OpenText™ Fortify Remediation Aviator

User Guide

Version : 26.3

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1. User Guide

This user guide provides guidance for users to use the OpenText™ Fortify Remediation Aviator .

This document includes the following information:

- Key concepts of OpenText Fortify Remediation Aviator (Introduction)
- Downloading and using the OpenText Fortify Remediation Aviator (Getting started)
- List of administrator customer tasks that you can perform using OpenText Fortify Remediation Aviator (Manage tenant information)
- List of queries for the customer administrator and user (FAQs)

1.1. Change log

The following table lists changes made to this document. Revisions to this document are published between software releases only if the changes made affect product functionality.

Software Release / Document Version	Changes
26.3.0	Added: • Configuration of selected OpenText Application Security applications to consume multiple entitlements (see Limitations) • Support to prevent auto-suppression for selected categories (see Audit tag mapping) • Correlation of OpenText SAST and OpenText DAST results • Perform bulk correlation • New command to add entitlement (see Manage applications) • New commands to manage OpenText Fortify SAST and OpenText DAST entitlements (see Manage entitlements) Updated: • SAST-DAST correlation description (see Introduction) • `tag mapping file` to include suppression exclusions (see Audit tag mapping) • Increased Initial Quota (see Limitations and Limitations (OpenText™ Fortify on Demand)) Removed: • Entitlement list command has been deprecated.

Software Release / Document Version	Changes
26.2.0	Added: • Support to customize the default folder prioritization order using command-line option or configuration based on the required priority when there is limited quota (see Trigger audit) • Options to prevent automatic consumption of quota on application versions that have more open issues than available quota for both individual and bulk audits (see Trigger audit and Perform bulk audit) • Option to select the mapping mode (see Perform bulk audit) • New options to apply auto-remediations for OpenText™ Application Security FPR (see Perform auto-remediation) • Option to apply auto-remediation for OpenText™ Fortify on Demand FPR (see Perform auto-remediation) Updated: • All categories for Apex, PHP, C/C++, ABAP, Scala, Swift, and PLSQL are now supported with automatic suppression (see Supported languages and vulnerability categories)

Software Release / Document Version	Changes
26.1.0	Added: • New options to refresh the application version metrics and to set the refresh timeout while auditing (see Trigger audit) Updated: • All categories for JavaScript, TypeScript, Python, Go, and Kotlin are now supported with automatic suppression (see Supported languages and vulnerability categories)
25.4.0/Revision1: Dec 11,2025	Added: • Supports bulk auditing for fcli v3.13.1 and later (see Perform bulk audit)

Software Release / Document Version	Changes
25.4.0	Added: • Limitations for off-cloud and Fortify Hosted customers (see Limitations) • New command to download an FPR from OpenText Application Security and automatically apply auto-remediations suggested by OpenText Fortify Remediation Aviator (see Perform auto-remediation) • New command options to select a filter set and folder or folders for auditing issues (see Trigger audit) • New command option to audit all issues by ignoring the filter sets including the default enabled one (see Trigger audit) • New command to add OpenText Fortify Remediation Aviator tags to the OpenText Application Security filter templates, thus ensuring all the relevant templates are aligned with OpenText Fortify Remediation Aviator tagging requirements (see Apply SAST Aviator tag)

Software Release / Document Version	Changes
25.3.0	Updated: • All categories for .NET are now supported with automatic suppression, except for Code Correctness, Dead Code, Poor Error Handling, and Unsafe Native Invoke (see Supported languages and vulnerability categories) • The email ID associated with managing user tokens is the user's email ID, which is other than the administrator's email ID (see Generate tokens for individual users, and Manage user tokens)
25.2.0	Initial release of the document.

1.2. Introduction

OpenText™ Fortify Remediation Aviator is a cloud-based enterprise service that audits the OpenText SAST scan results as a true positive or a false positive.

OpenText Fortify Remediation Aviator leverages Large Language Model (LLM) technology. When an issue is classified as a true positive, OpenText Fortify Remediation Aviator offers remediation recommendations, enabling users to resolve code issues quickly and accurately. It also supports auto-remediation and SAST-DAST correlation. SAST-DAST correlation uses AI to match OpenText Fortify SAST findings with OpenText DAST findings for the same application that refer to the same underlying vulnerability, giving security teams stronger, cross-validated evidence for each issue.

OpenText Fortify Remediation Aviator is accessible using OpenText SAST in an off-cloud setup and OpenText SAST through the Fortify Hosted model. In both cases, OpenText Fortify Remediation Aviator itself is a SaaS service. Regardless of the access method, you can use the open-source Fortify CLI tool to transmit scan results from the OpenText™ Application Security (Fortify Software Security Cente) to OpenText Fortify Remediation Aviator for processing. The results from OpenText Fortify Remediation Aviator are stored as audit information in the OpenText Application Security . OpenText Fortify Remediation Aviator is also available through OpenText Core Application Security (Fortify on Demand).

1.2.1. Product name changes

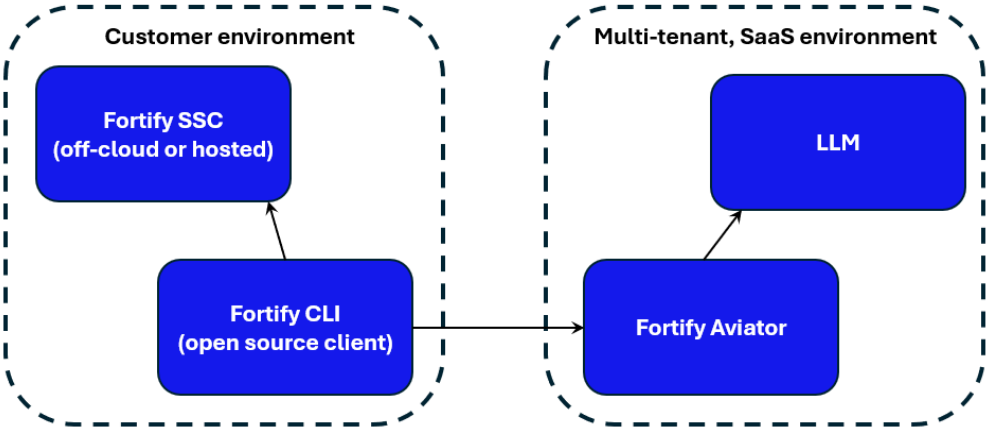
OpenText is in the process of changing the following product names:

Previous name	New name
OpenText™ Static Application Security Testing (OpenText SAST)	OpenText™ Fortify Static Application Security Testing (OpenText Fortify SAST)
Fortify Software Security Center	OpenText™ Application Security
Fortify WebInspect	OpenText™ Dynamic Application Security Testing (OpenText DAST)
OpenText™ Core Application Security	OpenText™ Fortify on Demand
OpenText™ Core Software Composition Analysis (OpenText Core SCA)	OpenText™ Fortify Software Composition Analysis (OpenText Fortify SCA)
OpenText™ Application Security Aviator	OpenText™ Fortify Remediation Aviator
Fortify Applications and Tools	OpenText™ Application Security Tools

The product names have changed on product splash pages, mastheads, login pages, and other places where the product is identified. The name changes are intended to clarify product functionality and to better align the Fortify Software products with OpenText. In some cases, such as on the documentation title page, the old name might temporarily be included in parenthesis. You can expect to see more changes in future product releases.

1.2.2. Aviator model

The Fortify CLI tool sends the SAST scan results, including vulnerability information and source code snippets, from the OpenText Application Security to OpenText Fortify Remediation Aviator. The OpenText Fortify Remediation Aviator sends the scan results to an LLM for auditing the scan results. The results are then returned to Fortify CLI. The vulnerability and audit information are not stored within OpenText Fortify Remediation Aviator. OpenText Fortify Remediation Aviator retains only the statistical data indicating that an audit occurred, including the number of issues identified.



Advantages of OpenText Fortify Remediation Aviator

OpenText Fortify Remediation Aviator leverages Generative Artificial Intelligence (GenAI) in the form of a Large Language Model (LLM) to generate content and provide product functionality.

- **Hybrid model**: The OpenText Fortify Remediation Aviator model enables you to use the cloud service hosted by OpenText and the existing Fortify CLI utility instead of hosting a heavy LLM.
- **Integration with OpenText Application Security**: After a regular SAST scan is performed, the results are uploaded to the OpenText Application Security. Subsequently, OpenText Fortify Remediation Aviator audits the scan results stored in OpenText Application Security. This approach prevents redundant evaluations.

1.2.3. Fortify CLI capabilities

In addition to auditing the scan results using FCLI, you can perform the following operations:

- Apply the remediations proposed by OpenText Fortify Remediation Aviator to the source code automatically.
- Correlate SAST and DAST findings for an application version to identify the same underlying vulnerability across both scan types. For more information, see Correlation of OpenText SAST and OpenText DAST results.
- View entitlements and entitlement consumption. For more information, see Entitlement model.
- Create new applications and view available applications.
- Create access tokens for individual users.
- List and revoke the access tokens.

1.2.4. User roles

OpenText Fortify Remediation Aviator includes sequential procedures and involves different user roles in your organization. The user roles involved are:

- Customer administrator: Customer administrator can create an admin configuration, create and manage tokens, and manage applications and entitlements.
- Customer user: User can create a user session and trigger an audit.

Note

Before using the fcli, you must be registered with OpenText. OpenText Support creates and registers the tenant upon your initial purchase of OpenText Fortify Remediation Aviator.

1.2.5. Entitlement model

OpenText Fortify Remediation Aviator is a paid service. The following entitlement models of OpenText Fortify Remediation Aviator models are available for purchase:

- **per Application**: The basic entitlement model is **per Application**. In this model, you can run any number of audits for a single application. Therefore, the customer administrator must first create applications in the tenant. OpenText Fortify Remediation Aviator monitors the number of entitlements for each tenant every time a Fortify Project Result (FPR) is processed.
- **per Developer**: In this model, OpenText Fortify Remediation Aviator cannot monitor developers. By default, a maximum of four applications are allocated per 10 developers. If this allocation does not meet your requirements, contact your account representative.

For every new purchase of the OpenText Fortify Remediation Aviator entitlement, OpenText Support updates the number of entitlements for the respective tenant.

1.2.5.1. Limitations

OpenText Fortify Remediation Aviator, like any LLM-powered system, has usage limitations due to the operational costs of invoking LLMs. Each application is assigned with a quota that defines the maximum number of issues it can audit. Quotas apply individually to each application and are not shared across applications or tenants. This method provides an efficient way to control audit consumption. When an application reaches its quota, issues will not be audited until the quota is assigned.

Quota consumption

When you run an audit, OpenText Fortify Remediation Aviator will audit up to the remaining quota for that application. If the audit is successful, the quota will be deducted based on the consumption. If the audit fails or crashes the quota remains unchanged.

Note

- Only one audit run per application is allowed at a time to ensure quota consistency.
- Quota usage is recorded in the audit logs for tracking.

Quota top-up

Initial Quota

When an application is created, an Initial Quota is credited as defined by the tenant configuration. The default value is 10,000.

Monthly Quota

Every month, applications receive a Monthly Quota top-up. The default value is 1,000. The total quota for an application cannot exceed the Initial Quota.

For example:

- Initial Quota = 10,000 (default)
- Monthly Quota = 1,000 (default)
- Month-1 = 500 issues are consumed and 9,500 are remaining.
- Monthly top-up = 1,000 is the default, but the total quota is limited to the Initial Quota, which is 10,000. Therefore, 500 is added (500 + 9,500).

Note

In some cases, both Initial and Monthly Quotas can be configured based on the tenant. This change affects the future and is not applied retroactively.

Multi-entitlement applications

You can configure selected applications to consume multiple entitlements. This supports large applications that regularly exceed standard quota limits and avoids creating multiple artificial applications for a single logical application.

The entitlement multiplier is configured on an existing application and defaults to 1.

- Multiplier values are positive integers (1, 2, 3, etc.).
- Each command increment adds one multiplier at a time.
- The multiplier is stored in the application entity and visible in application details.

Quota calculation

- Initial quota = Base initial quota × Entitlement multiplier
- Monthly quota = Base monthly quota × Entitlement multiplier
- Maximum quota cap = Scaled initial quota

For example,

- Multiplier = 2 → Initial Quota = 20,000; Monthly Quota = 2,000
- Multiplier = 3 → Initial Quota = 30,000; Monthly Quota = 3,000

When increasing a multiplier for an existing application, the new quota is calculated as:

`current_quota + (new_multiplier – current_multiplier) × base_initial_quota`

For example,
If an application has a base initial quota of 10,000, a multiplier of 2 and a current quota of 2,000, and it is increased to a multiplier of 4:

- New quota = 2,000 + (4 − 2) × 10,000 = 22,000
- Maximum quota cap = 4 × 10,000 = 40,000

Entitlement tracking and validation

- Each multiplier increment consumes one additional tenant entitlement.
- Configuration fails if insufficient entitlements are available.
- Validation checks entitlement availability before each change.

- Error messages are displayed if limits are exceeded.
- Entitlement consumption and multiplier values appear in application details.

Note
Existing applications remain backward compatible with multiplier 1 unless explicitly updated.

Behavior when quota limit is reached

If an audit reaches the quota limit:

- The number of issues audited is based on the remaining quota. FCLI displays the status and the number of issues audited and skipped.
- The audit stops gracefully.
- For the audited issues, the FPR file is generated and uploaded to OpenText Application Security .
- This case is not treated as an error.

When you run an audit and the quota is completely utilized, FCLI displays the message, "*No quota available for application <application_name>. Your next quota update for this application will happen on <Month Date, Year>.*".

Tip
The customer administrator can check the quota information using `fcli aviator app list` .

Efficient way to use the quota

When applications have a large number of issues exceeding the quota assigned and require auditing, use the following methods:

- Use OpenText Fortify SAST scan policy to reduce the number of issues. For information, see *OpenText™ Static Application Security Testing User Guide*.
- Use filter options while auditing:
  - Specify folders of your default filter set (for example, only audit Critical and High issues) to limit the number of issues processed by OpenText Fortify Remediation Aviator , or,
  - Define a custom filter set specifically to manage what gets processed by OpenText Fortify Remediation Aviator. For more information about the filter options, see Trigger audit.

See also

FAQs

1.2.6. Limitations (OpenText™ Fortify on Demand)

Important

The limitation system described below exclusively applies to OpenText Fortify Remediation Aviator as available through OpenText™ Fortify on Demand. For the limitation mechanism in OpenText Fortify Remediation Aviator for off-cloud and Fortify Hosted customers, see Limitations.

There are limitations on how OpenText Fortify Remediation Aviator audits SAST scan results containing an extremely large number of issues.

OpenText Fortify Remediation Aviator's approach to auditing data is similar to how auditing by a human works. If there are hundreds of issues, they can be audited manually. But if there are thousands, that’s neither practical nor useful. The first response should be to look for patterns. A recurring bad coding pattern may cause many true positives. In that case, the code should be fixed in bulk. Alternatively, some rules in SAST may trigger massive false positives for that particular codebase. In that case, the SAST scan configuration should be adjusted. After these steps, a smaller number of remaining findings can be audited individually.

OpenText Fortify Remediation Aviator has largely been designed as an AI-powered version of a human auditor. It will not audit an unlimited number of issues. Practically, such a limit is also necessary, given the non-trivial resource consumption for every issue audited.

The following limits apply:

- For any FPR, OpenText Fortify Remediation Aviator audits at most 10,000 new issues in total.
- For any FPR, OpenText Fortify Remediation Aviator audits at most 500 new issues in a single category.

When OpenText Fortify Remediation Aviator processes an FPR that exceeds one or more of these limits, any issue beyond the limit is skipped. When a subsequent SAST analysis of the same project yields new issues, these new issues are audited if the quota is available.

For example,

- A SAST scan of project X yields 10,500 issues.

- The OpenText Fortify Remediation Aviator auditing will audit 10,000 of those, and mark 500 as “Excluded due to Limiting”.
- Now, development continues. An additional 100 issues have been found, leading to an FPR with 10,600 issues.
- OpenText Fortify Remediation Aviator auditing of this new FPR will:
    - Not audit again the 10,000 previously audited issues.
    - Audit the 600 issues that were previously skipped if quota is available.

1.2.7. Authentication model

OpenText Fortify Remediation Aviator uses a dual authentication model.

- Customer administrators are authenticated using a private key. FCLI signs customer administrator requests with this private key. OpenText Fortify Remediation Aviator verifies the signature with the registered public key. New customer administrators and public keys can be registered through OpenText support.
- Regular users are authenticated with an access token. Customer administrators can create these tokens for users. FCLI includes this access token in user requests.

1.2.8. Audit tag mapping

The OpenText Fortify Remediation Aviator algorithm predicts issues to be true positives or false positives and, in some cases, unsure.

To provide audit results to OpenText Application Security, the audit result must be set as a tag value, along with the decision to suppress an issue or not. By default, the Analysis tag is used to store audit results and includes a predefined set of possible values. However as an administrator, you might have customized the available Analysis tag values in OpenText Application Security resulting in deviations from the default values. For these reasons, OpenText Fortify Remediation Aviator has the functionality to map its predictions to a provided tag value and also decide when an issue should be suppressed by default in OpenText Application Security. Additionally, it allows configuration of the storage location for audit results, in case a different tag, other than the default Analysis tag is preferred.

To configure this mapping, OpenText Fortify Remediation Aviator separates and organizes across two tiers of support. For more information, see Supported languages and vulnerability categories. Considering there are two tiers and three different OpenText Fortify Remediation Aviator outcomes (true positive (TP), false positive (FP), unsure), there are six different cases in total. These cases must be mapped to an OpenText Application Security tag value and a suppression status. The following is the default mapping performed by OpenText Fortify Remediation Aviator :

Tier	Tier configuration name	Outcome	Analysis tag value	Suppressed
Supported with automatic suppression	tier_1	TP	Exploitable	No
Supported with automatic suppression	tier_1	FP	Not an issue	Yes
Supported with automatic suppression	tier_1	Unsure	Not set	No
Supported without automatic suppression	tier_2	TP	Suspicious	No
Supported without automatic suppression	tier_2	FP	Not an issue	No
Supported without automatic suppression	tier_2	Unsure	Not set	No

To override the default tag mapping, use the `--tag-mapping` argument when you run an audit.

```
fcli aviator ssc audit --av <application_version_name:id> --tag-mapping=<file.yaml>
```

The following tag mapping file is the default one that implements the mapping described in the aforementioned table. Use this mapping file as a basis to configure your required mapping. In addition to changing analysis tag values and suppression status, you can also select a different analysis tag altogether.

```
# Set the SSC tag to use to store Aviator results. Optional.
# If not set, defaults to "87f2364f-dcd4-49e6-861d-f8d3f351686b"
tag_id: "87f2364f-dcd4-49e6-861d-f8d3f351686b"
# Map Aviator results to SSC tag values. “tier_1” are high-confidence cases
# that by default are suppressed automatically. “tier_2” are the remaining issues.
# “value” is a String attribute that maps to a tag value in SSC. It may be omitted.
# “suppress” is a Boolean attribute that defaults to “false”
# Optional: Issues matching these exclusions are never auto-suppressed by Aviator.
# Matching is exact and case-insensitive.
# suppression_exclusions:
#   - categories:
#       - "Privacy Violation"
mapping:
  tier_1:
    fp:
      value: "Not an Issue"
      suppress: true
    tp:
      value: "Exploitable"
      suppress: false
    unsure:
      suppress: false
  tier_2:
    fp:
      value: "Not an Issue"
      suppress: false
    tp:
      value: "Suspicious"
      suppress: false
    unsure:
      suppress: false
```

The tag used to save the audit results can be changed by specifying the tag GUID in the `tag_id` field of the mapping file. To see the available tags and their respective GUID's, run `fcli ssc tag ls` or `fcli ssc custom-tag ls`. The list of GUIDs and their tags is displayed, for example:

```
Guid                                   Name                  Value type
87f2364f-dcd4-49e6-861d-f8d3f351686b   Analysis              LIST
ACB05E55-E74D-468C-8501-52E1FDC27D71   Auditor Status        LIST
C2D6EC66-CCB3-4FB9-9EE0-0BB02F51008F   Aviator prediction    LIST
FB7B0462-2C2E-46D9-811A-DCC1F3C83051   Aviator status        LIST
831d8692-1b9a-4e6b-bddd-8e0f6552fe3e   Correlation Tag       TEXT
7A3B5C9D-1E2F-4A8B-9C0D-E1F2A3B4C5D6   DAST correlation status  TEXT
013cc66f-8651-4e39-bacb-beb918c5ef65   Expected Analysis     LIST
cc8b7810-2b61-42c6-9ab2-deec19d07234   xv                    LIST
```

Prevent auto-suppression for selected categories

You can prevent OpenText Fortify Remediation Aviator from automatically suppressing specific vulnerability categories by defining suppression exclusions in the tag mapping file.

When OpenText Fortify Remediation Aviator is about to suppress a finding, it checks the suppression exclusions first:

- If the finding's category matches an exclusion, the finding is not suppressed.
- If there is no match, suppression follows the defined mapping rules.

For example, if you specify categories such as "Privacy Violation" and "SQL Injection," any findings in these categories will not be automatically suppressed, even if suppression is enabled in the mapping. In the tag mapping file, it can be specified as:

```
suppression_exclusions:

 - categories:

    - "Privacy Violation"

    - "SQL Injection"
```

1.2.9. Related documents

This topic describes documents that provide information about OpenText Application Security Software products.

Note

Most guides are available in both PDF and HTML formats. Product help is available within the Fortify License and Infrastructure Manager (LIM) and the OpenText DAST products.

All products

The following documents provide general information for all products. Unless otherwise noted, these documents are available on the Product Documentation website for each product.

Document / file name	Description
About OpenText Application Security Software Documentation appsec-docs-n-*<version>*.pdf	This paper provides information about how to access OpenText Application Security Software product documentation. **Note** This document is included only with the product download.
OpenText™ Application Security Software System Requirements appsec-sr-*<version>*.pdf	This document provides the details about the environments and products supported for this version of OpenText Application Security Software.
What's New in OpenText Application Security Software<version> appsec-wn-*<version>*.pdf	This document describes the new features in OpenText Application Security Software products.
OpenText Application Security Software Release Notes	This document provides an overview of the changes made to OpenText Application Security Software for this release and important information not included elsewhere in the product documentation.

Fortify ScanCentral SAST

The following document provides information about Fortify ScanCentral SAST. This document is available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-software-security-center.

Document / file name	Description
OpenText™ Fortify ScanCentral SAST Installation, Configuration, and Usage Guide sc-sast-ugd-*<version>*.pdf	This document provides information about how to install, configure, and use Fortify ScanCentral SAST to streamline the static code analysis process. It is written for anyone who intends to install, configure, or use Fortify ScanCentral SAST to offload the resource-intensive translation and scanning phases of their OpenText Fortify SAST process.

OpenText Application Security

The following document provides information about OpenText Application Security. This document is available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-software-security-center.

Document / file name	Description
OpenText™ Applicaton Security User Guide ssc-ugd-*<version>*.pdf	This document provides OpenText Application Security users with detailed information about how to deploy and use OpenText Application Security. It provides all the information you need to deploy, configure, and use OpenText Application Security. It is intended for use by system and instance administrators, database administrators (DBAs), enterprise security leads, development team managers, and developers. OpenText Application Security provides security team leads with a high-level overview of the history and status of a project.

OpenText Fortify SAST

The following documents provide information about OpenText SAST (Fortify Static Code Analyzer). Unless otherwise noted, these documents are available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-static-code.

Document / file name	Description
OpenText™ Static Application Security Testing User Guide sast-ugd-*<version>*.pdf	This document describes how to install and use OpenText Fortify SAST to scan code on many of the major programming platforms. It is intended for people responsible for security audits and secure coding.
OpenText™ Static Application Security Testing Custom Rules Guide sast-cr-ugd-*<version>*.zip	This document provides the information that you need to create custom rules for OpenText Fortify SAST. This guide includes examples that apply rule-writing concepts to real-world security issues. **Note** This document is included only with the product download.
OpenText™ Fortify License and Infrastructure Manager Installation and Usage Guide lim-ugd-*<version>*.pdf	This document describes how to install, configure, and use the Fortify License and Infrastructure Manager (LIM), which is available for installation on a local Windows server and as a container image on the Docker platform.

OpenText Application Security Tools

The following documents provide information about OpenText Application Security Tools. These documents are available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-static-code-analyzer-and-tools.

Document / file name	Description
OpenText™ Application Security Tools Guide sast-tgd-<*version*>.pdf	This document describes how to install application security tools. It provides an overview of the applications and command-line tools that enable you to scan your code with OpenText Fortify SAST, review analysis results, work with analysis results files, and more.
OpenText™ Fortify Audit Workbench User Guide awb-ugd-<*version*>.pdf	This document describes how to use Fortify Audit Workbench to scan software projects and audit analysis results. This guide also includes how to integrate with bug trackers, produce reports, and perform collaborative auditing.
OpenText™ Fortify Plugin for Eclipse User Guide ep-udg-<*version*>.pdf	This document provides information about how to install and use the Fortify Plugin for Eclipse to analyze and audit your code.
OpenText™ Fortify Analysis Plugin for IntelliJ IDEA and Android Studio User Guide iap-udg-<*version*>.pdf	This document describes how to install and use the Fortify Analysis Plugin for IntelliJ IDEA and Android Studio to analyze your code and optionally upload the results to OpenText Application Security.
OpenText™ Fortify Extension for Visual Studio User Guide vse-ugd-<*version*>.pdf	This document provides information about how to install and use the Fortify Extension for Visual Studio to analyze, audit, and remediate your code to resolve security-related issues in solutions and projects.

1.3. Supported languages and vulnerability categories

OpenText Fortify Remediation Aviator is verified by OpenText to maximize accuracy. The extent to which a particular vulnerability category in a certain programming language is supported by OpenText Fortify Remediation Aviator might differ based on the amount of verification and optimization that has already been performed. There are three classes:

Class	Description
Supported with automatic suppression	Cases with a high degree of confidence. By default, OpenText Fortify Remediation Aviator performs automatic suppression of false positives.
Supported without automatic suppression	Cases where confidence is yet to be established to the same standard. By default, OpenText Fortify Remediation Aviator does not perform automatic suppression.
Not supported	A small set of cases that cannot be handled by OpenText Fortify Remediation Aviator.

The underlying LLM used by OpenText Fortify Remediation Aviator evolves over time. Because not every LLM version is immediately available in all cloud hosting locations used by OpenText Fortify Remediation Aviator, different instances of OpenText Fortify Remediation Aviator may use different LLM versions at any point. The LLM version in use determines the classification of cases. Generally, on newer LLMs, more classes can be moved to “automatic suppression”.

The following overview lists how language or category combinations are classified in the current version of OpenText Fortify Remediation Aviator for off-cloud and hosted customers.

Supported language or category combinations with automatic suppression

- Java, JavaScript, TypeScript, Python, Go, Kotlin, Apex, PHP, C/C++, ABAP, Scala, Swift, PLSQL
    - All categories except explicitly non-supported ones.
- .NET
    - All categories except Code Correctness, Dead Code, Poor Error Handling, and Unsafe Native Invoke.

Note

The categories Code Correctness, Dead Code, Poor Error Handling, and Unsafe Native Invoke are "supported without automatic suppression".

Supported without automatic suppression

- All other language or category combinations supported by OpenText SAST, except explicitly excluded cases.

Not supported

- The following vulnerability category is explicitly not-supported:
    - Privilege Management: Unnecessary Permission.

Note

The verification of this category's issues requires access to the complete source code at once, which is not compatible with the way OpenText Fortify Remediation Aviator functions.

1.4. Getting started

Perform the following steps to get started with OpenText Fortify Remediation Aviator:

1. Download fcli
2. Register customer administrator
3. Generate tokens for individual users
4. Create application
5. Apply Aviator tag
6. Correlation of OpenText SAST and OpenText DAST results
7. Trigger audit / Perform bulk audit / Perform bulk correlation
8. Perform auto-remediation

1.4.1. Download fcli

Download fcli v3.23.0 or later from https://github.com/fortify/fcli and extract it into a directory from where you will run the commands.

1.4.2. Register the customer administrator

Prerequisite

Ensure that the tenant is registered. Contact OpenText Support for details.

Register the customer administrator

To register a customer administrator:

1. Create a 4096-bit RSA key pair in the PEM format using a cryptographic tool available in your organization.
    - (Optional) Use OpenSSL (https://www.openssl.org/) to generate the RSA key pair.
        1. Generate a 4096-bit RSA private key (private_key.pem):

            ```
            openssl genpkey -algorithm RSA -pkeyopt rsa_keygen_bits:4096 -out private_key.pem
            ```

        2. Extract the public key (public_key.pem) from the private key:

            ```
            openssl rsa -in private_key.pem -pubout -out public_key.pem
            ```

2. Save the private key (private_key.pem) for later use.
3. Share the public key (public_key.pem) and other necessary details with OpenText Support to register the customer administrator.

    You will be notified after the registration is complete.

1.4.3. Generate tokens for individual users

Prerequisite

You must be a registered customer administrator.

Generate tokens for individual users

To create an access token for a specified user:

1. At the command prompt, navigate to the path where fcli has been extracted.
2. (Optional) View the various administrator and user operations available:

   ```
   fcli aviator -h
   ```

   The following table lists the available command options:

Argument	Description
`-h`, `--help`	Shows the help message and exits.
`admin-config`	Manages the OpenText Fortify Remediation Aviator administrator configurations (start here).
`session`	Manages the OpenText Fortify Remediation Aviator user sessions (start here).
`app`	Manages the OpenText Fortify Remediation Aviator applications.
`entitlement`	Manages the OpenText Fortify Remediation Aviator entitlements.
`ssc`	Uses OpenText™ Fortify Remediation Aviator with OpenText™ Application Security.
`token`	Manages OpenText Fortify Remediation Aviator access tokens.

Note
Use **admin-config** to view entitlement, manage applications, and generate tokens and **session** to audit.
Ensure to create an **admin-config** before performing administrator tasks and a user **session** before auditing.

3. Create an administrator configuration for interacting with OpenText Fortify Remediation Aviator:

```
fcli aviator admin-config create --url <aviator_server_url> --tenant <tenant_name> --private-key <path_to_private_key.pem>
```

> **Note**
>
> The `--private-key` can be a file containing the key or the key itself. Ensure that the key is in the PEM format.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

An admin session is created.

4. Generate the user access token:

```
fcli aviator token create --email <user_email_id> --save-token <output_file>
```

Optional arguments	Description	Default value
`--name`	Specifies the token name.	Derived from `--email`
`--save-token`	Saves the generated raw token string to the specified file. By default, the string is in json format.	NA
`-o` , `--output`	Specifies the token format. The available formats are csv, table, expr, json, xml, and yaml.	NA
`--to-file`	Specifies a file to save the output.	NA
`--end-date`	Specifies the token expiration date in the YYYY-MM-DD format.	30 days from the date of creation

Note

OpenText recommends using the `--save-token` optional argument to ease the user experience when using the access token.

1.4.4. Create application

Prerequisites

- You must be a registered customer administrator.
- Ensure to have a valid entitlement. See Entitlement model section.

Create application

To create an application:

1. Create an administrator configuration for interacting with OpenText Fortify Remediation Aviator:

```
fcli aviator admin-config create --url <aviator_server_url> --tenant <tenant_name> --private-key <path_to_private_key.pem>
```

Note

The `--private-key` can be a file containing the key or the key itself. Ensure that the key is in the PEM format.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

2. Create an application:

```
fcli aviator app create <aviator_application_name>
```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

An application is created and assigned to the first available entitlement.

1.4.5. Apply Aviator tag

If the OpenText Application Security application does not have the OpenText Fortify Remediation Aviator specific tags applied, apply the OpenText Fortify Remediation Aviator tags to the OpenText Application Security filter templates.

Apply tag

To apply OpenText Fortify Remediation Aviator specific tags:

1. Log in to your OpenText™ Application Security session:

```
fcli ssc session login --url <ssc_url> -u <user_name> -p <ssc_password>
```

2. Apply the required template. Ensure to specify at least one option:

Note

Applying the OpenText Fortify Remediation Aviator tags ensures that the OpenText Fortify Remediation Aviator specific custom tags exists in OpenText Application Security and is associated with the specified issue templates and/or application versions. This prevents OpenText Application Security from removing the OpenText Fortify Remediation Aviator audit data when processing the uploaded FPR files.

```
fcli aviator ssc prepare --all-avs | --all-issue-templates | --av=
<specific_app_VersionNameOrId> | --appversion=
<specific_app_VersionNameOrId> | --issue-template=
<specific_app_templateNameOrId>
```

Optional argument	Description	Default value
`--ssc-session`	Name of the OpenText Application Security session.	default

Note

This command may change in a future fcli version to re-use generic tag update functionality that is planned for the `fcli ssc` module.

1.4.6. Correlation of OpenText Fortify SAST and OpenText DAST results

OpenText Fortify SAST and OpenText DAST scans of the same application can independently detect the same underlying vulnerability. A OpenText Fortify SAST scan reports the defect anchored to a source code location, while a OpenText DAST scan reports it anchored to an HTTP request and URL. OpenText Fortify Remediation Aviator uses AI-based SAST-DAST correlation to identify these matching pairs, providing security teams with stronger, cross-validated evidence for each vulnerability.

When you run the correlation command for an application version, OpenText Fortify Remediation Aviator downloads both the SAST FPR and the DAST FPR from OpenText Application Security. It groups findings by vulnerability category and uses a two-stage AI process to identify and confirm correlated pairs. Confirmed correlations are reported back to OpenText Application Security and are visible in the issue view for both SAST and DAST findings. Only unsuppressed findings are submitted for correlation, and previously correlated pairs are retained across re-runs.

To correlate multiple application versions in one command, see Perform bulk correlation.

Prerequisites

- You must be a customer user.
- Ensure the following:
  - The application version in OpenText Application Security has both a processed SAST FPR and a processed DAST FPR.
  - Source code is included in the SAST FPR. Do not use the `-disable-source-bundling` option or the `com.fortify.sca.FPRDisableSourceBundling` property during the SAST scan.
  - The application exists in OpenText Fortify Remediation Aviator and is linked to the OpenText Application Security application version.
  - Have a valid user access token.
  - Have an active OpenText Application Security session.
  - User session is created.

Correlate OpenText Fortify SAST and OpenText DAST results

To correlate OpenText Fortify SAST and OpenText DAST findings:

1. Run the SAST-DAST correlation command:
   This command downloads both the SAST FPR and the DAST FPR from the specified OpenText Application Security application version. OpenText Fortify Remediation Aviator identifies correlated pairs using AI and uploads the results back to OpenText Application Security.

   ```
   fcli aviator correlate-sast-dast --av <application_name:version> --aviator-app <aviator_application_name>
   ```

Optional argument	Description	Default value
`--av-session, --aviator-session`	Name of the OpenText Fortify Remediation Aviator session	default
`--ssc-session`	Name of the OpenText Application Security session	default

FCLI displays a structured result containing:

- OpenText Application Security application name and version
- Artifact ID of the uploaded DAST FPR
- Status summarizing the outcome. The following are the status values:
  - `CORRELATED` : All submitted SAST findings have at least one confirmed correlated DAST pair.
  - `PARTIALLY_CORRELATED` : Some findings are correlated. This may occur if quota is exhausted before processing all findings.
  - `SKIPPED` : No shared vulnerability categories between SAST and DAST findings; no correlation performed.
  - `FAILED` : The correlation run encountered an unrecoverable error.

After a successful upload, correlated SAST and DAST issues in OpenText Application Security are marked as correlated. Correlation links are available in the OpenText Application Security issue view and through the REST API for both SAST and DAST

records. Subsequent correlation runs preserve previously identified pairs. SAST findings that are already correlated with a DAST URL are not reprocessed for that URL.

1.4.7. Trigger audit

The instructions provided in this topic are for auditing a single application. If you want to audit all applications in OpenText Application Security, or a subset of applications having a certain attribute, see the Perform bulk audit section.

Prerequisites

- You must be a customer user.
- Ensure the following:
  - At least one application is assigned to the entitlement.
  - You have a valid user access token.
- Logged in to your OpenText Application Security session.

Trigger audit

Caution

For the OpenText Fortify Remediation Aviator to audit FPRs and provide remediation suggestions, ensure the following:

- Source code is available in the FPRs.
- Do not enable the option `-disable-source-bundling` or property `com.fortify.sca.FPRDisableSourceBundling` when you perform the scan through OpenText Fortify SAST.

To trigger an audit:

1. Create a user session to interact with OpenText Fortify Remediation Aviator:

```
fcli aviator session login --url <aviator_server_url> --token <access_token>
```

Note

The default value for `--token` is a file path. To use other formats for the access token, prefix the value with `file:<local file containing key>` or `string:<key string value>` or `env:<env-var name containing key>`.

Ensure to create a user session before auditing.

If you cannot locate your access token, contact your customer administrator.

Optional argument	Description	Default value
`--av-session, --aviator-session`	Name of the Aviator user session.	default

2. Audit the application:
   This command downloads the FPR from the specified OpenText Application Security application version, OpenText Fortify Remediation Aviator audits the issues and uploads the result back to the OpenText Application Security.

   ```
   fcli aviator ssc audit --av <application_version_name:id>
   ```

Optional arguments	Description	Default value
`--app`	Name of the OpenText Fortify Remediation Aviator application. If the name is not specified, the build ID of the FPR is considered.	FPR build ID
`--tag-mapping`	Overrides the default tag mapping using the YAML file. See Audit tag mapping.	tag mapping.yaml
`--ssc-session`	Name of the OpenText Application Security session to use for auditing.	default
`--no-filterset`	Do not apply any filter sets, including the default enabled filter set from the FPR.	-
`--av-session` , `--aviator-session`	Name of the OpenText Fortify Remediation Aviator user session.	default
`--[no-]refresh`	By default, this option refreshes the source application version's metrics when copying from it. Note that for large applications, this can lead to an error if the timeout period expires.	-

Optional arguments	Description	Default value
`--refresh-timeout`	Set the timeout period for refreshing the metric. For example, 30s (30 seconds), 5m (5 minutes), 1h (1 hour).	60 seconds
`--skip-if-exceeding-quota`	Skips audit if the number of open issues exceeds the available quota. When skipped, a summary with the top 10 unaudited categories is displayed.	-
`--test-exceeding-quota`	Checks whether the number of open issues exceeds the available quota and displays the result without performing an audit.	-

It might take a few minutes to process the FPR. The duration depends on the size of the FPR.

Important

If the system running the OpenText Fortify Remediation Aviator scan does not have sufficient physical memory, the audit may fail with an *OutOfMemoryError*. This error typically occurs when the available system memory or the configured JVM heap size is insufficient to process a huge number of vulnerabilities (FPR files containing thousands of issues) during the audit phase.

In such cases, ensure that the machine initiating the OpenText Fortify Remediation Aviator scan has adequate physical memory and increase the JVM heap allocation before re-running the audit.

Note

- You can use the same access token to audit multiple FPRs on different terminals at the same time.
- You can audit an FPR only once.

1. You can use the following optional methods to audit:
   For details on how to prioritize the issues when the audit quota is limited, see Issue prioritization when audit quota is limited.
   - Select a filter set for auditing:

     ```
     fcli aviator ssc audit <app_version_name_or_id> --filterset <filterset_name_or_id>
     ```

Optional argument	Description	Default value
--filterset	Specifies the name or ID of the filter set to apply.	default

   - Select folder or folders for auditing:

     ```
     fcli aviator ssc audit <app_version_name_or_id> --filterset <filterset_name_or_id> --folder <folder_name1>,<folder_name2>,...
     ```

Optional argument	Description	Default value
`--folder`	Filters the issues by a comma-separated list of specific folder names from the selected filter set (for example, Critical, High). This option requires an active filter set.	-

After the OpenText Fortify Remediation Aviator processes the FPR, the Action status and the number of audited issues are displayed. OpenText Fortify Remediation Aviator uploads the audited FPR back to the OpenText Application Security application version.

To view the OpenText Fortify Remediation Aviator's audit results:

1. Open the OpenText Application Security application and go to **Applications** > **Audit**.
2. Click each row to view the Audit details, such as analysis tag, remediation comment, and the highlighted vulnerable code segment.

Issue prioritization when audit quota is limited

When you run an individual audit or a bulk audit, and the number of open issues in the selected OpenText Application Security application version is higher than the available OpenText Fortify Remediation Aviator application quota, OpenText Fortify Remediation Aviator audits only a subset of issues. Issue selection is based on folder priority. Issues are prioritized by the folder order stored in the FPR file.
The default order follows the severity hierarchy: Critical → High → Medium → Low. The severe issues are audited first until the available quota is used.
You can customize the default folder prioritization and provide the required folder order by using the OpenText Fortify Remediation Aviator command-line option `fcli aviator ssc audit <app_version_name_or_id> --filterset <filterset_name_or_id> --folder <folder_name1>,<folder_name2>,...` or configure the order in the OpenText Application Security application.

If there are more issues in a folder than the remaining quota, OpenText Fortify Remediation Aviator selects issues in a deterministic, repeatable way within that folder so that audit results are consistent across runs with the same inputs. Folder-based prioritization is applied consistently for each audit operation and applies to both individual and bulk audits. When the sufficient quota is not available to audit all open issues, the audit summary is displayed. This includes the subset of issues that are audited and shows which folders were fully audited, which were partially audited, and which were not audited.
For example,

- The number of open issues present are 1232 Critical, 242 High, 2324 Medium, and 2323 Low.
- The available OpenText Fortify Remediation Aviator application quota is 2000 issues.
- The default prioritization is Critical → High → Medium → Low.
- The following is the result:
  - All 1232 Critical issues are audited.
  - All 242 High issues are audited.
  - 526 Medium issues are audited (2000 − 1232 − 242 = 526).
  - 1798 Medium issues and all 2323 Low issues remain unaudited.
  - Remaining quota is 0.

1.4.8. Perform bulk audit

Important

If the system running the OpenText Fortify Remediation Aviator scan does not have sufficient physical memory, the audit may fail with an *OutOfMemoryError*. This error typically occurs when the available system memory or the configured JVM heap size is insufficient to process a huge number of vulnerabilities (FPR files containing thousands of issues) during the audit phase.

In such cases, ensure that the machine initiating the OpenText Fortify Remediation Aviator scan has adequate physical memory and increase the JVM heap allocation before re-running the audit.

The bulk audit option is available for the fcli v3.13.1 and later. It helps to audit multiple projects in OpenText Application Security that have unaudited issues using a single command.

The bulk audit task identifies OpenText Application Security application versions with pending audit issues and automatically submits them to OpenText Fortify Remediation Aviator for auditing. The action filters to only process versions with actual pending audit issues, automatically ignoring versions for which audit information needs to be refreshed.

For application versions that are not available in OpenText Fortify Remediation Aviator, the action will automatically create them before submitting for audit.

You must specify either `--tag-mapping` or `--add-aviator-tags` option. The default tag mapping does not audit unsure issues, causing indefinite reselection. When `--tag-mapping` is specified, tags are required for all the values in the .yaml file, for example, for Tier_1 and Tier_2, all values FP, TP, and Unsure should have the tags correctly specified, else FPRs will be reaudited.

When `--add-aviator-tags` is specified, fcli runs `fcli aviator prepare` command for each application before auditing. This option automatically ensures that the OpenText Fortify Remediation Aviator specific custom tags exist in OpenText Application Security and is associated with the specified issue templates and/or application versions.

Prerequisites

Ensure the following:

- OpenText Fortify Remediation Aviator administrator configuration is created

- Active OpenText Application Security session
- User session is created

Trigger bulk audit

To perform bulk auditing for OpenText Application Security, run the following command:

```
fcli ssc action run bulkaudit --add-aviator-tags
```

Optional argument	Description	Default value
`--max-audits`, `-m`	Maximum number of project versions to audit.	-1 (unlimited)
`--filter`, `-f`	An optional filter to apply when querying OpenText Application Security for projects. For example, 'Languages:java'. For information on how to use this option, see the Usage of --filter section.	no filtering
`--exclude-filter`, `-e`	An optional inverse filter to exclude projects from audit. Projects matching this filter will be skipped. For example, `'Languages:c#'` to exclude .NET projects. This can be combined with `--filter`.	no exclusion
`--dry-run`, `-n`	Shows what OpenText Fortify Remediation Aviator commands will be run without actually running them.	false

Optional argument	Description	Default value
`--tag-mapping`, `-t`	The path to tag mapping YAML file. This custom mapping ensures that OpenText Fortify Remediation Aviator's 'Unsure' audit results are properly handled. **Note** • Use this option if you do not use `--add-aviator-tags`. • Ensure to use either `--tag-mapping` or `--add-aviator-tags` when you run the `bulkaudit`.	-

Optional argument	Description	Default value
`--add-aviator-tags`	If specified, fcli runs `fcli aviator prepare` for the application before auditing. **Note** • Use this option if you do not use `--tag-mapping`. • Ensure to use either `--tag-mapping` or `--add-aviator-tags` when you run the `bulkaudit`.	-

Optional argument	Description	Default value
`--aviator-app-mapping`	Controls how OpenText Application Security application versions map to OpenText Fortify Remediation Aviator applications. The supported values are: • `app`: Maps one OpenText Fortify Remediation Aviator application to one OpenText Application Security application. • `version`: Maps one OpenText Fortify Remediation Aviator application to one OpenText Application Security application version. Each application version consumes a separate application entitlement. When you use `version`, application names reflect the mapping by including both the OpenText Application Security application name and the OpenText Application Security application version name.	`app`

Optional argument	Description	Default value
	For more information, see Aviator application mapping.	
`--refresh`	Refreshes application version metrics before audit. For large applications, this can lead to timeout errors.	true
`--refresh-timeout`	Timeout period for metric refresh. For example, 30s (30 seconds), 5m (5 minutes), 1h (1 hour).	60s
`--log-file`	Saves the log output to a file. It is a good practice to use this option. You can refer to the log file for the complete information corresponding to the triggered `bulkaudit`.	./fcli.log
`--skip-if-exceeding-quota`	Skips audit if the number of open issues exceeds the available quota. When skipped, a summary with the top 10 unaudited categories is displayed.	-

Optional argument	Description	Default value
`--test-exceeding-quota`	Checks whether the number of open issues exceeds the available quota and displays the result without performing an audit.	-

Note
Use either the `--tag-mapping` or `--add-aviator-tags` option, else an error is returned.

Aviator application mapping

Bulk audit maps OpenText Application Security content to OpenText Fortify Remediation Aviator applications in two ways. Use the `--aviator-app-mapping` option to select the mapping mode.

- Project-based mapping (default): One OpenText Fortify Remediation Aviator application for one OpenText Application Security application. All project versions in the project are audited under the same OpenText Fortify Remediation Aviator application.
- Version-based mapping: One OpenText Fortify Remediation Aviator application for one OpenText Application Security application version. Use this mode when OpenText Application Security project versions represent separate components that you want to track and audit independently.

Note
In version-based mapping, each OpenText Application Security application version consumes a separate OpenText Fortify Remediation Aviator application entitlement. To avoid unexpected entitlement usage, use a consistent mapping mode across bulk audit runs.

Usage of `--filter`

The `--filter` option in fcli enables you to perform a bulk audit by targeting specific attributes in your OpenText Application Security application.

For default attributes

1. Refer to your OpenText Application Security application to obtain the corresponding value for the default attribute that you want to audit.
2. Run bulk audit:

   ```
   fcli ssc action run bulkaudit --filter <default_tag_attribute:value> --add-aviator-tags
   ```

   For example:

   ```
   fcli ssc action run bulkaudit --filter Languages:ABAP --add-aviator-tags
   ```

For custom attributes

1. List the OpenText Application Security attributes:
   This displays details, such as ID, Category, Guid, Name, Type, and Required.

   ```
   fcli ssc attribute lsd
   ```

2. Get the Guid information of the required custom tag attribute:
   This command displays the related options, which contain ID, guid, name, description, hidden, inUse, index, projectMetaDataDefId, publishVersion, and objectVersion.

   ```
   fcli ssc attribute get-definition <custom_tag_attribute_guid_value>
   ```

3. Run the bulk audit:

   ```
   fcli ssc action run bulkaudit --filter <custom_tag_attribute_guid_value:required_guid_value> --add-aviator-tags
   ```

1.4.9. Perform bulk correlation

The bulk correlation action automatically identifies application versions that have both a OpenText Fortify SAST scan result and a OpenText DAST scan result, then runs SAST-DAST correlation across all of them or a filtered subset. This allows you to run correlation from a single command, without triggering it individually for each application version.

The action uses a two-stage selection process before submitting any work. For each application version, it first checks whether both a processed SAST FPR and a processed DAST FPR are present. Versions missing either scan type are skipped. For versions that have both, the action compares the most recent scan date against the `last_correlation` custom attribute on the application version. If the attribute records a date equal to or later than the most recent scan, the version is skipped because the scan data has not changed since the last correlation run. Versions with a newer scan date, or no recorded correlation date, are selected for correlation.

If an application version does not exist, the action creates it before running correlation. If entitlement is exhausted, a warning is logged and remaining versions that would require a new application are skipped; versions with an existing application continue to be processed. A failure on one application version does not abort the overall run.

For instructions on correlating a single application version, see Correlation of OpenText SAST and OpenText DAST results.

Prerequisites

Ensure the following:

- OpenText Fortify Remediation Aviator administrator configuration is created
- Active OpenText Application Security session
- User session is created

Trigger bulk correlation

To perform bulk SAST-DAST correlation for an OpenText Application Security application, run the following command:

```
fcli ssc action run bulkcorrelate
```

Optional argument	Description	Default value
`--max-correlations`, `-m`	Maximum number of application versions to correlate in a single run.	-1 (unlimited)
`--filter`, `-f`	An optional filter to apply when querying for projects. For example, `'Languages:java'`.	no filtering
`--exclude-filter`, `-e`	An optional inverse filter to exclude projects from correlation. Projects matching this filter are skipped. For example, `'Languages:c#'` to exclude .NET projects. This can be combined with `--filter`.	no exclusion
`--dry-run`, `-n`	Shows which application versions would be processed without actually running correlation. Dry-run output includes the number of versions skipped due to missing SAST or DAST results.	false

At completion, FCLI displays the following:

- Number of applications created during the run.

- Number of correlations attempted.
- Number of failures.
- Whether entitlement was exhausted during the run.

After a successful run, the `last_correlation` custom attribute is written to each processed application version in OpenText Application Security. This timestamp is used on subsequent bulk correlation runs to skip versions whose scan data has not changed.

1.4.10. Perform auto-remediation

OpenText™ Fortify Remediation Aviator allows users to download the audited FPR file from the OpenText Application Security artifact ID and automatically apply the remediation proposed by OpenText Fortify Remediation Aviator to the source code with a single command. This enables users to fix their source code without any manual intervention. You can apply remediation from:

- The most recent OpenText Fortify Remediation Aviator audit
- All OpenText Fortify Remediation Aviator audits in an application version
- A specific OpenText Fortify Remediation Aviator artifact

OpenText™ Fortify on Demand users can apply the remediation from a specific OpenText Fortify Remediation Aviator artifact. For more information, see the *OpenText™ Fortify on Demand User Guide*.

Prerequisites

Ensure the following:

- Have an active user session.
- Already performed the OpenText Fortify Remediation Aviator audit.
- Logged in to OpenText™ Application Security /OpenText™ Fortify on Demand.

Apply the auto-remediation

For OpenText™ Application Security (Software Security Center)

Select one of the following options based on how you want to choose OpenText Fortify Remediation Aviator audit data:

- Apply remediation from the latest OpenText Fortify Remediation Aviator audit. This option applies remediation from the most recent OpenText Fortify Remediation Aviator processed artifact for an application version.

```
fcli aviator ssc apply-remediations --av <application_version_name_or_id> --latest --source-dir <source_dir>
```

Optional arguments	Description	Default value
`--source-dir`	Specifies the directory containing the source code where remediation are applied. If the directory is not specified, remediation are applied to the current working directory.	Current working directory
`--since`	Limits artifact selection by upload time. The supported formats are: ◦ Relative durations: `7d` , `2w` , `1M` ◦ Dates/timestamps: `2025-01-01` , `2025-01-01T10:30:00Z`	-

- Apply remediation across all OpenText Fortify Remediation Aviator audits in an application Version. Use this option to apply remediation from all open OpenText Fortify Remediation Aviator issues within an application version.

```
fcli aviator ssc apply-remediations --av <application_version_name_or_id> --all --source-dir <source_dir>
```

Optional arguments	Description	Default value
`--source-dir`	Specifies the directory containing the source code where remediation are applied. If the directory is not specified, remediation are applied to the current working directory.	Current working directory
`--since`	Limits artifact selection by upload time. The supported formats are: ◦ Relative durations: `7d` , `2w` , `1M` ◦ Dates/timestamps: `2025-01-01` , `2025-01-01T10:30:00Z`	-

Note
This option downloads and processes multiple FPR files. Execution time may increase for application versions with many OpenText Fortify Remediation Aviator runs.

- Apply remediation from a specific OpenText Fortify Remediation Aviator artifact. Use this option if you know the OpenText Fortify Remediation Aviator artifact ID.
    i. Get the application version artifact information:

```
fcli ssc artifact list --av <application_versionnameorID>
```

Optional argument	Description	Default value
`--ssc-session`	Name of the OpenText Application Security session.	default

ii. Apply remediation for the required artifact ID:

```
fcli aviator ssc apply-remediations --artifact-id <aviatorArtifactID> --source-dir <source_dir>
```

Optional arguments	Description	Default value
`--ssc-session`	Name of the OpenText Application Security session.	default
`--source-dir`	Specifies the directory containing the source code where remediation are applied. If the directory is not specified, remediation are applied to the current working directory.	Current working directory

After the remediation are applied, FCLI displays the following:

- Application version ID and artifact ID
- Number of artifacts processed and skipped
- Total number of remediation identified
- Number of remediation applied and skipped
- Overall action status

For OpenText™ Fortify on Demand

For information on how to configure a static scan using OpenText Fortify on Demand , see the *OpenText™ Fortify on Demand User Guide*.

1. Get the release details for the specified application.

   ```
   fcli fod release list --app <appNameOrId>
   ```

2. Apply remediation for the required release ID:

   ```
   fcli fod aviator apply-remediations --rel <releaseID>
   ```

Optional arguments	Description	Default value
`--source-dir`	Specifies the directory containing the source code where remediation are applied. If the directory is not specified, remediation are applied to the current working directory.	Current working directory

After the remediation are applied, FCLI displays the following:

- Release ID
- Total number of remediation identified
- Number of remediation applied and skipped
- Overall action status

Note

- If the source code file is still exactly the same from the time when it was scanned by OpenText Fortify SAST and then audited by OpenText Fortify Remediation Aviator, the remediation are implemented.
- If the source code file has been changed in the meantime, remediation are implemented only if the relevant context is located accurately else the remediation are skipped.

1.5. Manage tenant information

Prerequisite

You must be a registered customer administrator.

List of customer administrator tasks

You can perform the following administrator tasks using the OpenText Fortify Remediation Aviator fcli:

- Manage administrator configurations
  - Create an administrator configuration.
  - List the administrator configurations.
  - Delete an administrator configuration.
- Manage user tokens
  - Create a user access token.
  - List the access tokens.
  - Validate, revoke, or delete the access tokens.
- Manage applications
  - Create an application.
  - Get the application details.
  - List the available applications.
  - Update or delete the applications.
- Manage entitlements
  - Retrieve the entitlement details for a specified tenant.

Note

You must create an **admin-config** to interact with OpenText Fortify Remediation Aviator before performing an administrator task.

1.5.1. Manage administrator configurations

You can perform the following tasks using the **fcli aviator admin-config** command.

- Create an administrator configuration for interacting with OpenText Fortify Remediation Aviator:

```
fcli aviator admin-config create --url <aviator_server_url> --tenant <tenant_name> --private-key <path_to_private_key.pem>
```

Note

The `--private-key` can be a file containing the key or the key itself. Ensure that the key is in the PEM format.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- List the available OpenText Fortify Remediation Aviator administrator configurations:

```
fcli aviator admin-config list
```

- Delete the OpenText Fortify Remediation Aviator administrator configuration:

```
fcli aviator admin-config delete --admin-config <administrator_configuration_name>
```

1.5.2. Manage user tokens

You can perform the following tasks using the **fcli aviator token** command.

- Create an access token for a user:

```
fcli aviator token create --email <user_email_id> --save-token <output_file>
```

Optional arguments	Description	Default value
`--name`	Specifies the token name.	Derived from `--email`
`--save-token`	Saves the generated raw token string to the specified file. By default, the string is in json format.	NA
`-o` , `--output`	Specifies the token format. The available formats are csv, table, expr, json, xml, and yaml.	NA
`--to-file`	Specifies a file to save the output.	NA
`--end-date`	Specifies the token expiration date in YYYY-MM-DD format.	30 days from the date of creation

Note

OpenText recommends using `--save-token` optional argument to ease the user experience when using the access token.

- Retrieve the list of access tokens within OpenText Fortify Remediation Aviator tenant:

```
fcli aviator token list
```

  - Retrieve a list of access tokens for a specified user within OpenText Fortify Remediation Aviator tenant:

```
fcli aviator token list --email <user_email_id>
```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Validate an existing access token for a user within OpenText Fortify Remediation Aviator tenant, checking its authenticity and status:

```
fcli aviator token validate --token <access_token>
```

Note

The default value for `--token` is a file path. To use other formats for the access token, prefix the value with `file:<local file containing key>` or `string:<key string value>` or `env:<env-var name containing key>`.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Revoke an access token for a user within an OpenText Fortify Remediation Aviator tenant. This task invalidates the access token without permanently deleting it:

```
fcli aviator token revoke --token <access_token>
```

Note

The default value for `--token` is a file path. To use other formats for the access token, prefix the value with `file:<local file containing key>` or `string:<key string value>` or `env:<env-var name containing key>`.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Delete an existing access token for a user:

```
fcli aviator token delete --token <access_token>
```

Note

The default value for `--token` is a file path. To use other formats for the access token, prefix the value with `file:<local file containing key>` or `string:<key string value>` or `env:<env-var name containing key>`.

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

1.5.3. Manage applications

You can perform the following tasks using the **fcli aviator app** command.

- Create new OpenText Fortify Remediation Aviator applications:

  ```
  fcli aviator app create <aviator_application_name>
  ```

Optional argument	Description	Default value
--admin-config	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Add one entitlement to an existing OpenText Fortify Remediation Aviator application:

  ```
  fcli aviator app add-entitlement <application_id>
  ```

  This operation increments the entitlement multiplier of an existing OpenText Fortify Remediation Aviator application by one

  by one and displays the updated application details.

Optional argument	Description	Default value
--admin-config	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Get the details of an existing OpenText Fortify Remediation Aviator application for a particular tenant:

  ```
  fcli aviator app get <application_id>
  ```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- List all OpenText Fortify Remediation Aviator applications for a particular tenant in the admin configuration:

```
fcli aviator app list
```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Rename an existing OpenText Fortify Remediation Aviator application identified by its ID:

```
fcli aviator app update <application_id> -n <new_application_name>
```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

- Delete a OpenText Fortify Remediation Aviator application by its ID:

```
fcli aviator app delete <application_id>
```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration.	default

1.5.4. Manage entitlements

You can manage OpenText Fortify SAST and OpenText DAST entitlements using the **fcli aviator entitlement** command

Note
The `fcli aviator entitlement list` command has been deprecated and will be removed in the next release.

- Retrieve the OpenText Fortify SAST entitlement details for a specified tenant:

  ```
  fcli aviator entitlement list-sast
  ```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration to use.	default

- Retrieve the OpenText DAST entitlement details for a specified tenant:

  ```
  fcli aviator entitlement list-dast
  ```

Optional argument	Description	Default value
`--admin-config`	Name of the OpenText Fortify Remediation Aviator administrator configuration to use.	default

The following entitlement details are retrieved:

- Total number of entitlements available.
- Number of active entitlements.
- Total number of applications linked to the entitlements that are already consumed.

- Number of remaining applications under the available entitlements.
- Expiration date for each entitlement.

1.6. FAQs

What should you do if you disagree with the OpenText Fortify Remediation Aviator audit result?

OpenText recommends creating a support request and sharing the FPR.

What should you do if you cannot locate your access token?

Contact your customer administrator.

What should you do if you run out of entitlements?

Contact your account representative.

What happens if your audit exceeds the quota?

The audit will stop once the quota is reached. The FPR will still be generated and uploaded, but further issues will not be audited.

Will quota changes affect past audits after configuring new Initial and Monthly quotas?

No, changes apply only to future audits and quota top-ups.

How to check your remaining quota?

Quota usage is visible in the audit logs for each application or contact your customer administrator.