

# Using the advanced functionality of the CodeQL CLI

You can use the CodeQL CLI to locally develop, test and run CodeQL queries on software projects.

GitHub CodeQL is licensed on a per-user basis upon installation. You can use CodeQL only for certain tasks under the license restrictions. For more information, see "[About the CodeQL CLI](#)." If you have a GitHub Advanced Security license, you can use CodeQL for automated analysis, continuous integration, and continuous delivery. For more information, see "[About GitHub Advanced Security](#)."

## Advanced setup of the CodeQL CLI

You can modify your CodeQL CLI setup to use a local checkout of the CodeQL repository for analysis, set up multiple versions of the CodeQL CLI, and analyze databases you have downloaded from GitHub.com.

## About CodeQL workspaces

CodeQL workspaces allow you to develop and maintain a group of CodeQL packs that depend on each other.

## Using custom queries with the CodeQL CLI

You can write your own CodeQL queries to find specific vulnerabilities and errors.

## Creating CodeQL query suites

You can create query suites for queries you frequently use in your CodeQL analyses.

## Testing custom queries

You can set up tests for your CodeQL queries to ensure that they continue to return the expected results with new releases of the CodeQL CLI.

## Testing query help files

You can use the CodeQL CLI to preview your query help files as Markdown and ensure they are valid.

## Creating and working with CodeQL packs

You can use CodeQL packs to create, share, depend on, and run CodeQL queries and libraries.

## Publishing and using CodeQL packs

You can publish your own CodeQL packs and use packs published by other people.

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## Specifying command options in a CodeQL configuration file

You can save default command options in a CodeQL configuration file.

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## Query reference files

You can use query reference files to define the location of a query you want to run in tests.

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## CodeQL CLI SARIF output

You can output SARIF from the CodeQL CLI and share static analysis results with other systems.

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## CodeQL CLI CSV output

You can output results from the CodeQL CLI in CSV format to share with other systems.

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## Extractor options

You can use the CodeQL CLI to run CodeQL processes locally on software projects.

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## Exit codes

Exit codes signify the status of a command after the CodeQL CLI runs it.

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