Quantum Readiness Scanner
Release Notes

Version 2.0.1.47

January 23, 2026

Document Revision Log			
Software Version	**Document ID**	**Date**	**Change Description**
2.0.1.47	QRRN20147_001	01/23/2026	Initial Customer Release

What's New in This Release

Version **2.0.1.47** introduces significant improvements to output flexibility, data quality, and enterprise deployment compatibility. This release includes critical bug fixes for Windows path handling and FlatNDJSON formatting, plus a powerful new feature for controlling output verbosity and splitting datasets.

New Features

- **TQR-254: Split Outputs and Detail Level Control**
  Introduces two powerful features for managing scanner output: Split Outputs and Detail Level Control.

  Split Outputs (-split-outputs):
  - Breaks up scanner output into separate files per dataset (quantum, network, memory, filesystem, keystore, outlook, vpn, ipsec)
  - File naming pattern: {base}_{dataset}.{ext}
  - Automatically skips empty datasets
  - Works with all formats except cbom, html, and eventlog
  - Use -keep-consolidated to create both split and consolidated files

  Detail Levels (-detail-level):
  - Full: All fields (current behavior, 0% reduction)
  - Standard: Removes verbose/technical fields like raw PEM data, signatures, modulus (30-40% reduction)
  - Minimal: Essential fields only - security status, PQC flags, key crypto params (60-70% reduction)

  Benefits: Easier parsing of large scan results, reduced storage requirements (up to 70%), faster SIEM ingestion, better performance for streaming analytics.

Fixes

- **TQR-169: Windows Path Validation Error with Parentheses**
  Issue: Scanner rejected Windows paths containing parentheses () or brackets [] as "dangerous characters", causing BigFix deployments to fail.
  Example Error: C:\Program Files (x86)\BigFix Enterprise\... was incorrectly flagged.
  Resolution: Removed parentheses and brackets from dangerous character validation. These are legitimate in Windows file paths and pose no security risk. Truly dangerous shell metacharacters (|, &, ;, `, $) remain blocked.

- **TQR-253: Missing Dataset Type in FlatNDJSON Output**
  Issue: FlatNDJSON format output did not include tychon.type field, making it impossible to distinguish between datasets (cipherscan, memoryscan, ipsec, etc.) when parsing NDJSON lines.
  Resolution: Added tychon.type field to all FlatNDJSON output lines, consistent with the standard NDJSON format. Each line now clearly identifies its dataset type.

- **TQR-189: Scanner Outputs Unrequested Archived Datasets**
  Issue: Scanner included archived/inactive data from unrelated scan types. For example, requesting only -filesystemscan would still output archived cipher scan results.
  Resolution: Scanner now only outputs results from explicitly requested scan types. Archived data is excluded unless the corresponding scan mode is active.

- **TQR-252: Missing Process Information for Archived Items in FlatNDJSON**
  Issue: When using FlatNDJSON output format and a cipher/library is marked as inactive (no longer running), the output includes the cipher data but omits process information (PID, process name, path).
  Resolution: Archived/inactive items now retain all metadata fields including process information for historical tracking and compliance reporting.

- **TQR-262: Full Scan Hangs on OneDrive Files On-Demand**
  Issue: Filesystem scans would hang indefinitely when encountering OneDrive Files On-Demand (cloud storage files not fully downloaded). The scanner attempted to read cloud-only files, triggering automatic downloads that caused timeouts and scan failures.
  Resolution: Enhanced file processing logic to detect and skip cloud storage placeholder files (OneDrive, SharePoint, and other cloud providers). Scans now complete successfully without attempting to download cloud-only content.

Security Enhancements

- **TQR-256: DoD STIGS Compliance: OpenSSL Extraction to Binary Directory**
  *Security Issue***:** DoD Security Technical Implementation Guides (STIGS) prevent execution from temporary directories (/tmp, /var/tmp, %TEMP%) on protected endpoints. Scanner previously extracted embedded OpenSSL to temp directories, causing failures on DoD-hardened systems with noexec mounted temp directories.

  *Resolution***:** Changed OpenSSL extraction to use timestamped hidden subdirectories in the binary's own directory:
  - Extract to .tychon_<unix_timestamp>/ subdirectory
  - Fresh extraction every run with SHA-256 integrity verification
  - Automatic cleanup at exit (zero persistence)

- Unique timestamp per execution prevents concurrent execution conflicts
- Falls back to temp directories only if binary directory not writable (with warning)

Benefits: DoD STIGS compliant, concurrent execution safe, secure (hash verification + fresh extraction + zero persistence), self-contained deployment.

Upgrade Notes

- **Breaking Change:** FlatNDJSON output now includes tychon.type field. Existing parsers may need updates to handle this new field.
- **Default Behavior Unchanged:** Split outputs and detail levels are opt-in features. Existing deployments will see no change in output behavior unless new flags are used.
- **Windows Path Fix:** BigFix and SCCM users should re-test deployments with paths containing parentheses - these will now work correctly.

Known Issues

- **TQR-254: Minimal Detail Level Creates Empty Files with Split Outputs**
  Issue: When using -detail-level minimal in conjunction with -split-outputs, the scanner creates output files but they may contain no data or only minimal top-level metadata.

  Affected Scenarios:
  - Using -mode local -fullscan -split-outputs -detail-level minimal
  - Files are created but datasets contain empty or incomplete data
  - Works correctly when using -detail-level standard or -detail-level full

  Workaround: Use -detail-level standard instead of minimal when using -split-outputs. Standard detail level provides a good balance of size reduction (30-40%) while ensuring all datasets contain valid data.

  Status: Fix in progress. Will be resolved in the next patch release.

Command Line Examples

- **Split Outputs with Standard Detail Level:** Creates separate files: scan_report_quantum.json, scan_report_network.json, etc. with reduced verbosity.

```
certscanner -mode local -fullscan -split-outputs -detail-level standard \
    -output /path/to/scan_report.json
```

- **Minimal Output for Dashboard Analytics:** 60-70% size reduction, includes only essential security metrics.

```
certscanner -mode local -cipherscan -detail-level minimal \
    -output scan_dashboard.json
```

- **BigFix Deployment with Parentheses in Path:** Now works correctly with Windows paths containing parentheses.

```
certscanner -mode local -fullscan \
    -output "C:\Program Files (x86)\BigFix Enterprise\scans\report.json"
```