TERMS OF REFERENCE

Consultancy for Koha ILS and VPS Administration

1. Background

The GZK-UGCS Library seeks a consultant to administer, maintain and customize its KOHA Integrated Library System and the Ubuntu VPS that hosts it.

Koha is an open-source library management system covering cataloguing, circulation, patron management, acquisitions, serials, reports and the public catalogue (OPAC). It runs on a Linux Ubuntu Virtual Private Server and is reached through the Client's domain name, secured with an SSL/TLS certificate.

Keeping the system available and secure needs steady technical care: software updates, server hardening, backups, domain and certificate management, and responsive user support. These Terms of Reference (ToR) set out the scope, deliverables, qualifications and conditions for that assignment.

2. Objectives

The assignment aims to keep Koha stable, secure, current and fitted to the Client's library operations. Specifically, to:

1. Administer and maintain the Koha ILS to ensure reliable access and smooth operation for library staff and users.
2. Keep Koha, its supporting software and dependencies and the Ubuntu operating system updated and patched.
3. Customise Koha (OPAC, staff interface, notices, reports and library workflows) to meet the Client's operational requirements.
4. Manage and secure the VPS, including server configuration, performance monitoring, regular backups and data recovery.
5. Maintain the link between the VPS and the Client's domain name and keep the SSL certificate valid and functional.
6. Provide technical support, troubleshooting and knowledge transfer to build the capacity of the Client's staff to run day-to-day library operations in Koha.

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3. **Scope of work**

The consultant will cover three areas: the Koha application, the VPS that hosts it, and the domain and SSL that make it reachable and secure.

3.1 Koha Administration and updates

1. Administer Koha system preferences, libraries/branches, item types, patron categories, circulation and fines calculations rules, and authorised values.
2. Manage staff user accounts, permissions and roles to ensure that access to different system functions is appropriately controlled.
3. Apply Koha updates and upgrades (including major version upgrades) after testing, with a rollback plan for each.
4. Maintain Koha dependencies: Apache, MariaDB/MySQL, Zebra or Elasticsearch indexing, Plack, Memcached and Perl modules to ensure the system operates reliably.
5. Maintain and tune Koha's search functionality by updating search indexes, resolving indexing faults and ensuring that library materials can be easily located through the catalogue.
6. Configure and maintain automated system tasks (cron jobs) such as overdue notices, fines, holds queue, index updates, cleanup.
7. Configure outgoing email (SMTP) for notices and alerts, and check delivery.
8. Support MARC21 cataloguing frameworks and configure external catalogue connections using Z39.50/SRU to support the retrieval and bulk import/export of bibliographic and patron records.

3.2 Koha customisation

1. Customise the OPAC and staff interface (branding, layout, CSS and JavaScript, news, and the Client's visual identity).
2. Design and maintain notice and slip templates (checkout, overdue, holds, receipts).
3. Write and maintain SQL reports and dashboards requested by the Client.
4. Install, configure and test Koha plugins where needed.
5. Configure modules on request: acquisitions, serials, course reserves, self-checkout,label printing, and barcodes.
6. Keep all customisations documented and version-controlled so they survive upgrades.

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3.3 VPS Server Administration

1. Apply Ubuntu security updates and patches at least monthly, and critical patches within 72 hours of becoming available for installation.
2. Plan and carry out Ubuntu LTS release upgrades before end-of-support.
3. Harden the server: firewall (UFW), SSH key-only access, disabled root login,Fail2ban, and least-privilege user accounts.
4. Monitor uptime, CPU, memory, disk space and logs; set alerts and act on them.
5. Configure and test automated backups of the Koha database, configuration and uploaded files, with at least one off-server copy.
6. Test restoration from backup at least once per quarter and record the result.
7. Tune Apache, MariaDB and Plack for performance.
8. Liaise with the VPS hosting provider on outages, resources and billing renewals.

3.4 Domain name and SSL

1. Maintain DNS records (A, AAAA, CNAME, MX, SPF/DKIM where applicable) linking the domain/subdomains to the VPS for the OPAC and staff interfaces.
2. Track domain registration renewal dates and alert the Client at least 30 days before expiry.
3. Install and maintain SSL/TLS certificates (e.g. Let's Encrypt with automatic renewal via Certbot) for all Koha addresses.
4. Enforce HTTPS redirects and modern TLS settings; verify certificate validity monthly.

3.5 Staff support and capacity building

1. Provide first- and second-line technical support to library staff via phone, email and remote session.
2. Diagnose and fix faults and escalate to the Koha community or hosting provider where needed.
3. Train the Client’s staff on Koha administration, circulation, cataloguing and reporting.
4. Prepare user guides and a system administration manual.

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4. Service levels

The consultant shall ensure that the Koha system maintains a minimum monthly uptime of 99%, excluding planned maintenance. Planned maintenance shall be communicated to the Client at least 48 hours in advance and conducted outside normal working hours, unless otherwise agreed with the Client.

Priority	Example	Response time	Resolution target
Critical	Koha or server down; security breach; SSL expired	1 hour	4 hours
High	Circulation, search or login failing for many users	4 hours	1 working day
Medium	A module or report not working; single-user issue	1 working day	3 working days
Low	Customisation request; how-to question	2 working days	As agreed

Working hours are Monday to Friday, 8:00am to 5:00pm (local time). Critical issues are covered at all times.

5. Qualifications and experience

The consultant (individual, or the lead expert of a firm) must meet the following Requirements.

5.1 Academic and professional qualifications

- Bachelor's degree in computer science, Information Technology, Library and Information Science, or a related field.
- Linux system administration certification (e.g. LPIC, RHCSA, CompTIA Linux+, or Ubuntu certification) is an added advantage.
- Training or certification in network/information security is an added advantage.

5.2 Experience

- At least 3 years hands-on experience installing, administering and upgrading Koha ILS in a production environment.
- At least 2 references from institutions where the consultant has supported Koha.
- Experience managing Linux-based VPS environments.
- Experience implementing Koha upgrades, backups and system recovery
- Proven experience managing DNS, domain names and SSL/TLS certificates.

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5.3 **Technical skills and competencies**

- Practical experience in Koha installation, administration, maintenance and upgrades of its architecture and supporting technologies (Apache, Plack, MariaDB/MySQL, Zebra/Elasticsearch, Memcached and Perl).
- Knowledge of library operations and standards, including MARC21 cataloguing, Z39.50/SRU, and library workflows (circulation, acquisitions, serials management).
- SQL report writing; HTML, CSS and JavaScript for OPAC and template customisation.
- Experience in Linux/Ubuntu server administration, automation, backups, system monitoring and troubleshooting
- Knowledge of server security: including firewalls, secure remote access, security updates and access controls
- Good communication and training skills; ability to write clear technical documentation.

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