

QuantaCade

QC Update Laboratory User Walkthrough

A plain-language guide to creating a private laboratory, testing Joomla updates, reviewing evidence, pushing the exact tested update, and undoing the latest operation

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www.quantacade.com

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FREE - ALL FEATURES INCLUDED

QC Update Laboratory 1.01.11 does not require a license key, subscription, activation, trial, or paid plan. Every laboratory, report, production-push, and rollback feature described in this guide is included.

1. What QC Update Laboratory does

QC Update Laboratory (QCUL) creates one private, production-derived copy of a Joomla site so an administrator can test one Joomla core or extension update before changing the live site. It captures the exact update package, installs that package in the laboratory, checks the result, preserves evidence, and keeps the tested update connected to a controlled production workflow.

Core capabilities

- Create one isolated, private laboratory from the current Joomla site and database.
- Protect laboratory access and keep the copied site out of normal search-engine indexing.
- Test one extension update or one Joomla core update at a time.
- Capture the exact update package and verify its SHA-256 checksum before use.
- Open the laboratory frontend and administrator area for human review.
- Compare routes, files, database structure, installed versions, logs, and visible errors before and after the update.
- Download a detailed report and open an issue summary when QCUL finds a concern.
- Undo the most recent laboratory update and make it testable again.
- Push the exact tested package to the live site after the administrator confirms review.
- Use an existing recovery method or create a temporary QCUL production rollback checkpoint.
- Validate the live site after the push and undo the latest production push while a valid QCUL checkpoint remains available.

IMPORTANT BOUNDARY

QCUL is an update-testing and controlled-deployment tool. It is not a replacement for a complete independent backup, disaster-recovery plan, staging platform, or change-management policy. Keep a current external backup before production work.

2. Before you begin

Recommended preparation

- Create a current, independently restorable backup of the live Joomla files and database.
- Confirm the site has enough disk space for a production-derived laboratory and temporary checkpoint data.
- Confirm Joomla can download normal extension and core update packages.
- Choose a low-traffic maintenance window for the first production push.
- Know which frontend pages, administrator screens, forms, integrations, and scheduled tasks are business-critical.
- Confirm the administrator account has Joomla permissions to manage QCUL and install updates.
- Avoid testing unrelated manual code or database changes inside the laboratory while an update test is in progress.

ONE ACTIVE LABORATORY

QCUL intentionally manages one active laboratory per Joomla installation and one tested update at a time. This keeps the production decision tied to a single, exact package and a clear evidence trail.

3. First setup checklist

1. Install the outer QC Update Laboratory package through System > Install > Extensions.
2. Open Components > QC Update Laboratory.
3. Open Status and confirm version 1.01.11 is installed and the QCUL update connection is available.
4. Open Settings. Keep the recommended 3-day laboratory duration, Standard creation speed, and 30-minute Undo Production Push window for the first test.
5. Open Laboratory and select Create Private Laboratory.
6. Wait for the browser-driven copy process to finish. Keep the administrator page open while it is actively processing.

7. Open the private laboratory frontend and administrator area. Confirm the copied site looks like production and remains isolated.
8. Select Refresh Updates and choose one low-risk extension update for the first rehearsal.
9. Select Test in Lab, review the result, open the private site, and download the report.
10. Use Undo Lab Update once to confirm the laboratory can return to its pre-update state.
11. Test the same update again, select a production-protection method, and perform the first controlled production push only after an independent backup is confirmed.
12. Review the live site and retain the report with the site maintenance records.

4. Administrator area overview

QCUL uses five focused administrator tabs. The former multi-screen staging and history concepts are intentionally consolidated into one Laboratory workspace.

Tab	Purpose
About	Plain-language product purpose and confirmation that all features are free.
Support	Links to QuantaCade support, profile, downloads, and product/version details.
Status	Installed QCUL version, site identity, update-site state, last check, and available QCUL version.
Settings	Default laboratory lifetime, creation speed, and temporary production rollback window.
Laboratory	Create, review, refresh, remove, test, report, push, validate, and undo from one workspace.

5. Status and extension updates

Status is about QC Update Laboratory itself, not the extension or Joomla core update currently being rehearsed.

- Edition shows Free - all features included.
- Installed Version identifies the active QCUL release and live site domain.
- QC Update Laboratory Update shows the installed version, available version, update connection, and last checked time.
- Check for Updates asks Joomla to refresh QCUL update information.
- Update QC Update Laboratory opens Joomla's normal update installer when an update is available and the current user may manage extensions.

NO ACTIVATION STEP

There is no License Key field and no activation workflow in QCUL 1.01.11. A missing QuantaCade key is not a troubleshooting issue for this product.

6. Configure Laboratory settings

Open Settings before creating the first laboratory. These values affect new work and temporary production rollback availability.

Setting	Choices	Recommended use
Default laboratory duration	1, 3, 7, 14, or 30 days	Use 3 days for ordinary update testing. Use a longer period only when review genuinely requires it.

Setting	Choices	Recommended use
Lab creation speed	Lower server load; Standard - recommended; Faster	Use Standard on most hosting. Lower server load reduces work per browser request. Faster uses more server resources.
How long Undo Production Push remains available	10, 30, 60, 120, or 240 minutes	Use 30 minutes for routine tests. The timer applies only when a temporary QCUL rollback checkpoint is selected before the push.

Select Save Settings after changes. A longer rollback window keeps temporary checkpoint data longer and may require more storage.

7. Create a Private Laboratory

1. Open Laboratory. Create Private Laboratory appears only when no active laboratory exists.
2. Select Create Private Laboratory.
3. Leave the administrator page open while QCUL copies the live files and database in restartable batches.
4. Watch the progress message. The displayed progress represents actual file/database work rather than a simple request counter.
5. When the operation completes, confirm the Active Laboratory section appears with private access details and an expiration time.
6. Open the laboratory frontend and administrator links and verify access before testing any update.

PRIVATE ACCESS DETAILS

Treat the laboratory URL, access PIN, and administrator access as sensitive. The laboratory contains a production-derived copy of the site and may include real account or business data.

8. Understand the Active Laboratory

The Active Laboratory section identifies the single disposable environment currently connected to QCUL.

Item	What it means
Status pill	The current laboratory state, such as ready, processing, attention required, or expired.
Frontend review	The private copy of the public Joomla site. Use it to test menus, forms, templates, content, and integrations.
Administrator review	The copied Joomla administrator area. Use it to verify extension screens, configuration, dashboards, and installed versions.
Expiration	The time at which the temporary laboratory closes unless refreshed or removed first.
Refresh Laboratory	Destroys the current copied environment, preserves historical evidence, and creates a fresh production-derived replacement.
Remove Laboratory	Permanently deletes the active laboratory and its temporary QCUL checkpoints.

The laboratory is separate from production. Testing an update in the laboratory does not install it on the live site.

9. Refresh the available update list

1. Open Laboratory and locate Test Updates.
2. Select Refresh Updates to ask Joomla for the current core and extension update list.

3. Leave Hide Joomla language file updates selected for a quieter list. Clear it when language packages must be reviewed.
4. Choose only the update you intend to test. QCUL processes one update at a time.
5. Confirm the displayed installed version and target version are the expected pair.

UPDATE LIST CHANGES

An update can disappear from Joomla's normal list after it is pushed to production. QCUL keeps the tested row available so its report, review link, production result, and rollback information remain accessible.

10. Test an extension update in the laboratory

1. Find the extension update in Test Updates and select Test in Lab.
2. QCUL captures the exact update ZIP, records its filename, size, and SHA-256 checksum, and prepares a laboratory restore point.
3. The package is installed only in the private laboratory.
4. QCUL verifies the resulting extension version and records installer messages, warnings, route checks, file changes, database changes, and relevant log evidence.
5. Wait for the tested-update row to appear directly beneath the extension update.
6. Review the result summary. Open View Issue Report when QCUL provides that button.
7. Open Review Update in Lab and complete the human review before production work.

Only the latest tested update can be undone in the laboratory. Starting a different test replaces the current latest-update undo target.

11. Test a Joomla core update in the laboratory

Joomla core updates use the same one-update workflow but affect a broader part of the site.

1. Confirm the current and target Joomla versions in Test Updates.
2. Select Test in Lab for the Joomla core update.
3. QCUL captures and hashes the exact core package and uses the dedicated Joomla core-update process inside the laboratory.
4. Wait for installation, route checks, version verification, file evidence, database evidence, and log review to finish.
5. Open both the laboratory frontend and administrator area. Confirm the target Joomla version and test critical pages, logins, menus, forms, templates, third-party extensions, and scheduled tasks.
6. Download the report and use Undo Lab Update once before considering a live core push.
7. Retest the same exact package after the undo so the production candidate is based on the current laboratory state.

CORE UPDATES DESERVE A WIDER REVIEW

A successful version check is not enough for a Joomla core update. Review the public template, administrator template, authentication, extension compatibility, editors, forms, mail, cache, and scheduled tasks that matter to the site.

12. Review the updated laboratory

QCUL performs automated checks, but the administrator remains responsible for deciding whether the updated site is acceptable.

Suggested review path

- Open the laboratory frontend in a private browser window and test the main navigation.
- Log in and log out with a normal test account.
- Submit important forms without sending irreversible real-world transactions.

- Open the Joomla administrator area and inspect the updated extension or Joomla version.
- Open dashboards, list views, edit forms, media, menus, modules, templates, and plugins affected by the update.
- Check browser-visible PHP warnings, blank pages, broken styling, missing assets, redirects, and unexpected permission errors.
- Run the site's own smoke tests, health checks, or integration tests when available.
- Confirm no unrelated manual changes were made in the laboratory during the rehearsal.

Select the confirmation that states I reviewed this update in the laboratory before a production push. QCUL records this review as part of the tested update.

13. Read and download the update report

Select Download Report from the tested-update row. The report is tied to the exact laboratory test and expands as production actions occur.

Report area	Typical evidence
Outcome	Overall result, issue counts, validation state, and important warnings.
Package	Filename, size, checksum, source, installed version, and target version.
Installation	Start/completion times, duration, installer messages, and warnings.
Route checks	Frontend/administrator URLs, HTTP status, timing, response size, page title, final URL, and blank/fatal detection.
Database	Affected data scope plus detected table, column, and index changes.
Files	Added, modified, and removed files with protected checkpoint evidence where applicable.
Logs	Relevant Joomla/PHP evidence captured around the test.
Human review	Recorded laboratory review confirmation.
Production	Protection choice, push state, verification, live review, and rollback result.

View Issue Report appears only when QCUL has a focused concern to explain. Read it before deciding whether to retest, investigate, or stop.

14. Undo the latest laboratory update

QCUL automatically creates a laboratory restore point before each protected test. Undo Lab Update is separate from the optional temporary production rollback checkpoint.

1. Confirm the tested update is the latest laboratory test.
2. Select Undo Lab Update.
3. Keep the page open while QCUL restores the laboratory database and files in restartable batches.
4. Confirm the laboratory returns to the previous extension or Joomla version.
5. Open the laboratory frontend and administrator area and verify the original state.
6. Refresh Updates when needed. The update should become testable again.
7. Select Test in Lab again before a production push.

PRODUCTION IS NOT CHANGED

Undo Lab Update affects only the private laboratory. It does not roll back, modify, or refresh the live Joomla site.

15. Choose production protection

Before Push to Production, QCUL requires one of two production-protection choices.

Choice	Use it when	What QCUL provides
Use my existing recovery method	A tested host snapshot, backup product, filesystem/database backup, or other independent recovery method is ready.	QCUL records the selection but does not create or offer Undo Production Push.
Create a temporary QCUL rollback checkpoint	You want QCUL to capture the update-related production database and file scope before the push.	QCUL creates a short-lived checkpoint and offers Undo Production Push until the configured window expires.

SELECTION IS THE CONFIRMATION

There is no separate recovery-details field or second confirmation checkbox. Choosing the protection method records the administrator's decision. Confirm it is accurate before continuing.

16. Push an extension update to production

1. Finish the laboratory review and confirm I reviewed this update in the laboratory.
2. Choose the production-protection method.
3. Select Push to Production.
4. QCUL confirms the exact package checksum, expected starting version, production identity, permissions, storage, disk space, recovery readiness, and maintenance handling.
5. When a temporary QCUL checkpoint is selected, allow checkpoint creation to finish before installation begins.
6. QCUL installs the exact package tested in the laboratory.
7. QCUL verifies the target extension version and performs post-production checks.
8. Open Review Production Site and complete the live-site review.
9. Download the updated report and retain it with the maintenance record.

General production drift elsewhere on the site is recorded as historical context but does not invalidate a tested update. QCUL still enforces the exact starting version, package integrity, production identity, and safety checks for the selected update.

17. Push a Joomla core update to production

1. Complete the wider Joomla core review in the laboratory and retest after a successful Undo Lab Update.
2. Confirm the live site still reports the exact expected starting Joomla version.
3. Choose the production-protection method. A temporary QCUL core checkpoint covers all Joomla-prefixed database tables and the affected core-file scope.
4. Select Push to Production and keep the page open while the core package and validation steps run.
5. Confirm the target Joomla version in System Information.
6. Review public and administrator templates, login, menus, content editing, forms, mail, cache, third-party extensions, and scheduled tasks.
7. Use Review Production Site, download the final report, and decide whether to retain the update or use Undo Production Push while available.

KEEP THE INDEPENDENT BACKUP

The temporary QCUL checkpoint is intentionally scoped to the tested core update. Keep the complete external backup even when QCUL's temporary rollback option is used.

18. Monitor, pause, and resume long operations

Large sites and shared hosting may require many browser-driven batches. QCUL saves operation state so work can continue instead of restarting from the beginning.

- Keep the administrator page open while the progress area says an operation is running.
- Do not repeatedly click the same action while processing is active.
- When a restartable error occurs, read the message and use Resume or the displayed continuation action.
- Production rollback stops safely after an error and changes to Resume Rollback rather than retrying forever.
- QCUL uses a no-progress watchdog to stop a browser loop when the operation signature does not change.
- Restore Site Availability appears when maintenance handling needs explicit recovery after an interrupted production action.
- Use the Lower server load creation speed when the host returns timeouts or resource-limit errors during laboratory copying.

19. Review the live site after a production push

A successful package installation is followed by a real production review.

Minimum production review

- Confirm the expected extension or Joomla version is installed.
- Open the public homepage and several representative routes.
- Open the Joomla administrator area and the updated extension.
- Confirm authentication, menus, forms, editors, media, and scheduled tasks used by the site.
- Check for new PHP warnings, blank responses, broken styling, redirects, or access errors.
- Confirm maintenance mode/site availability returned to the expected state.
- Select Review Production Site so the report records the human review.

When the update is accepted, keep the report and allow the temporary rollback window to expire. QCUL removes expired temporary checkpoint data automatically.

20. Undo the latest production push

Undo Production Push is available only when a temporary QCUL rollback checkpoint was created and its configured window has not expired.

1. Open the tested-update row and confirm rollback is available and not expired.
2. Select Undo Production Push.
3. Keep the page open while QCUL restores protected database and file operations in batches.
4. Use Resume Rollback after a restartable interruption. Do not start a different production action.
5. QCUL restores original table definitions/data where captured, restores modified or removed files, removes files created by the update, and verifies protected hashes and version evidence.
6. Confirm the previous extension or Joomla version in the live administrator area.
7. Review the public and administrator site and confirm the rollback result is verified.
8. Refresh the update list. The rolled-back update should be available for a new laboratory test when Joomla still offers it.

VERIFIED ROLLBACK RESULT

QCUL does not label a production rollback successful merely because database version metadata changed. It verifies protected files, created-file removal, database evidence, and the on-disk extension or Joomla state.

21. Understand rollback windows and checkpoint expiry

The rollback timer begins from the temporary checkpoint/production operation and uses the setting chosen before the push.

- 10 minutes is suitable only for a very fast immediate review.
- 30 minutes is the recommended routine default.
- 1 to 4 hours gives more review time but retains checkpoint data and storage longer.

- After expiry, Undo Production Push is no longer available and QCUL deletes the temporary checkpoint.
- Removing the laboratory also removes associated temporary rollback checkpoints and makes Undo Lab Update and Undo Production Push unavailable.
- Choosing an existing recovery method never creates a QCUL production rollback window.

22. Refresh or remove the laboratory

Refresh Laboratory

Use Refresh Laboratory when the active private copy is stale, damaged, or no longer represents the live site. QCUL removes the current copied environment, preserves its completed evidence, and creates a new production-derived laboratory. Any update must be tested again in the new copy.

Remove Laboratory

Use Remove Laboratory when testing is complete or the private copy is no longer required. The confirmation warns that the environment and temporary rollback checkpoints are permanently deleted. Download required reports first.

REMOVAL IS PERMANENT

After removal, the private laboratory cannot be reopened and the latest lab/production undo actions tied to its checkpoint data are unavailable.

23. Joomla permissions and delegated access

QCUL adds focused Joomla ACL actions so a trusted maintenance team can be delegated only the access it needs.

Permission	Allows
Manage Settings	Change laboratory duration, creation speed, and rollback-window settings.
Create Laboratories	Create a private update-testing laboratory.
Test and Manage Updates	Create or refresh the laboratory, test updates, and continue paused work.
View Laboratories	View laboratory status and private access details.
Remove Laboratories	Permanently remove the private laboratory and temporary rollback checkpoints.
Download Reports	View and download update-test and production reports.

Configure permissions through Joomla's component permissions. Keep production push and rollback authority with a small group of experienced administrators.

24. Support and downloadable resources

Open Support for links to the QuantaCade Support Center, profile, downloads, and the current product/version information. Include the QCUL version, Joomla version, PHP version, site domain, tested extension/core version pair, exact error message, and downloaded report when requesting help.

- Use the Support Center for installation, laboratory creation, update testing, production push, and rollback questions.
- Use Downloads for the latest installer and user walkthrough.
- Do not publish laboratory URLs, PINs, checkpoint paths, or sensitive report data in a public issue.
- Preserve the active laboratory and failed-operation state until support evidence has been collected unless site availability requires immediate recovery.

25. Recommended go-live checklist

1. Create and verify a complete external backup.

2. Use the recommended Settings defaults for the first test.
3. Create the laboratory and verify private frontend/administrator access.
4. Refresh updates and choose one update only.
5. Test the update and read the result and issue report.
6. Complete the human laboratory review.
7. Download the report.
8. Use Undo Lab Update and verify the prior state.
9. Retest the same exact package.
10. Choose and verify the production-protection method.
11. Push during a controlled maintenance window.
12. Complete the production review and download the final report.
13. Use Undo Production Push immediately when a serious issue is found and a valid QCUL checkpoint exists.
14. Remove the laboratory only after all required evidence is downloaded and rollback is no longer needed.

26. Troubleshooting

Symptom	What to check
Create Private Laboratory is not visible	An active laboratory may already exist, or the current Joomla user may lack Create Laboratories permission.
Laboratory creation stops or times out	Keep the page open, use Resume when offered, choose Lower server load, verify disk space, and review server limits/logs.
The private site does not open	Check the displayed private URL/PIN, laboratory status, rewrite rules, HTTPS, and whether hosting security blocks the laboratory path.
No updates are listed	Select Refresh Updates, verify Joomla update sites are enabled, purge/update cache when appropriate, and confirm the source vendor still publishes the update.
Language updates clutter the list	Keep Hide Joomla language file updates selected. Clear it only when language packages must be tested.
Test in Lab reports a package problem	Do not push. Read View Issue Report and the package filename/hash evidence, then refresh update metadata or contact the vendor.
Push to Production is unavailable	Confirm the laboratory test completed, human review was recorded, expected starting version still matches, and a production-protection method is selected.
Production operation stops	Read the saved message. Use Resume/Resume Rollback or Restore Site Availability as displayed; do not repeatedly start a new action.
Undo Production Push is unavailable	The existing-recovery option was selected, the checkpoint expired, the laboratory was removed, or no valid temporary checkpoint completed.
Rollback could not be verified	Keep the site in a controlled state, preserve the report/checkpoint evidence, use the independent recovery method if needed, and contact support.

27. Glossary

Term	Meaning
Active Laboratory	The single private production-derived Joomla copy currently managed by QCUL.

Term	Meaning
Exact tested package	The extension or Joomla core ZIP captured, hashed, installed, and retained as the production candidate.
Laboratory restore point	The automatic pre-test laboratory checkpoint used by Undo Lab Update.
Temporary QCUL rollback checkpoint	The optional short-lived production database/file checkpoint created before a push.
Undo Lab Update	Restore the latest laboratory test to its pre-update state. Production is not changed.
Push to Production	Install the exact tested package on the live Joomla site after safety checks and human review.
Undo Production Push	Restore the protected live database/file scope while a valid QCUL checkpoint remains available.
Existing recovery method	The administrator's independent host snapshot, backup, or other tested production-recovery process.
Issue Report	A focused explanation shown when QCUL detects a concern requiring attention.
Update Report	The complete laboratory, package, check, review, production, and rollback evidence record.
Production drift	Other live-site changes recorded as context; broad drift alone does not invalidate the tested update.
Restartable batch	A saved operation step that can continue after a browser/server interruption without restarting all work.

FINAL OPERATING RULE

Test one update, review the private result, keep an independent backup, push the exact package, review production, and preserve the report. The simple workflow is backed by stronger package, version, checkpoint, file, database, and rollback verification.