Patrons Restriction' components.				
CVE-2025-52360	1 Koha	1 Koha	2025-07-26	8.8 High
A Cross-Site Scripting (XSS) vulnerability exists in the OPAC search feature of Koha Library Management System v24.05. Unsanitized input entered in the search field is reflected in the search history interface, leading to the execution of arbitrary JavaScript in the browser context when the user interacts with the interface.				
CVE-2025-30076	1 Koha	1 Koha	2025-07-21	7.7 High
Koha before 24.11.02 allows admins to execute arbitrary commands via shell metacharacters in the tools/scheduler.pl report parameter.				
CVE-2025-22954	1 Koha	1 Koha	2025-06-16	10 Critical
GetLateOrMissingIssues in C4/Serials.pm in Koha before 24.11.02 allows SQL Injection in /serials/lateissues-export.pl via the supplierid or serialid parameter.				



SKILLS NEEDED TO MAINTAIN

- External threats
 - bot brutal behavior
 - The most recent threat : Koha catalogues where overwhelmed by IA bot, not respecting robots.txt
 - Hacking the DB
 - Koha contains personal information that can be considered as valuable by an attacker
- If your Koha is old, you're in danger.



THE SOLUTION ?

- Now that you're anxious...
 - ... just keep Koha up to date
- Who can do that ?
 - Someone In-house with required skills AND dedicated time !
 - Don't underestimate the skills required
 - Don't underestimate the time required
 - A support company



SUPPORT COMPANY ?

- With a support company, an additional challenge: SaaS or not SaaS
- BibLibre experience
 - For years, we let the library chose between SaaS on on-premise hosting
 - Since some years, due to (legitimate) security issues, reaching on-premise server is a nightmare (legitimate) IT team requirement make our life a nightmare
 - That's why we now provide only SaaS option



PART 2

Challenges faced by Koha community



THE FUTURE OF KOHA

- Koha foundation
- End of MARC ?



KOHA FOUNDATION

- Since 2000, Koha is a community driven project
- The license is **standard** for open-source projects
 - GNU/GPL
- The tools are **standard** for open-source projects
 - A bug tracker (bugzilla)
 - A wiki
 - A direct communication channel (initially IRC, now mattermost)
 - Regular online meetings
 - Regular face-to-face conferences
 - “Kohacon” and “Hackfest in Marseille”



KOHA FOUNDATION

- Workflow and team are **standard** for open-source projects
 - Release manager, maintainers & other elected roles
 - More than 550 contributors so far
- The organization is **very original** for a so large project:
 - No Non-Profit foundation (like Apache foundation, Linux foundation, Opendocument foundation, Eclipse foundation, ...)
 - No company deciding for the product evolution (like mysql/mariaDB, nextcloud, odoo...)



KOHA FOUNDATION

- Since many years Koha is mostly developed by 3 companies (alphabetical order)
 - BibLibre (France)
 - Bywatersolutions (USA)
 - Openfifth (UK, previously named PTFS-europe)
- We provide
 - Human resources (developers)
 - Hardware resource (servers)
 - Money (funding Jonathan Druart work, sponsoring conference...)



KOHA FOUNDATION

- We want to perpetuate Koha, and make it more independent from our decisions
 - During Kohacon24 in Montreal, the community voted in favor of joining the Openlibrary Foundation (aka **OLF**)
 - What does it mean ?
 - Bylaws are being written. OLF requirements are very light, they don't require a specific way of managing the project/the product
 - In the short term, it will change nothing.
 - In the long term, we can expect OLF making us able to find sponsors to fund the project more widely



KOHA FOUNDATION

- During Kohacon25 in NZ (next week), we'll continue working on this



END OF MARC ?

- Koha supports MARC flavours since v2.0 (MARC21 and UNIMARC)
- For years, the libraries are working on “how to make MARC die”
 - FRBR, RDA, LRM, bibframe: new standard for describing library resources and cataloguing them
 - Library of Congress decided to go Folio and Bibframe a couple of years ago
 - BNF is going UNIMARC-ER (ER= Entity/Relation)
- What should the Koha project do ?



END OF MARC ?

- Implementing UNIMARC-ER should not be too hard
 - It's technically MARC (with fields and subfields)
- BibLibre is investigating the implementation of bibframe into Koha
 - It's technically much harder than UNIMARC-ER: bibframe describe resources in 3 parts (Work, Instance, Item)
 - Work: <<author>> wrote <<title>> in <<copyrightyear>>
 - Instance: <<publisher>> published <<WORK>> in <<publicationyear>>
 - Item: the <<INSTANCE>> is at <<library>>



END OF MARC

- BibLibre is investigating the implementation of bibframe into Koha
 - Lot of questions to solve:
 - How should we store bibframe records ?
 - Do we want to be able to store MARC AND bibframe on the same catalogue ?
 - How to “migrate”/“upgrade” a MARC catalogue to bibframe ?
 - Should we re-think the way users search and find documents ?



END OF MARC ?

- The inconvenient questions
 - MARC data is of good quality (despite it's limitations). How can we “migrate” them to bibframe with a better-or-at-least-same quality ?



END OF MARC ?

➤ The inconvenient questions

➤ At the age of IA, is bibframe still relevant ?

➤ bibframe rise more question than answer questions

➤ <https://www.tandfonline.com/doi/full/10.1080/07317131.2025.2512281#d1e172>

➤ <https://scholarsphere.psu.edu/resources/fc19faee-70b9-44b3-9346-18e40a2cd990>

➤ it's already too late

➤ having a complex search interface means not being used patrons ask in natural language

➤ Migrating from MARC to bibframe will require millions of € (or \$)



END OF MARC

➤ Conclusion

- Pessimistic ? Not at all !
- The Koha community, as a community, will continue investigate bibframe
 - Discussion to come at Kohacon25
- The library ecosystem will continue brainstorming, trying, testing
- I don't think that libraries will disappear, so they'll still need a catalogue
 - Let's see where the wind takes us !