OpenText™ Fortify Static Code Analyzer

Software Version: 23.2.0

Applications and Tools Guide

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Legal Notices

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Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number
- Document Release Date, which changes each time the document is updated
- Software Release Date, which indicates the release date of this version of the software

This document was produced on February 05, 2024. To check for recent updates or to verify that you are using the most recent edition of a document, go to:

https://www.microfocus.com/support/documentation

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Preface

Contacting Fortify Customer Support

Visit the Support website to:

- Manage licenses and entitlements
- Create and manage technical assistance requests
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https://www.microfocus.com/support

For More Information

For more information about Fortify software products:

https://www.microfocus.com/cyberres/application-security

About the Documentation Set

The Fortify Software documentation set contains installation, user, and deployment guides for all Fortify Software products and components. In addition, you will find technical notes and release notes that describe new features, known issues, and last-minute updates. You can access the latest versions of these documents from the following OpenText Product Documentation website:

https://www.microfocus.com/support/documentation

To be notified of documentation updates between releases, subscribe to Fortify Product Announcements on the OpenText Community:

https://community.microfocus.com/cyberres/fortify/w/fortify-product-announcements

Fortify Product Feature Videos

You can find videos that highlight Fortify products and features on the Fortify Unplugged YouTube channel:

https://www.youtube.com/c/FortifyUnplugged

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**
23.2.0 / Revision 1: February 2024	Updated: • Fixed broken links (see "Working with FPR Files from the Command Line" on page 31)
23.2.0	Added: • Moved all the content from the *Fortify Static Code Analyzer Applications and Tools Properties Reference Guide* to this document (see "Configuration Options" on page 41) Updated: • The REST version of the fortifyclient utility is now installed in the `bin` directory (see "About Fortify Static Code Analyzer Applications and Tools" on page 7) • The Fortify Applications and Tools installer can detect a locally installed Fortify Static Code Analyzer in the default location for use by applications that perform analysis with it (see "About Installing Fortify Static Code Analyzer Applications and Tools" on page 10) • Added the OWASP MASVS 2.0 and OWASP API Top 10 reports (see "BIRTReportGenerator Command-Line Options" on page 27)
23.1.0	Initial release of this document

Chapter 1: Getting Started

This chapter describes the Fortify Static Code Analyzer applications and tools and how to install them.

This section contains the following topics:

About Fortify Static Code Analyzer Applications and Tools

The Fortify Applications and Tools installation includes applications and Fortify Secure Code Plugins that enable you to scan your code with Fortify Static Code Analyzer and view the analysis results so you can fix vulnerability issues. The command-line tools enable you to generate reports based on the analysis results, work with Fortify Project Results (FPR) files, and securely transfer objects to and from Fortify Software Security Center.

The following table describes the Fortify Static Code Analyzer applications and tools that you can install with the Fortify Applications and Tools installer.

Application or Tool	**Description**	**More Information**
OpenText™ Fortify Audit Workbench	Provides a graphical user interface for Fortify Static Code Analyzer analysis results that helps you organize, investigate, and prioritize analysis results so that developers can fix security flaws quickly.	*OpenText™ Fortify Audit Workbench User Guide* in Fortify Static Code Analyzer and Tools Documentation

Application or Tool	Description	More Information
OpenText™ Fortify Plugin for Eclipse	Adds the ability to run Fortify Static Code Analyzer scans (either locally or remotely using Fortify ScanCentral SAST) on the entire Java codebase of a project from the Eclipse IDE. The analysis results are displayed, along with descriptions of each of the security issues and suggestions for their elimination.	*OpenText™ Fortify Plugin for Eclipse User Guide* in Fortify Static Code Analyzer and Tools Documentation
OpenText™ Fortify Analysis Plugin for IntelliJ IDEA and Android Studio	Adds the ability to run Fortify Static Code Analyzer scans (either locally or remotely using Fortify ScanCentral SAST) on the entire codebase of a project from IntelliJ IDEA and Android Studio. To view the analysis results, upload them to OpenText™ Fortify Software Security Center or open them in Fortify Audit Workbench.	*OpenText™ Fortify Analysis Plugin for IntelliJ IDEA and Android Studio User Guide* in Fortify Static Code Analyzer and Tools Documentation
OpenText™ Fortify Extension for Visual Studio	Adds the ability to run Fortify Static Code Analyzer scan (either locally or remotely using OpenText™ Fortify ScanCentral SAST) on solutions and projects from Visual Studio. The analysis results are displayed, along with descriptions of each of the security issues and suggestions for their elimination. This extension also includes remediation functionality that works with analysis results stored on a Fortify Software Security Center server.	*OpenText™ Fortify Extension for Visual Studio User Guide* in Fortify Static Code Analyzer and Tools Documentation
Fortify Scan Wizard	Provides a graphical user interface that enables you to prepare a script to scan your code with Fortify Static Code Analyzer (either locally or remotely using Fortify ScanCentral SAST) and then optionally upload the results to Fortify Software Security Center.	"Fortify Scan Wizard" on page 23
Fortify Custom Rules Editor	Provides a graphical user interface to create and edit custom rules.	

Application or Tool	Description	More Information
BIRTReportGenerator ReportGenerator	Command-line tools to generate BIRT reports and legacy reports based on a Fortify Project Results (FPR) file.	"Generating Analysis Reports from the Command Line" on page 26
FPRUtility	Command-line tool that enables you to: • Merge audited projects • Verify FPR signatures • Display information from an FPR file including: • Any errors associated with the analysis • Number of issues • Filtered lists of issues in different formats • Lines of code for analyzed files • List of analyzed functions • Mappings for a migrated project • Combine or split source code files and audit projects into FPR files • Alter an FPR	"Working with FPR Files from the Command Line" on page 31
fortifyclient	Command-line utility to create Fortify Software Security Center authentication tokens and securely transfer objects to and from Fortify Software Security Center. **Note:** Two versions of fortifyclient are included with the Fortify Applications and Tools installation: • REST API-based client in `<tools_install_dir>/bin` • SOAP API-based client in `<tools_install_dir>/tools` (see the *Fortify Software Release Notes* for information about the scheduled removal of this legacy technology)	*OpenText™ Fortify Software Security Center User Guide* in Fortify Software Security Center Documentation

The following table describes a tool that is included in the Fortify Static Code Analyzer Applications and Tools download package. This tool is installed separately from the Fortify Applications and Tools installer. See the documentation for instructions.

Tool	Description	More Information
Fortify Security Assistant Plugin for Eclipse	Provides alerts to potential security issues as you write your Java code. The alerts give you detailed information about security risks and recommendations for how to secure the potential issue.	*Fortify Security Assistant Plugin for Eclipse* in *Fortify Security Assistant Plugin for Eclipse Documentation*

About Installing Fortify Static Code Analyzer Applications and Tools

See the *Fortify Software System Requirements* document to make sure that your system meets the minimum requirements for each software component you plan to install. For a description of the applications and tools that you can install, see "About Fortify Static Code Analyzer Applications and Tools" on page 7. You must provide a Fortify license file for the Fortify Static Code Analyzer Applications and Tools installation.

Fortify recommends that you install Fortify Static Code Analyzer before installing Fortify Applications and Tools. The Fortify Applications and Tools installer can detect an existing Fortify Static Code Analyzer that is locally installed in the default location or in the same root folder where you plan to install Fortify Applications and Tools. If the location is successfully detected, the applications that require the location of Fortify Static Code Analyzer(Fortify Audit Workbench and the Fortify Extension for Visual Studio) will have the location automatically configured.

The following table lists the different methods of installation.

Installation Method	Instructions
Perform the installation using a standard install wizard	"Installing Fortify Static Code Analyzer Applications and Tools" on the next page
Perform the installation silently (unattended)	"Installing Fortify Applications and Tools Silently (Unattended)" on page 12
Perform a text-based installation on non-Windows systems	"Installing Fortify Applications and Tools in Text-Based Mode on Non-Windows Platforms" on page 13

Installing Fortify Static Code Analyzer Applications and Tools

To install Fortify Static Code Analyzer applications and tools:

1. Run the installer file for your operating system to start the Fortify Applications and Tools Setup Wizard:

   - Windows: `Fortify_Apps_and_Tools_<version>_windows_x64.exe`
   - Linux: `Fortify_Apps_and_Tools_<version>_linux_x64.run`
   - macOS: `Fortify_Apps_and_Tools_<version>_osx_x64.app.zip`
     Uncompress the ZIP file before you run the APP installer file.

   where *<version>* is the software release version.
2. Click **Next**.
3. Review and accept the license agreement, and then click **Next**.
4. Choose where to install Fortify Applications and Tools, and then click **Next**.

   > **Important!** Do not install Fortify Applications and Tools in the same directory where Fortify Static Code Analyzer is installed.
5. (Optional) Select the components to install, and then click **Next**.
6. Specify the path to the `fortify.license` file, and then click **Next**.
7. Specify if you want to migrate from a previous installation of Fortify Applications and Tools on your system.

   Migrating from a previous Fortify Applications and Tools installation preserves Fortify Applications and Tools artifact files. For more information, see "About Upgrading Fortify Static Code Analyzer Applications and Tools" on page 15.

   To migrate artifacts from a previous installation:

   a. In the Applications and Tools Migration page, select **Yes**, and then click **Next**.
   b. Specify the location of the existing Fortify Applications and Tools installation on your system, and then click **Next**.

   To skip migration of artifacts from a previous release, leave the Applications and Tools Migration selection set to **No**, and then click **Next**.
8. If you are installing the Fortify Extension for Visual Studio, do the following:

   a. Specify whether to install the extensions for the current install user or for all users.

      The default is to install the extensions for only the current install user.
   b. Click **Next**.
9. Click **Next** on the Ready to Install page to install Fortify Applications and Tools.
10. Click **Finish** to close the Fortify Applications and Tools Setup Wizard.

Installing Fortify Applications and Tools Silently (Unattended)

A silent installation enables you to complete the installation without any user prompts. To install silently, you need to create an option file to provide the necessary information to the installer. Using the silent installation, you can replicate the installation parameters on multiple machines.

> **Important!** Do not install Fortify Applications and Tools in the same directory where Fortify Static Code Analyzer is installed.

To install Fortify Applications and Tools silently:

1. Create an options file.
   a. Create a text file that contains the following line:

      ```
      fortify_license_path=<license_file_location>
      ```

      where <*license_file_location*> is the full path to your `fortify.license` file.
   b. Add more installation instructions, as needed, to the options file.

      To obtain a list of installation options that you can add to your options file, open a command prompt, and then type the installer file name and the `--help` option. This command displays each available command-line option preceded with a double dash and the available parameters enclosed in angle brackets. For example, if you want to see the progress of the install displayed at the command line, add `unattendedmodeui=minimal` to your options file. The command-line options are case-sensitive.

      For the `enable-components` option on Windows, you can specify the `AWB_group` parameter to install Fortify Audit Workbench, Fortify Custom Rules Editor, and associate FPR files with Fortify Audit Workbench. To install specific plugins, list each plugin by parameter name (the `Plugins_group` parameter does ***not*** install all plugins and you do not need to include it). The valid components values for this option are `AWB_group`, `AWB`, `fprFileAssociate`, `ScanWizard`, `CustomRulesEditor`, `Eclipse`, `IntelliJAnalysis`, and `VS<year>` (where <*year*> is a supported version of Visual Studio). For the list of supported versions of Visual Studio, see the *Fortify Software System Requirements* document.

      The following example Windows options file specifies the location of the license file, a request to migrate from a previous release, installation of Fortify Audit Workbench (associate FPR files with Fortify Audit Workbench), Fortify Scan Wizard, Fortify Custom Rules Editor, Fortify Extension for Visual Studio 2022 for all users, and the target Fortify Applications and Tools installation directory:

      ```
      fortify_license_path=C:\Users\admin\Desktop\fortify.license
      MigrateTools=1
      enable-components=AWB_group,VS2022
      VS_all_users=1
      installdir=C:\FortifyApps
      ```

The following example is an options file for Linux and macOS that specifies the location of the license file, a request to migrate from a previous release, installation of Fortify Audit Workbench, the Fortify Plugin for Eclipse, Fortify Scan Wizard, and the target Fortify Applications and Tools installation directory:

```
fortify_license_path=/opt/Fortify/fortify.license
MigrateTools=1
enable-components=AWB,Eclipse,ScanWizard
installdir=/opt/FortifyApps
```

2. Save the options file.
3. Run the silent install command for your operating system.

Note: You might need to run the command prompt as an administrator before you run the installer.

Windows	Fortify_Apps_and_Tools_*<version>*_windows_x64.exe --mode unattended --optionfile *<full_path_to_options_file>*
Linux	./Fortify_Apps_and_Tools_*<version>*_linux_x64.run --mode unattended --optionfile *<full_path_to_options_file>*
macOS	You must uncompress the ZIP file before you run the command. Fortify_Apps_and_Tools_*<version>*_osx_x64.app/Contents/MacOS/installbuilder.sh --mode unattended --optionfile *<full_path_to_options_file>*

The installer creates an installer log file when the installation is complete. This log file is in the following location depending on your operating system.

Windows	C:\Users\*<username>*\AppData\Local\Temp\FortifyAppsAndTools-*<version>*-install.log
Linux **macOS**	/tmp/FortifyAppsAndTools-*<version>*-install.log

Installing Fortify Applications and Tools in Text-Based Mode on Non-Windows Platforms

You perform a text-based installation on the command line. During the installation, you are prompted for information required to complete the installation. Text-based installations are not supported on Windows systems.

Important! Do not install Fortify Applications and Tools in the same directory where Fortify Static Code Analyzer is installed.

To perform a text-based installation of Fortify Applications and Tools, run the text-based install command for your operating system as listed in the following table.

Linux	`./Fortify_Apps_and_Tools_<version>_linux_x64.run --mode text`
macOS	You must uncompress the provided ZIP file before you run the command. `Fortify_Apps_and_Tools_<version>_osx_x64.app/Contents/MacOS/installbuilder.sh --mode text`

Adding Trusted Certificates

Connection from the Fortify Static Code Analyzer applications and tools to other Fortify products and external systems might require communication over HTTPS. Some examples include:

- The Fortify Static Code Analyzer applications and tools such as Fortify Audit Workbench, Fortify Extension for Visual Studio, and Fortify Scan Wizard typically require an HTTPS connection to communicate with Fortify Software Security Center. By default, these tools do not trust self- or locally-signed certificates.
- Fortify Static Code Analyzer configured as a Fortify ScanCentral SAST sensor uses an HTTPS connection to communicate with the Controller.

When using HTTPS, Fortify Static Code Analyzer applications and tools will by default apply standard checks to the presented SSL server certificate, including a check to determine if the certificate is trusted. If your organization runs its own certificate authority (CA) and the Fortify Static Code Analyzer applications and tools need to trust connections where the server presents a certificate issued by this CA, you must configure the Fortify Static Code Analyzer applications and tools to trust the CA. Otherwise, the use of HTTPS connections might fail.

You must add the trusted certificate of the CA to the Fortify Applications and Tools keystore. The Fortify Applications and Tools keystore is in the `<tools_install_dir>/jre/lib/security/cacerts` file. You can use the keytool command to add the trusted certificate to the keystore.

To add a trusted certificate to the Fortify Applications and Tools keystore:

1. Open a command prompt, and then run the following command:

   ```
   <tools_install_dir>/jre/bin/keytool -importcert -alias <alias_name> -
   cacerts -file <cert_file>
   ```

   where:

   - *<alias_name>* is a unique name for the certificate you are adding.
   - *<cert_file>* is the name of the file containing the trusted root certificate in PEM or DER format.

2. Enter the keystore password.

   > **Note:** The default password is `changeit`.

3. When prompted to trust this certificate, select **yes**.

About Upgrading Fortify Static Code Analyzer Applications and Tools

To upgrade Fortify Applications and Tools, install the new version in a different location than where your current version is installed and choose to migrate settings from the previous installation. This migration preserves and updates the Fortify Applications and Tools artifact files located in the `<tools_install_dir>/Core/config` directory.

If you choose not to migrate any settings from a previous release, Fortify recommends that you save a backup of the following data if it has been modified:

- `<tools_install_dir>/Core/config/CustomExternalMetadata` folder
- `<tools_install_dir>/Core/config/server.properties` file
- `<tools_install_dir>/Core/config/fortify.properties` file

After you install the new version, you can uninstall the previous version. For more information, see "About Uninstalling Fortify Applications and Tools" on the next page.

Upgrading the Fortify Extension for Visual Studio

If you have administrative privileges and are upgrading from a previous version of the Fortify Applications and Tools for any supported version of Visual Studio, the installer will overwrite the existing Fortify Extension for Visual Studio. If the previous version was installed without administrative privileges, the installer will also overwrite the existing Fortify Extension for Visual Studio without requiring administrative privileges.

> **Note:** If you do not have administrative privileges and you are upgrading the Fortify Extension for Visual Studio that was previously installed using an administrative privileged user account, you must first uninstall the Fortify Extension for Visual Studio from Visual Studio using an administrative privilege account.

About Uninstalling Fortify Applications and Tools

This section describes how to uninstall Fortify Static Code Analyzer applications and tools. You can use the standard install wizard, or you can perform the uninstallation silently. You can also perform a text-based uninstallation on non-Windows systems.

Uninstalling Fortify Applications and Tools

To uninstall Fortify Applications and Tools:

1. Run the uninstall command located in the *`<tools_install_dir>`* for your operating system:

Windows	`Uninstall_FortifyAppsAndTools_<version>.exe` Alternatively, you can do the following: a. Select **Start > Settings > Apps > Apps & Features**. b. From the list of programs, select **Fortify Applications and Tools *<version>***, and then click **Uninstall**.
Linux	`Uninstall_FortifyAppsAndTools_<version>`
macOS	`Uninstall_FortifyAppsAndTools_<version>.app`

2. You are prompted to indicate whether to remove the entire application or individual components. Make your selection, and then click **Next**.

   If you are uninstalling specific components, select the components to remove on the Select Components to Uninstall page, and then click **Next**.
3. You are prompted to indicate whether to remove all application settings. Do one of the following:
   - Click **Yes** to remove the application setting folders for the applications installed with the version of Fortify Applications and Tools that you are uninstalling.
   - Click **No** to retain the application settings on your system.

Uninstalling Fortify Applications and Tools Silently

To uninstall Fortify Applications and Tools silently:

1. Navigate to the installation directory.
2. Type one of the following commands based on your operating system:

Windows	`Uninstall_FortifyAppsAndTools_<version>.exe --mode unattended`

Linux	`./Uninstall_FortifyAppsAndTools_<version> --mode unattended`
macOS	`Uninstall_FortifyAppsAndTools_<version>.app/Contents/MacOS/installbuilder.sh --mode unattended`

Note: The uninstaller removes the application setting folders for the applications installed with the version of Fortify Applications and Tools that you are uninstalling.

Uninstalling Fortify Applications and Tools in Text-Based Mode on Non-Windows Platforms

To uninstall Fortify Applications and Tools in text-based mode, run the text-based install command for your operating system, as follows:

1. Navigate to the installation directory.
2. Type one of the following commands based on your operating system:

Linux	`./Uninstall_FortifyAppsAndTools_<version> --mode text`
macOS	`Uninstall_FortifyAppsAndTools_<version>.app/Contents/MacOS/installbuilder.sh --mode text`

Samples

The Fortify Applications and Tools installation includes sample bug tracker plugins, an analysis results file that was scanned with Fortify Static Code Analyzer, and more.

The following table describes the samples in the `<tools_install_dir>/Samples` folder.

Folder Name	Description
`advanced`	Javadoc for `public-api` and `WSClient`
`bugtrackers`	Source code for supported bug tracker plugins
`fortifyclient`	Source code for the REST API-based client used to securely transfer objects to and from Fortify Software Security Center
`fprs`	Sample Fortify Project Results (FPR) file from the analysis of a WebGoat project

Locating Log Files

By default, log files for Fortify Static Code Analyzer applications and tools are written to the following directory:

- Windows: `C:\Users\<username>\AppData\Local\Fortify\<tool_name>-<version>\log`
- Non-Windows: `<userhome>/.fortify/<tool_name>-<version>/log`

The following table lists log file directory associated with each Fortify Static Code Analyzer application and command-line tool.

Application / Tool	**Log File Directory**
Fortify Audit Workbench	`AWB-<version>`
Fortify Plugin for Eclipse	`Eclipse.Plugin-<version>`
Fortify Analysis Plugin for IntelliJ IDEA and Android Studio	`IntelliJAnalysis-<version>`
Fortify Extension for Visual Studio	`VS<VSversion>-<version>`
Fortify Scan Wizard	`ScanWizard-<version>`
Fortify Custom Rules Editor	`CRE-<version>`
BIRTReportGenerator	`BIRT-<version>`
fortifyclient	`FortifyClient-<version>`
FPRUtility	`FPRCommandlineInterface-<version>`
ReportGenerator	`ReportCommandlineInterface-<version>`

Related Documents

This topic describes documents that provide information about Fortify software products.

Note: You can find the Fortify Product Documentation at https://www.microfocus.com/support/documentation. Most guides are available in both PDF and HTML formats.

All Products

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

Document / File Name	Description
About Fortify Software Documentation About_Fortify_Docs_<*version*>.pdf	This paper provides information about how to access Fortify product documentation. **Note:** This document is included only with the product download.
Fortify Software System Requirements Fortify_Sys_Reqs_<*version*>.pdf	This document provides the details about the environments and products supported for this version of Fortify Software.
Fortify Software Release Notes FortifySW_RN_<*version*>.pdf	This document provides an overview of the changes made to Fortify Software for this release and important information not included elsewhere in the product documentation.
What's New in Fortify Software <version> Fortify_Whats_New_<*version*>.pdf	This document describes the new features in Fortify Software products.

Fortify ScanCentral SAST

The following document provides information about Fortify ScanCentral SAST. Unless otherwise noted, 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_Guide_<*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 Fortify Static Code Analyzer process.

Fortify Software Security Center

The following document provides information about Fortify Software Security Center. Unless otherwise noted, 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 Software Security Center User Guide SSC_Guide_*<version>*.pdf	This document provides Fortify Software Security Center users with detailed information about how to deploy and use Fortify Software Security Center. It provides all of the information you need to acquire, install, configure, and use Fortify Software Security Center. It is intended for use by system and instance administrators, database administrators (DBAs), enterprise security leads, development team managers, and developers. Fortify Software Security Center provides security team leads with a high-level overview of the history and current status of a project.

Fortify Static Code Analyzer

The following documents provide information about 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™ Fortify Static Code Analyzer User Guide SCA_Guide_*<version>*.pdf	This document describes how to install and use Fortify Static Code Analyzer to scan code on many of the major programming platforms. It is intended for people responsible for security audits and secure coding.
OpenText™ Fortify Static Code Analyzer Applications and Tools Guide SCA_Apps_Tools_*<version>*.pdf	This document describes how to install Fortify Static Code Analyzer applications and tools. It provides an overview of the applications and command-line tools that enable you to scan your code with Fortify Static Code Analyzer, review analysis results, work with analysis results files, and more.

Document / File Name	Description
OpenText™ Fortify Static Code Analyzer Custom Rules Guide SCA_Cust_Rules_Guide_*<version>*.zip	This document provides the information that you need to create custom rules for Fortify Static Code Analyzer. 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_Guide_*<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.

Fortify Static Code Analyzer Applications and Tools

The following documents provide information about Fortify Static Code Analyzer applications and tools. Unless otherwise noted, 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™ Fortify Audit Workbench User Guide AWB_Guide_*<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 Eclipse_Plugin_Guide_*<version>*.pdf	This document provides information about how to install and use the Fortify Complete Plugin for Eclipse.
OpenText™ Fortify Analysis Plugin for IntelliJ IDEA and Android Studio User Guide IntelliJ_AnalysisPlugin_Guide_ *<version>*.pdf	This document describes how to install and use Fortify Analysis Plugin for IntelliJ IDEA and Android Studio.

Document / File Name	Description
OpenText™ Fortify Extension for Visual Studio User Guide VS_Ext_Guide_*<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.

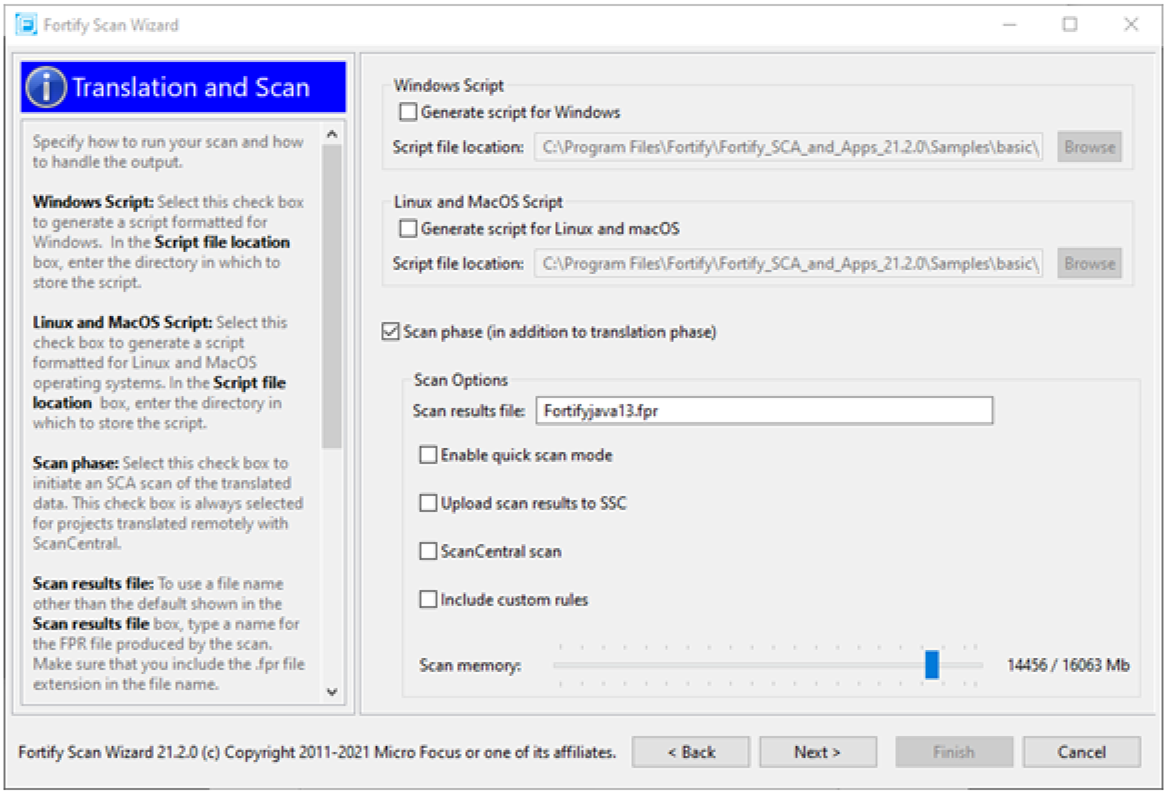
Chapter 2: Fortify Scan Wizard

Fortify Scan Wizard is an application with a graphical interface that enables you to easily generate a script to perform Fortify Static Code Analyzer commands for Windows, Linux, and macOS systems. You can run the generated script to analyze your code with Fortify Static Code Analyzer. You can specify to run your analysis locally or use Fortify ScanCentral SAST to run all or part of the analysis remotely.

This section contains the following topics:

Preparing to use Fortify Scan Wizard

Fortify Scan Wizard uses the information you provide to create a script with the commands for Fortify Static Code Analyzer to scan project code and optionally upload the analysis results to Fortify Software Security Center. You can use Fortify Scan Wizard to create a script that runs your scans locally or sends them to Fortify ScanCentral SAST for all or part of the analysis.



Translation and Scan

Specify how to run your scan and how to handle the output.

Windows Script: Select this check box to generate a script formatted for Windows. In the **Script file location** box, enter the directory in which to store the script.

Linux and MacOS Script: Select this check box to generate a script formatted for Linux and MacOS operating systems. In the **Script file location** box, enter the directory in which to store the script.

Scan phase: Select this check box to initiate an SCA scan of the translated data. This check box is always selected for projects translated remotely with ScanCentral.

Scan results file: To use a file name other than the default shown in the **Scan results file** box, type a name for the FPR file produced by the scan. Make sure that you include the .fpr file extension in the file name.

Windows Script

□ Generate script for Windows

Script file location: C:\Program Files\Fortify\Fortify_SCA_and_Apps_21.2.0\Samples\basic\

Linux and MacOS Script

□ Generate script for Linux and macOS

Script file location: C:\Program Files\Fortify\Fortify_SCA_and_Apps_21.2.0\Samples\basic\

☑ Scan phase (in addition to translation phase)

Scan Options

Scan results file: Fortifyjava13.fpr

□ Enable quick scan mode

□ Upload scan results to SSC

□ ScanCentral scan

□ Include custom rules

Scan memory: 14456 / 16063 Mb

Fortify Scan Wizard 21.2.0 (c) Copyright 2011-2021 Micro Focus or one of its affiliates.

To use Fortify Scan Wizard, you need access to the build directory of the projects you want to scan. The following table describes some of the required information you will need, depending on how you will analyze the project and if you want to upload the scan results to Fortify Software Security Center.

> **Important!** If Fortify Software Security Center or the Fortify ScanCentral SAST Controller uses an SSL connection from an internal certificate authority or a self-signed certificate, you must add the certificate to the Java keystore for Fortify Static Code Analyzer (see the *OpenText™ Fortify Static Code Analyzer User Guide*).

Task	Requirements
Perform a local analysis with Fortify Static Code Analyzer	• Fortify Static Code Analyzer installed on the system where the generated script will be run. You can generate the script on a different platform without Fortify Static Code Analyzer, and then transfer the script to the system where it will be run.
Perform a remote analysis (translation and scan phases) with Fortify ScanCentral SAST	• Either a Fortify ScanCentral SAST client installed with the Fortify Static Code Analyzer installation or a standalone Fortify ScanCentral SAST client installation (see the *OpenText™ Fortify ScanCentral SAST Installation, Configuration, and Usage Guide* for instructions) • A Fortify ScanCentral SAST Controller URL **Note:** If you are also uploading analysis results to Fortify Software Security Center, then you do not need to specify a Controller URL. The Fortify ScanCentral SAST that is integrated with the Fortify Software Security Center server is used in this case. • Your project must be in a language that Fortify ScanCentral SAST supports for translation. See the *Fortify Software System Requirements* for a list of supported languages.
Perform a local Fortify Static Code Analyzer translation and a remote scan with Fortify ScanCentral SAST	• A Fortify ScanCentral SAST client installed with the Fortify Static Code Analyzer installation • A Fortify ScanCentral SAST Controller URL
Upload analysis results to Fortify Software Security Center	• A Fortify Software Security Center server URL **Note:** If you are using Fortify ScanCentral SAST, the Fortify

Task	Requirements
	Software Security Center server must be integrated with the Fortify ScanCentral SAST Controller. • Your Fortify Software Security Center login credentials **Note:** If you do not have Fortify Software Security Center login credentials, you must have an application name and version that exists in Fortify Software Security Center. • An authentication token of type ToolsConnectToken **Note:** If you do not have a token, you can use Fortify Scan Wizard to generate one. To do this, you must have Fortify Software Security Center login credentials.

Important! If you generate a script for a Windows system, you cannot run that script on a non-Windows system. Likewise, if you generate a script for a non-Windows system, you cannot run it on a Windows system.

Starting Fortify Scan Wizard

To start Fortify Scan Wizard, do one of the following, based on your operating system:

- On Windows, select **Start > All Programs > Fortify Applications and Tools <*version*> > Scan Wizard**.

  You can also open a Command Prompt window, and then type `scanwizard`.
- On Linux, navigate to the `<tools_install_dir>/bin` directory, and then run `ScanWizard` from the command line.
- On macOS, navigate to the `<tools_install_dir>` directory, and then double-click the `ScanWizard.app` icon.

Chapter 3: Command-Line Tools

This chapter describes the tools that you can run from a Command Prompt window.

This section contains the following topics:

Generating Analysis Reports from the Command Line

There are two command-line tools that you can use to generate analysis reports:

- BIRTReportGenerator—Generates issue reports from FPR files that are based on the Business Intelligence and Reporting Technology (BIRT) system.

  > **Note:** To generate BIRT reports on a Linux system running OpenJDK, you must install fontconfig, DejaVu Sans fonts, and DejaVu Serif fonts.

- ReportGenerator—Generates legacy reports from FPR files. You can specify a report template or use the default report template. See the *OpenText™ Fortify Audit Workbench User Guide* for a description of the available report templates.

Generating Issue Reports

Use the BIRTReportGenerator command-line tool to generate issue reports that are based on the BIRT system. The basic command-line syntax to generate an issue report is:

```
BIRTReportGenerator -template <template_name>
-source <audited_proj>.fpr -format <format>
-output <report_file_name>
```

The following is an example of how to generate an OWASP Top 10 2021 report with additional options:

```
BIRTReportGenerator -template "owasp top 10" -source auditedProj.fpr
-format pdf -ShowSuppressed --Version "owasp top 10 2021"
--UseFortifyPriorityOrder -output MyOWASP_Top10_Report.pdf
```

See Also

"BIRTReportGenerator Command-Line Options" on the next page

"Troubleshooting BIRTReportGenerator" on page 29

BIRTReportGenerator Command-Line Options

The following table describes the BIRTReportGenerator options.

BIRTReportGenerator Option	Description
`-template` *<template_name>*	(Required) Specifies the report template name. The valid values for *<template_name>* are `"CWE Top 25"`, `"CWE/SANS Top 25"`, `"Developer Workbook"`, `"DISA CCI 2"`, `"DISA STIG"`, `"FISMA Compliance"`, `GDPR`, `MISRA`, `"OWASP API Top 10"`, `"OWASP ASVS 4.0"`, `"OWASP MASVS 2.0"`, `"OWASP Mobile Top 10"`, `"OWASP Top 10"`, `"PCI DSS Compliance"`, and `"PCI SSF Compliance"`. **Note:** You only need to enclose the report template name in quotes if a space exists in the <*template_name*>. The template name values are case-insensitive.
`-source` *<audited_proj>*`.fpr`	(Required) Specifies the audited project on which to base the report.
`-format` `pdf` | `doc` | `html`	(Required) Specifies the generated report format. **Note:** The format values are ***not*** case-sensitive.
`-output` *<report_file.*****>*	(Required) Specifies the file to which the report is written. **Note:** If you specify a file that already exists, that file is overwritten.
`-searchQuery` *<query>*	Specifies a search query to filter issues before generating the report. For example: `-searchQuery audited:false` For a description of the search query syntax, see the *OpenText™ Fortify Audit Workbench User Guide*.
`-ShowSuppressed`	Include issues that are marked as suppressed.

BIRTReportGenerator Option	Description
`-ShowRemoved`	Include issues that are marked as removed.
`-ShowHidden`	Include issues that are marked as hidden.
`-filterSet <filterset_name>`	Specifies a filter set to use to generate the report (for example, `-filterSet "Quick View"`).
`--Version <version>`	Specifies the version for the template. The template version values are case-insensitive. **Note:** • Templates that are not listed here have only one version available. • If you do not specify a version and multiple versions are available, BIRTReportGenerator uses the most recent version based on the external metadata used when the FPR was created. • The BIRTReportGenerator help displays current report versions. Fortify periodically deprecates older report versions, however these versions are still available for FPR files that were created before the report version was deprecated. The valid values for the template versions are: • For the "CWE Top 25" template, the version is `"CWE Top 25 <year>"` (for example, `"CWE Top 25 2023"`) • For the "CWE/SANS Top 25" template, the version is `"<year> CWE/SANS Top 25"` (for example, `"2011 CWE/SANS Top 25"`)

BIRTReportGenerator Option	Description
	- For the "DISA STIG" template, the version is "`DISA STIG` *`<version>`*" (for example, "`DISA STIG 5.2`") - For the "FISMA Compliance" template, the version is "`NIST 800-53 Rev` *`<version>`*" (for example, "`NIST 800-53 Rev 5`") - For the MISRA template, the available versions are "`MISRA C 2012`" or "`MISRA C++ 2008`" - For the "OWASP Top 10" template, the version is "`OWASP Top 10` *`<year>`*" (for example, "`OWASP Top 10 2021`") - For the "PCI DSS Compliance" template, the version is "`PCI` *`<version>`*" (for example, "`PCI 4.0`") - For the "PCI SSF Compliance" template, the version is "`PCI SSF` *`<version>`*" (for example, "`PCI SSF 1.2`")
`--IncludeDescOfKeyTerminology`	Include the *Description of Key Terminology* section in the report.
`--IncludeAboutFortify`	Include the *About Fortify Solutions* section in the report.
`--SecurityIssueDetails`	Provide detailed descriptions of reported issues. This option is not available for the Developer Workbook template.
`--UseFortifyPriorityOrder`	Use Fortify Priority Order instead of folder names to categorize issues. This option is not available for the Developer Workbook and PCI Compliance templates.
`-h | -help`	Displays detailed information about the options.
`-debug`	Displays debug information that can be helpful to troubleshoot issues with BIRTReportGenerator.

Troubleshooting BIRTReportGenerator

Occasionally, you might encounter an out of memory error when you generate a report. You might see a message similar to the following in the command-line output:

```
java.lang.OutOfMemoryError: GC overhead limit exceeded
```

To increase the memory allocated for BIRTReportGenerator, add the `-Xmx` option to the BIRTReportGenerator command. In the following example, 32 GB is allocated to BIRTReportGenerator to run a report:

```
BIRTReportGenerator -template "DISA STIG" -source myproject.fpr -format PDF
-output myproject_report.pdf -Xmx32G
```

Generating a Legacy Analysis Report

Use the ReportGenerator command-line tool to generate legacy reports. The legacy reports include user-configurable report templates. The basic command-line syntax to generate a legacy analysis report is:

```
ReportGenerator -source <audited_proj>.fpr -format <format> -f <report_
file_name>
```

The following is an example of how to generate a PDF report using the Fortify Scan Summary template and additional options:

```
ReportGenerator -source auditedProj.fpr -format pdf -template
ScanReport.xml -showSuppressed -user Alex -f MyFortifyReport.pdf
```

ReportGenerator Command-Line Options

The following table describes the ReportGenerator options.

ReportGenerator Option	Description
`-source` *`<audited_proj>`*`.fpr`	(Required) Specifies the audited project on which to base the report.
`-format` `pdf` | `xml`	(Required) Specifies the generated report format.
`-f` *`<report_file.***>`*	(Required) Specifies the file to which the report is written. **Note:** If you specify a file that already exists, that file is overwritten.
`-template` *`<template_name>`*	Specifies the report template. If not specified, ReportGenerator uses the default template. The default template is located in *`<tools_install_dir>`* `/Core/config/reports/DefaultReportDefinition.xm`

ReportGenerator Option	Description
	1. **Note:** Enclose the <*template_name*> in quotes if it contains any spaces. See the *OpenText™ Fortify Audit Workbench User Guide* for a description of the available report templates and how to customize them.
`-user <username>`	Specifies a user name to add to the report.
`-showSuppressed`	Include issues marked as suppressed.
`-showRemoved`	Include issues marked as removed.
`-showHidden`	Include issues marked as hidden.
`-filterSet <filterset_name>`	Specifies a filter set to use to generate the report (for example, `-filterset "Quick View"`).
`-verbose`	Displays status messages to the console.
`-debug`	Displays debug information that can be helpful to troubleshoot issues with ReportGenerator.
`-h`	Displays detailed information about the options.

Working with FPR Files from the Command Line

Use the FPRUtility command-line tool located in `<tools_install_dir>/bin` to perform the following tasks:

- "Merging FPR Files" on the next page
- "Displaying Analysis Results Information from an FPR File" on page 34
- "Extracting a Source Archive from an FPR File" on page 38
- "Altering FPR Files" on page 40
- "Allocating More Memory for FPRUtility" on page 40

Merging FPR Files

The FPRUtility `-merge` option combines the analysis results from two FPR files into a single FPR file. The values of the primary project are used to resolve conflicts. When you merge two FPR files, copies of both the primary analysis results and the secondary analysis results are stored in the merged FPR. When you open a merged FPR in Fortify Audit Workbench or Fortify Software Security Center, *removed issues* are determined as those that exist in the secondary analysis results but not in the primary analysis results. Similarly, *new issues* are those that exist in the primary analysis results, but not in the secondary analysis results.

To merge FPR files:

```
FPRUtility -merge -project <primary>.fpr -source <secondary>.fpr \
-f <merged>.fpr
```

To merge FPR files and set instance ID migrator options:

```
FPRUtility -merge -project <primary>.fpr -source <secondary>.fpr \
-f <merged>.fpr -iidmigratorOptions "<iidmigrator_options>"
```

FPRUtility Data Merge Options

The following table lists the FPRUtility options that apply to merging data.

FPRUtility Option	**Description**
`-merge`	Merges the specified project and source FPR files.
`-project <primary>.fpr`	Specifies the primary FPR file to merge. Conflicts are resolved using the values in this file.
`-source <secondary>.fpr`	Specifies the secondary FPR file to merge. The primary project overrides values if conflicts exist.
`-f <merged>.fpr`	Specifies the name of the merged FPR file to contain the result of the merged files. **Note:** When you specify this option, neither of the original FPR files are modified. If you do not use this option, the primary FPR is overwritten with the merged results.
`-forceMigration`	Forces the migration, even if Fortify Static Code Analyzer and the Rulepack versions of the two projects are the same.

FPRUtility Option	Description
-ignoreAnalysisDates	Specifies to ignore the analysis dates in the primary and secondary FPR files for the merge. Otherwise, the secondary FPR is always updated with the primary FPR .
-useSourceIssueTemplate	Specifies to use the filter sets and folders from the issue template in the secondary FPR.
-useMigrationFile *<mapping_file>*	Specifies an instance ID mapping file. This enables you to modify mappings manually rather than using the migration results. Supply your own instance ID mapping file.
-iidmigratorOptions *<iidmigrator_options>*	Specifies instance ID migrator options. Separate included options with spaces and enclosed them in quotes. Some valid options are: • -i provides a case-sensitive file name comparison of the merged files • -u *<scheme_file>* tells iidmigrator to read the matching scheme from *<scheme_file>* for instance ID migration **Note:** Wrap *<-iidmigrator_options>* in single quotes ('-u *<scheme_file>*') when working from a Cygwin command prompt. Windows example: FPRUtility -merge -project *<primary>*.fpr -source *<secondary>*.fpr -f *<merged>*.fpr -iidmigratorOptions "-u scheme_file"
-debug	Displays debug information that can be helpful to troubleshoot issues with FPRUtility.

FPRUtility Data Merge Exit Codes

Upon completion of the -merge command, FPRUtility provides one of the exit codes described in the following table.

Exit Code	Description
0	The merge completed successfully.
5	The merge failed.

Displaying Analysis Results Information from an FPR File

The FPRUtility `-information` option displays information about the analysis results. You can obtain information to:

- Validate signatures
- Examine any errors associated with the FPR
- Obtain the number of issues for each analyzer, vulnerability category, or custom grouping
- Obtain lists of issues (including some basic information). You can filter these lists.
- Obtain the list of analyzed files and the number of lines of code (LOC) for each file. You can also compare the LOC with another FPR.

To display signature information for the analysis:

```
FPRUtility -information -signature -project <project>.fpr -f <output>.txt
```

To display a full analysis error report for the FPR:

```
FPRUtility -information -errors -project <project>.fpr -f <output>.txt
```

To display the number of issues per vulnerability category or analyzer:

```
FPRUtility -information -categoryIssueCounts -project <project>.fpr
FPRUtility -information -analyzerIssueCounts -project <project>.fpr
```

To display the number of issues for a custom grouping based on a search:

```
FPRUtility -information -search -query <search_expression> \
[-categoryIssueCounts] [-analyzerIssueCounts] \
[-includeSuppressed] [-includeRemoved] \
-project <project>.fpr -f <output>.txt
```

Note: By default, the result does not include suppressed and removed issues. To include suppressed or removed issues, use the `-includeSuppressed` or `-includeRemoved` options.

To display information for issues in CSV format:

```
FPRUtility -information -listIssues \
-search [-queryAll | -query <search_expression>] \
[-categoryIssueCounts] [-analyzerIssueCouts] \
[-includeSuppressed] [-includeRemoved] \
-project <project>.fpr -f <output>.csv -outputFormat CSV
```

To display information for all issues from the most recent scan (excluding suppressed and removed issues) using the Quick View filter set:

```
FPRUtility -information -listIssues \
-search -queryAllExistingUnsuppressed \
-filterSet "Quick View" \
[-categoryIssueCounts] [-analyzerIssueCouts] \
-project <project>.fpr -f <output>.txt
```

To display a comparison of the number of lines of code for analyzed files in two FPRs:

```
FPRUtility -information -loc -project <project>.fpr \
-compareTo <oldproject>.fpr -f <output>.txt
```

FPRUtility Information Options

The following table lists the FPRUtility options that apply to project information.

FPRUtility Option	Description
`-information`	Displays information for the project.
Specify one of the following options to indicate what information to display:	
`-signature`	Displays the signature for analysis results and rules.
`-mappings`	Displays the migration mappings report.
`-errors`	Displays a full error report for the FPR.
`-versions`	Displays the Fortify Static Code Analyzer and the Fortify Secure Coding Rulepacks versions used in the static scan.
`-functionsMeta`	Displays all functions that the static analyzer encountered in CSV format. To filter which functions are displayed, include `-excludeCoveredByRules`, and `-excludeFunctionsWithSource`.
`-categoryIssueCounts`	Displays the number of issues for each vulnerability category.
`-analyzerIssueCounts`	Displays the number of issues for each analyzer.
`-search <query_option>`	• Use `-search -query <search_expression>` to display the number of issues in the result of your specified search expression. To display the number of issues per vulnerability category or analyzer, add the optional `-categoryIssueCounts` and `-analyzerIssueCounts` options to the search option. Use the `-includeSuppressed` and `-includeRemoved` options to include suppressed or removed issues. • Use `-search -queryAll` to search all the issues in the FPR including

FPRUtility Option	Description
	suppressed and removed issues. • Use `-search -queryAllExistingUnsuppressed` to search all the issues in the FPR excluding suppressed and removed issues.

`-loc`	Displays the list of analyzed files each with the number of lines of code (LOC) in the following format:
	`<filename>: <total_loc> (<executable_loc>)`
	where *<total_loc>* is the approximate number of lines that contain code constructs (comments are excluded).
	Use `-compareTo <project>.fpr` with this option to compare the number of lines of code with another FPR. The comparison output includes the following information:
	• + indicates new analyzed files
	• - indicates removed analyzed files
	• * indicates files with a different number of lines of code. The difference in the number of lines of code is shown next to the executable LOC number as in (+N or -N). For example:
	`* ProjectA/main.jsp: 115 +15 (85 +7)`
	In the previous example, the comparison shows that the number of lines of code in `main.jsp` is different between the two FPR files. There are 15 additional total LOC and 7 additional executable LOC.

`-project <project>.fpr`	Specifies the FPR from which to extract the results information.
`-listIssues`	Displays the location for each issue in one of the following formats: `<sink_filename>:<line_num>` or `<sink_filename>:<line_num>` (`<category>` | `<analyzer>`) You can also use the `-listIssues` option with `-search` and with both issueCounts grouping options. If you group by `-categoryIssueCounts`, then the output includes (*<analyzer>*) and if you group by `-analyzerIssueCounts`, then the output includes (*<category>*). If you specify the `-outputFormat CSV` option, then each issue is displayed on one line in the format: `"<instanceid>", "<category>", "<sink_filename>:<line_num>", "<analyzer>"`

FPRUtility Option	Description
`-filterSet <filterset_name>`	Displays only the issues and counts that pass the filters specified in the filter set. Filter sets are ignored without this option. **Important!** You must use `-search` with this option.
`-f <output>`	Specifies the output file. The default is `System.out`.
`-outputFormat TEXT|CSV`	Specifies the output format. The default value is `TEXT`.
`-debug`	Displays debug information that can be helpful to troubleshoot issues with FPRUtility.

FPRUtility Signature Exit Codes

Upon completion of the `-information -signature` command, FPRUtility provides one of the exit codes described in the following table.

Exit Code	Description
0	The project is signed, and all the signatures are valid.
1	The project is signed, and some, but not all, of the signatures passed the validity test.
2	The project is signed but none of the signatures are valid.
3	The project had no signatures to validate.

Extracting a Source Archive from an FPR File

The FPRUtility -sourceArchive option creates a source archive (FSA) file from a specified FPR file and removes the source code from the FPR file. You can extract the source code from an FPR file, merge an existing source archive (FSA) back into an FPR file, or recover source files from a source archive.

To archive data:

```
FPRUtility -sourceArchive -extract -project <project>.fpr -f <output_
archive>.fsa
```

To archive data to a directory:

```
FPRUtility -sourceArchive -extract -project <project>.fpr \
-recoverSourceDirectory -f <output_dir>
```

To add an archive to an FPR file:

```
FPRUtility -sourceArchive -mergeArchive -project <project>.fpr \
-source <old_source_archive>.fsa -f <project_with_archive>.fpr
```

To recover files that are missing from an FPR file:

```
FPRUtility -sourceArchive -fixSecondaryFileSources \
-payload <source_archive>.zip -project <project>.fpr -f <output>.fpr
```

FPRUtility Source Archive Options

The following table lists the FPRUtility options that apply to working with the source archive.

FPRUtility Option	Description
`-sourceArchive`	Creates an FSA file so that you can extract a source archive.

One of:
`-extract`
`-mergeArchive`
`-fixSecondaryFileSources`
	Use the `-extract` option to extract the contents of the FPR file.

	Use the `-mergeArchive` option to merge the contents of the FPR file with an existing archived file (`-source` option).

FPRUtility Option	Description
	Use the `-fixSecondaryFileSources` option to recover source files from a source archive (`-payload` option) missing from an FPR file.
`-project` *`<project>`*`.fpr`	Specifies the FPR to archive.
`-recoverSourceDirectory`	Use with the `-extract` option to extract the source as a directory with restored source files.
`-source` *`<old_source_archive>`*`.fsa`	Specifies the name of the existing archive. Use only if you are merging an FPR file with an existing archive (`-mergeArchive` option).
`-payload` *`<source_archive>`*`.zip`	Use with the `-fixSecondaryFileSources` option to specify the source archive from which to recover source files.

`-f` *`<project_with_archive>`*`.fpr |`
`<output_archive>``.fsa |`
`<output_dir>`
	Specifies the output file. You can generate an FPR, a directory, or an FSA file.

`-debug`	Displays debug information that can be helpful to troubleshoot issues with FPRUtility.

Altering FPR Files

Use the FPRUtility `-trimToLastScan` option to remove the previous scan results from a merged project (FPR). This reduces the size of the FPR file when you no longer need the previous scan results. This can also reduce the time it takes to open an FPR in Fortify Audit Workbench.

To remove the previous scan from the FPR:

```
FPRUtility -trimToLastScan -project <merged_project>.fpr [-f <output>.fpr]
```

FPRUtility Alter FPR File Options

FPRUtility Option	Description
`-trimToLastScan`	Removes the previous scan results from a merged project.
`-project <merged_project>.fpr`	Specifies the merged FPR to alter. If this project is not a merged project, then the FPR file remains unchanged.
`-f <output>.fpr`	Specifies the name of the altered output file. If you do not specify this option, then the merged FPR is altered.

Allocating More Memory for FPRUtility

Performing tasks with large and complex FPR files might trigger out-of-memory errors. By default, 1000 MB is allocated for FPRUtility. To increase the memory, add the `-Xmx` option to the command line. For example, to allocate 2 GB for FPRUtility, use the following command:

```
FPRUtility -Xmx2G -merge -project <primary>.fpr -source <secondary>.fpr \
-f <output>.fpr
```

Chapter 4: Configuration Options

The Fortify Applications and Tools installer places a set of properties files on your system. Properties files contain configurable settings for Fortify Static Code Analyzer applications and tools. Some properties described in this chapter already exist in the properties file, and some of them you must add yourself. You can modify any of the properties in the configuration file with a text editor.

This section contains the following topics:

Properties File Format

In a properties file, each property consists of a pair of strings: the first string is the property name and the second string is the property value.

```
com.fortify.log.console=false
```

As shown above, the property disables console logging. The property name is `com.fortify.log.console` and the value is set to `false`.

Configuration Options for Java-Based Applications and IDE Plugins

This section describes the properties used to configure the following Java-based Fortify Static Code Analyzer applications.

- Fortify Audit Workbench
- Fortify Custom Rules Editor
- Fortify Plugins for Eclipse, IntelliJ IDEA, and Android Studio

The following table lists the Fortify Static Code Analyzer application acronyms used in this section.

Acronym	Fortify Application / Plugin / Extension
AWB	Fortify Audit Workbench

Acronym	Fortify Application / Plugin / Extension
CRE	Fortify Custom Rules Editor
ECP	Fortify Plugin for Eclipse
IAP	Fortify Analysis Plugin for IntelliJ IDEA and Android Studio

Where to Find the Properties File

The location of the properties file `fortify.properties` varies for the different Fortify Static Code Analyzer applications. The following table provides the location of the properties file for the applications described in this chapter.

Fortify Application	Property File Location
AWB, CRE	`<tools_install_dir>/Core/config` **Note:** After you specify the location of the Fortify Static Code Analyzer executable from Fortify Audit Workbench, the location of the properties file changes to `<sca_install_dir>/Core/config` for AWB.

ECP	`<eclipse_install_dir>/plugins/com.fortify.dev.ide.eclipse_<version>/Core/config`
	or if Eclipse was installed with an installer:
	`<userhome>/.p2/pool/plugins/com.fortify.dev.ide.eclipse_<version>/Core/config`

IAP	`<IDE_product_plugins_dir>/Core/config`
	The following is an example location on Windows:
	`C:\Users\<username>\AppData\Roaming\JetBrains\Idea<version>\plugins\Fortify\config`

Java-Based Applications and IDE Plugin Properties

Some properties described in this section already exist in the `fortify.properties` file, and some of them you must add yourself. The colored boxes in the Details column indicate which Fortify Static Code Analyzer applications use the property. To find this properties file for the various products, see "Where to Find the Properties File" above.

The following table describes the properties in the `fortify.properties` file.

Property	Details
com.fortify. audit.ui.DisableAddingFolders	If set to `true`, disables the add folder functionality. **Default:** `false` **Tools Affected:** [✓ AWB] [✓ ECP] CRE IAP
com.fortify. audit.ui.DisableBugtrackers	If set to `true`, disables bug tracker integration. **Default:** `false` **Tools Affected:** [✓ AWB] [✓ ECP] CRE IAP
com.fortify. audit.ui.DisableEditing CustomTags	If set to `true`, removes the ability to edit custom tags. **Default:** `false` **Tools Affected:** [✓ AWB] [✓ ECP] CRE IAP
com.fortify. audit.ui.DisableSuppress	If set to `true`, disables issue suppression. **Default:** `false` **Tools Affected:** [✓ AWB] [✓ ECP] CRE IAP
com.fortify. AuthenticationKey	Specifies the directory used to store the encrypted Fortify Software Security Center authentication token. **Default:** `${com.fortify.WorkingDirectory}/config/tools` **Tools Affected:** [✓ AWB] [✓ ECP] [✓ CRE] [✓ IAP]
com.fortify. awb.Debug	If set to `true`, Fortify Audit Workbench runs in debug mode. **Default:** `false` **Tools Affected:** [✓ AWB] ECP CRE IAP

Property	Details
com.fortify. awb.javaExtensions	Specifies the file extensions (comma-delimited) to treat as Java files during a scan. If this property is empty, Fortify Audit Workbench and the Fortify Plugin for Eclipse recognize `.java`, `.jsp`, and `.jspx` files as Java files. The property is used only to determine whether a project includes Java files and to add Java-specific controls to the Advanced Scan wizard. **Default:** none **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. awb.forceGCOnProjectClose	If set to `true`, garbage collection is run and heap space is released when you close a project. This reduces the increased Java process memory consumption when working with small FPR files. When Fortify Audit Workbench runs with G1GC garbage collection, the Java process can return free memory back to the operating system when the project is closed. **Default:** `false` **Tools Affected:** 🟩 AWB ECP CRE IAP
com.fortify. awb.LinuxFontAdjust	Specifies the font size to use on Linux platforms. Fortify Audit Workbench adds the specified size to original font size. **Default:** `0` **Tools Affected:** 🟩 AWB 🟩 ECP 🟩 CRE IAP
com.fortify. awb.MacFontAdjust	Specifies to tune font size for the macOS platform. Fortify Audit Workbench adds the specified size to the original font size. **Default:** `2` **Tools Affected:** 🟩 AWB 🟩 ECP 🟩 CRE IAP
com.fortify. awb.WindowsFontAdjust	Specifies to tune the font size for the Windows platform. Fortify Audit Workbench adds the specified size to original font size. **Default:** `0`

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td><b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>🟩 CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
Debug</td><td>If set to <code>true</code>, runs the Fortify Static Code Analyzer applications in debug mode.
<b>Default:</b> <code>false</code>
<b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
DisableDescriptionXML
Escaping</td><td>If set to <code>true</code>, disables XML escaping in issue descriptions (for example, changing <code>&quot;</code> in XML/FVDL to ").
<b>Default:</b> <code>false</code>
<b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
DisableExternalEntry
Correlation</td><td>If set to <code>true</code>, parses URL in the ExternalEntries/Entry element in the FVDL file.
<b>Default:</b> <code>false</code><pre>
<ExternalEntries>
  <Entry name="HTML Form" type="URL">
  <URL>/auth/PerformChangePass.action</URL>
  <SourceLocation path="pages/content/
   ChangePass.jsp" line="16" lineEnd="16"
   colStart="0" colEnd="0"
   snippet=
   "1572130B944CEC7A3D98775A499AE8FA#pages/
   content/ChangePass.jsp:16:16"/>
  </Entry>
</ExternalEntries>
</pre><b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
DisableMinVirtCallConfidence
Computation</td><td>If set to <code>true</code>, disables computing minimum virtual call confidence.
Fortify Audit Workbench and the Fortify Plugin for Eclipse use this attribute to compute minimum virtual call confidence and enable issue filtering. For example, you can use it to filter out all issues that contain a</td></tr>
</table>

Property	Details
	virtual call with confidence lower than 0.46. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify.DisableRemovedIssuePersistance	If set to `true`, disables removed issue persistence (clears removed issues from the FPR file). **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify.DisableReportCategoryRendering	If set to `true`, disables rendering issue description into reports. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify.DisplayEventID	If set to `true`, displays the event ID in the issue node tooltip in the Issues view. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify.eclipse.Debug	If set to `true`, runs the plugin in debug mode. **Default:** `false` **Tools Affected:** AWB 🟩 ECP CRE IAP
com.fortify.InstallationUserName	Specifies the default user name for logging in to Fortify Software Security Center for the first time. **Default:** `${user.name}` **Tools Affected:** 🟩 AWB 🟩 ECP 🟩 CRE 🟩 IAP

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td>com.fortify.
locale</td><td>Specifies the locale (for rules and metadata only). The possible values are:
en (English)
es (Spanish)
ja (Japanese)
ko (Korean)
pt_BR (Brazilian Portuguese)
zh_CN (Simplified Chinese)
zh_TW (Traditional Chinese)
<b>Default:</b> en
<b>Tools Affected:</b>
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>🟩 CRE</td><td>🟩 IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.CheckSig</td><td>If set to true, verifies the signature in the FPR file.
If com.fortify.model.UseIssueParseFilters is set to true, then com.fortify.model.MinimalLoad is set to true, com.fortify.model.IssueCutoffStartIndex is not null, com.fortify.model.IssueCutoffEndIndex is not null, com.fortify.model.IssueCutoffByCategoryStartIndex is not null or com.fortify.model.IssueCutoffByCategoryEndIndex is not null, com.fortify.model.CheckSig is false, and the signature in FPRs are not verified.
<b>Default:</b> true (normal) / false (minimum load)
<b>Tools Affected:</b>
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.CustomDescriptions
Header</td><td>Specifies a custom prefix for the description header. It prepends the text in the Description/Recommendation header, so that you see “My Recommendations” instead of “Custom Recommendations.”
<b>Note:</b> To update description headers, Fortify recommends that you use the <CustomDescriptionRule> rule with the <Header> element text instead.
<b>Default:</b> none</td></tr>
</table>

Property	Details
	Tools Affected: 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.DisableChopBuildID	If set to `true`, does not shorten the build ID, even if the build ID exceeds 250 characters. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.DisableContextPool	If set to `true`, disables loading the `ContextPool` section of the FVDL file. You can configure this property if `com.fortify.model.MinimalLoad` is not set to `true`. If `com.fortify.model.MinimalLoad` is set to `true`, then `com.fortify.model.DisableContextPool` is automatically set to `true`. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.DisableDescription	If set to `true`, disables loading the `Description` section from the FVDL file. You can configure this property if `com.fortify.model.MinimalLoad` is not set to `true`. If `com.fortify.model.MinimalLoad` is `true`, then `com.fortify.model.DisableDescription` is automatically set to `true`. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.DisableEngineData	If set to `true`, disables loading the `EngineData` section of the FVDL file to save memory when large FPR files are opened. This data is displayed on the **Analysis Information** tab of **Project Summary** view. The property is useful if too many analysis warnings occur during a scan. However, Fortify recommends that you instead set a limit for `com.fortify.model.MaxEngineErrorCount` to open FPR files that have many Fortify Static Code Analyzer warnings.

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td>Also see "com.fortify.model.MaxEngineErrorCount " on page 52

Default: `false`

Tools Affected:
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableProgramInfo</td><td>If set to `true`, disables use of the code navigation features in Fortify Audit Workbench.

You can configure this property if `com.fortify.model.MinimalLoad` is not `true`. If `com.fortify.model.MinimalLoad` is set to `true`, then this property is automatically set to `true`.

Also see "com.fortify.model.MinimalLoad " on page 53

Default: `false`

Tools Affected:
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableProgramPoint</td><td>If set to `true`, disables loading of the `ProgramPoint` section from the `runtime.fvdl` file.

Default: `false`

Tools Affected:
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableReplacement
Parsing</td><td>If set to `true`, disables replacing the conditional description.

You can configure this property if `com.fortify.model.MinimalLoad` is not set to `true`. If `com.fortify.model.MinimalLoad` is `true`, then this property is automatically set to `true`.

Also see "com.fortify.model.MinimalLoad " on page 53

Default: `false`

Tools Affected:
<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableSnippets</td><td>If set to `true`, disables loading the `Snippets` section from the FVDL file.

You can configure this property if `com.fortify.model.MinimalLoad` is set to `false`. If `com.fortify.model.MinimalLoad` is set to `true`, then</td></tr>
</table>

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td>com.fortify.model.DisableSnippets is automatically set to true.
Default: false
Tools Affected:<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableUnified
Inductions</td><td>If set to true, disables loading the UnifiedInductionPool section from the FVDL file.
You can configure this property if com.fortify.model.MinimalLoad is not set to true. If com.fortify.model.MinimalLoad is set to true, then com.fortify.model.DisableUnifiedInductions is automatically set to true.
Default: false
Tools Affected:<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableUnifiedPool</td><td>If set to true, disables loading the UnifiedNodePool section from the FVDL file.
You can configure this property if com.fortify.model.MinimalLoad is set to false. If com.fortify.model.MinimalLoad is true, then com.fortify.model.DisableUnifiedPool is automatically set to true. If the value is not specified or false, this property is set to none.
Default: false
Tools Affected:<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.DisableUnifiedTrace</td><td>If set to true, disables loading the UnifiedTracePool section from the FVDL file.
You can configure this property if com.fortify.model.MinimalLoad is not set to true. If com.fortify.model.MinimalLoad is true, then com.fortify.model.DisableUnifiedTrace is automatically set to true.
Default: false
Tools Affected:<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
</table>

Property	Details
com.fortify. model.EnableSource Correlation	If set to `true`, takes data flow source into consideration for issue correlation. The default is `false` because correlations with runtime results might not be reliable with this setting enabled. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.ExecMemorySetting	Specifies the JVM heap memory size in megabytes used by Fortify Audit Workbench to launch external utilities. **Default:** `600`—iidmigrator `300`—fortifyupdate **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.ForceIIDMigration	If set to `true`, forces running Instance ID migration during a merge. **Default:** `false` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.FullReportFilenames	If set to `true`, uses the full file name in reports. **Default:** `false` **Tools Affected:** Also used the FPRUtility command-line tool 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.IIDmigratorOptions	Specifies iidmigrator options (space-delimited values). **Default:** none **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.IssueCutoffByCategory StartIndex	Specifies the start index for issue cutoff by category. **Default:** `0`

Property	Details
	Tools Affected: 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.IssueCutoffByCategory EndIndex	Specifies the end index for issue cutoff by category. **Default:** `java.lang.Integer.MAX_VALUE` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.IssueCutoffStartIndex	Specifies the start index for issue cutoff. Select the first issue (by number) to load. **Default:** `0` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.IssueCutoffEndIndex	Specifies the end index for issue cutoff. Select the last issue (by number) to load. **Default:** `java.lang.Integer.MAX_VALUE` **Tools Affected:** 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.MaxEngineErrorCount	Specifies how many reported Fortify Static Code Analyzer warnings to load. To allow an unlimited number, specify `-1`. Fortify recommends that you keep the default value of `3000` because this can speed up the load time of large FPR files. **Default:** `3000` **Tools Affected:** Also used by FPRUtility 🟩 AWB 🟩 ECP CRE IAP
com.fortify. model.MergeResolveStrategy	Specifies the merge resolve strategy to one of the following: • `DefaultToMasterValue` (use primary project) • `DefaultToImportValue` (use secondary project) • `NoStrategy` (prompt for project to use)

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td><b>Default:</b> <code>DefaultToMasterValue</code>
<b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.MinimalLoad</td><td>If set to <code>true</code>, minimizes the data loaded from an FPR file.
<b>Default:</b> <code>false</code>
<b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.NProcessingThreads</td><td>Specifies the number of threads used to process FPR files.
If the <code>com.fortify.model.PersistDataToDisk</code> property is set to <code>true</code>, this value defaults to one thread.
If the number specified exceeds the number of available processors, then Fortify Static Code Analyzer tools use the number of available processors as the number of threads to process FPR files.
Also see: "com.fortify.model.PersistDataToDisk " below
<b>Default:</b> Number of available processors
<b>Tools Affected:</b> Also used by FPRUtility<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.PersistDataToDisk</td><td>If set to <code>true</code>, enables a persistence strategy to reduce the memory footprint and uses the disk drive to swap FPR data out of memory.
<b>Default:</b> <code>false</code>
<b>Tools Affected:</b><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.PersistenceBlockSize</td><td>If the <code>com.fortify.model.PersistenceStrategy</code> property is set to <code>CUSTOM</code>, this property specifies the number of attribute values that comprise a single block of attributes. These blocks are cached to disk and read back in as needed. A larger number decreases the total number of cache files, but increases the file size and the amount of memory that is read in each time.
<b>Default:</b> <code>250</code>
<b>Tools Affected:</b></td></tr>
</table>

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.PersistenceQueue
Capacity</td><td><p>If the <code>com.fortify.model.PersistenceStrategy</code> property is set to <code>CUSTOM</code>, then this property specifies the maximum number of attribute value blocks that can exist in the producer/consumer queue.</p><p><b>Default:</b> queue is unbounded</p><p><b>Tools Affected:</b></p><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.PersistenceStrategy</td><td><p>If the <code>com.fortify.model.PersistDataToDisk</code> property is set to <code>true</code>, then this property specifies the technology used to unload processed issues back on the hard drive while opening a really large FPR file. The valid values for this property are <code>CUSTOM</code> or <code>CACHE</code>.The <code>CUSTOM</code> strategy is the legacy mechanism, which utilizes hard disk clustering, and the <code>CACHE</code> strategy utilizes a popular open source caching library.</p></td></tr>
<tr><td>com.fortify.
model.PriorityImpact
Threshold</td><td><p>Specifies the threshold for issue impact. The valid values are 0.0F–5.0F. If the impact of an issue is greater than or equal to the threshold, the issue is considered High. If the impact of an issue is less than the threshold, the issue is considered Low. Issues are then categorized as follows:</p><ul><li><b>Critical</b>—High Impact and High Likelihood</li><li><b>High</b>—High Impact and Low Likelihood</li><li><b>Medium</b>—Low Impact and High Likelihood</li><li><b>Low</b>—Low Impact and Low Likelihood</li></ul><p>Also see "com.fortify.model.PriorityLikelihoodThreshold" below</p><p><b>Default:</b> <code>2.5F</code></p><p><b>Tools Affected:</b></p><table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table></td></tr>
<tr><td>com.fortify.
model.PriorityLikelihood
Threshold</td><td><p>Specifies the threshold for issue likelihood. The valid values are 0.0F–5.0F. If the likelihood of an issue is greater than or equal to the threshold, the issue is considered High. If the likelihood of an issue is less than the threshold, the issue is considered Low. Issues are then categorized as follows:</p><ul><li><b>Critical</b>—High Impact and High Likelihood</li><li><b>High</b>—High Impact and Low Likelihood</li></ul></td></tr>
</table>

<table>
<tr><th>Property</th><th>Details</th></tr>
<tr><td></td><td>

- **Medium**—Low Impact and High Likelihood
- **Low**—Low Impact and Low Likelihood

Also see "com.fortify.model.PriorityImpactThreshold " on the previous page

Default: `2.5F`

Tools Affected:

<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table>
</td></tr>
<tr><td>com.fortify.
model.report.useSystemLocale</td><td>

If set to `true`, uses the system locale for report output. If set to `false`, uses `com.fortify.locale` in the `fortify.properties` file. If a value is not specified, the tool uses `java.util.Locale.getDefault()`.

Default: `false`

Tools Affected:

<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table>
</td></tr>
<tr><td>com.fortify.
model.ReportLineLimit</td><td>

Specifies the character limit for each issue code snippet in reports.

Default: `500`

Tools Affected:

<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table>
</td></tr>
<tr><td>com.fortify.
model.UseIIDMigrationFile</td><td>

Specifies the full path of the instance ID migration file to use.

Default: none

Tools Affected: Also used by FPRUtility

<table><tr><td>🟩 AWB</td><td>🟩 ECP</td><td>CRE</td><td>IAP</td></tr></table>
</td></tr>
<tr><td>com.fortify.
model.UseIssueParseFilters</td><td>

If set to `true`, respects the settings in the `IssueParseFilters.properties` configuration file. This file is in the following directories:

AWB—`<tools_install_dir>/Core/config`

ECP—`<eclipse_install_dir>/plugins/com.fortify.dev.ide.eclipse_<version>/Core/config`

Default: `false`

Tools Affected:
</td></tr>
</table>

Property	Details
	🟩 AWB · 🟩 ECP · CRE · IAP
com.fortify. model.UseOldIIDMigration Attributes	If set to `true`, uses attributes of old issues during instance ID migration while merging similar issues of old and new scans. **Default:** `false` **Tools Affected:** 🟩 AWB · 🟩 ECP · CRE · IAP
com.fortify. RemovedIssuePersistanceLimit	Specifies how many removed issues to keep when you save an FPR. **Default:** `1000` **Tools Affected:** 🟩 AWB · 🟩 ECP · CRE · IAP
com.fortify. SCAExecutablePath	Specifies the file path to `sourceanalyzer.exe`. **Tools Affected:** 🟩 AWB · 🟩 ECP · CRE · 🟩 IAP
com.fortify. search.defaultSyntaxVer	Specifies whether to use the AND and OR operators in searches. These are enabled in search syntax by default. • To block the use of the AND and OR operators, set the value to 1. • To use ANDs and ORs without parentheses, set the value to 2. **Default:** `2` **Tools Affected:** 🟩 AWB · 🟩 ECP · CRE · IAP
com.fortify. StoreOriginalDescriptions	If set to `true`, stores original plain text issue descriptions (before parsing) as well as the parsed ones with tags replaced with specific values. **Default:** `false` **Tools Affected:** 🟩 AWB · 🟩 ECP · CRE · IAP
com.fortify. taintFlagBlacklist	Specifies taint flags to exclude (comma-delimited values).

Property	Details
	Default: none **Tools Affected:** 🟩 AWB 🟩 ECP ⬜ CRE ⬜ IAP
com.fortify. tools.iidmigrator.scheme	Set this property to migrate instance IDs created with different versions of Fortify Static Code Analyzer using a custom matching scheme. This is handled by Fortify Static Code Analyzer. If you need a custom matching scheme, contact Customer Support. **Default:** none **Tools Affected:** 🟩 AWB 🟩 ECP ⬜ CRE ⬜ IAP
com.fortify. UseSourceProjectTemplate	This property determines the issue template to use when merging analysis information from two audit projects. If set to true, it forces the use of filter sets and folders from the issue template associated with the original scan results (secondary project). The issue template from the new scan results (primary project) are used by default. **Default:** `false` **Tools Affected:** Also used by FPRUtility 🟩 AWB 🟩 ECP ⬜ CRE ⬜ IAP
com.fortify. WorkingDirectory	Specifies the working directory that contains all user configuration and working files for all Fortify Static Code Analyzer applications and Java IDE plugins. To configure this property, you must have write access to the directory. **Defaults:** • Windows—`${win32.LocalAppdata}/Fortify` • Non-Windows—`${user.home}/.fortify` **Tools Affected:** 🟩 AWB 🟩 ECP 🟩 CRE 🟩 IAP

Configuration Options for Fortify Extension for Visual Studio

This section describes the properties used by the Fortify Extension for Visual Studio. The properties are listed in alphabetical order based on the files in which they belong.

Fortify Extension for Visual Studio Properties

Some properties described here already exist in the `fortify.properties` file, and some of them you must add yourself. The following table describes the properties in the *`<tools_install_dir>`*`/Core/config/fortify.properties` file.

Property	**Details**
com.fortify. audit.ui.DisableBugtrackers	If set to `true`, disables bug tracker integration. **Default:** `false`
com.fortify. audit.ui.DisableSuppress	If set to `true`, disables issue suppression. **Default:** `false`
com.fortify. AuthenticationKey	Specifies the directory used to store the encrypted Fortify Software Security Center authentication token. **Default:** `${com.fortify.WorkingDirectory}/config/VS`*`<vs_version>`*`-`*`<extension_version>`*
com.fortify. Debug	If set to `true`, runs all Fortify Static Code Analyzer tools in debug mode. **Default:** `false`
com.fortify. model.CustomDescriptionsHeader	Specifies the custom prefix for the description header. It prepends the text in the `Description/Recommendation` header, so that you see “My Recommendations” instead of “Custom Recommendations.” **Note:** To update description headers, Fortify recommends that you use the `<CustomDescriptionRule>` rule with the `<Header>` element text instead. **Default:** none
com.fortify. model.ForceIIDMigration	If set to `true`, forces running Instance ID migration during a merge. **Default:** `false`

Property	**Details**
com.fortify. model.PriorityImpactThreshold	Specifies the threshold for issue impact. The valid values are 0.0F–5.0F. If the impact of an issue is greater than or equal to the threshold, the issue is considered High. If the impact of an issue is less than the threshold, the issue is considered Low. Issues are then categorized as follows: • **Critical**—High Impact and High Likelihood • **High**—High Impact and Low Likelihood • **Medium**—Low Impact and High Likelihood • **Low**—Low Impact and Low Likelihood Also see "com.fortify.model.PriorityLikelihoodThreshold " below **Default:** `2.5F`
com.fortify. model.PriorityLikelihoodThreshold	Specifies the threshold for issue likelihood. The valid values are 0.0F–5.0F. If the likelihood of an issue is greater than or equal to the threshold, the issue is considered High. If the likelihood of an issue is less than the threshold, the issue is considered Low. Issues are then categorized as follows: • **Critical**—High Impact and High Likelihood • **High**—High Impact and Low Likelihood • **Medium**—Low Impact and High Likelihood • **Low**—Low Impact and Low Likelihood Also see "com.fortify.model.PriorityImpactThreshold" above **Default:** 2.5F
com.fortify. model.UseIIDMigrationFile	Specifies the full path of the instance ID migration file to use. **Default:** none
com.fortify. SCAExecutablePath	Specifies file path to `sourceanalyzer.exe`.
com.fortify. search.defaultSyntaxVer	Specifies whether to use the AND and OR operators in searches. These are enabled in search syntax by default. • To block the use of the AND and OR operators, set the value to 1. • To use ANDs and ORs without parentheses, set the value to 2. **Default:** 2

Property	Details
com.fortify. tools.iidmigrator.scheme	Set this property to migrate instance IDs created with different versions of Fortify Static Code Analyzer using a custom matching scheme. This is generally handled by Fortify Static Code Analyzer. If you need a custom matching scheme, contact Customer Support. **Default:** none
com.fortify. visualstudio.vm.args	Specifies JVM options. **Default:** `-Xmx256m`
com.fortify. VS.Debug	If set to `true`, runs the Fortify Extension for Visual Studio in debug mode. **Default:** `false`
com.fortify. VS.DisableCIntegration	If set to `true`, disables C/C++ build integration in Visual Studio. **Default:** `false`
com.fortify. VS.disableMigrationCheck	If set to `true`, disables instance ID migration checking. **Default:** `false`
com.fortify. VS.DisableReferenceLibDirs AndExcludes	If set to `true`, disables using references added to a project. **Default:** `false`
com.fortify. VS.ListProjectProperties	If set to `true`, lists the Visual Studio project properties in a log file. **Default:** `false`
com.fortify. VS.NETFrameworkRoot	Specifies the file path to the .NET Framework root. **Default:** none
com.fortify. WorkingDirectory	Specifies the working directory that contains all user configuration and working files for Fortify Extension for Visual Studio. To configure this property, you must have write access to the directory. **Default:** `${win32.LocalAppdata}/Fortify`

Azure DevOps Server Configuration Property

The property for the Azure DevOps Server is stored in the `TFSconfiguration.properties`. This file is located in the Fortify working directory in the `config\VS<vs_version>-<sca_version>` directory.

Note: The `TFSconfiguration.properties` file is created only after the first time you configure a connection to your Azure DevOps Server from the Fortify Extension for Visual Studio.

The following property is in the `TFSconfiguration.properies` file:

`server.url`

Details: Specifies the Azure DevOps Server location.

Default: none

Shared Configuration Options

This section describes the properties shared by Fortify Static Code Analyzer applications and command-line tools.

Server Properties

Because some values in this file are encrypted (such as proxy user name and password), you must use the scapostinstall tool to configure these properties. For information about how to use the scapostinstall tool, see the *OpenText™ Fortify Static Code Analyzer User Guide*.

Other properties are updated using command-line tools, and standalone applications (such as Fortify Audit Workbench). Fortify recommends that you use these tools to edit the properties in this file instead of editing the file manually.

The following table describes the properties in the `*<tools_install_dir>*/Core/config/server.properties` file.

> **Note:** After you specify the location of the Fortify Static Code Analyzer executable from Fortify Audit Workbench or Fortify Extension for Visual Studio, the location of the properties file changes to `*<sca_install_dir>*/Core/config`.

Property	**Details**
autoupgrade.server	Specifies the automatic update server. This enables users to check for new versions of the Fortify Static Code Analyzer and the Fortify Applications and Tools installer on a Fortify Software Security Center server and run the installer if an update is available. **Default:** `http://localhost:8180/ssc/update-site/installers`
install.auto.upgrade	If set to `true`, enables Fortify Audit Workbench automatic update feature. **Default:** `false`
oneproxy.http.proxy.port	Specifies the proxy server port to access bug trackers. **Default:** none

Property	Details
oneproxy.http.proxy.server	Specifies the proxy server name to access bug trackers. **Default:** none
oneproxy.https.proxy.port	Specifies the proxy server port to access bug trackers through an SSL connection. **Default:** none
oneproxy.https.proxy.server	Specifies the proxy server name to access bug trackers through an SSL connection. **Default:** none
rp.update.from.manager	If set to `true`, updates security content from Fortify Software Security Center instead of from the Fortify Rulepack update server. **Default:** `false`
rulepack.auto.update	If set to `true`, updates security content automatically. **Default:** `false`
rulepack.days	Specifies the interval (in days) between security content updates. **Default:** `15`
rulepackupdate.proxy.port	Specifies the proxy server port to access the Fortify Rulepack update server (`uploadclient.proxy.port` is used if `rp.update.from.manager` is set to `true`). Also see "rp.update.from.manager " above **Default:** none
rulepackupdate.proxy.server	Specifies proxy server name to access the Fortify Rulepack update server (`uploadclient.proxy.server` is used if `rp.update.from.manager` is set to `true`). Also see "rp.update.from.manager " above **Default:** none
rulepackupdate.server	Specifies the Fortify Rulepack update server location. **Default:** `https://update.fortify.com`
rulepackupdate.SocketReadTimeoutSeconds	Specifies the socket read timeout value to use when updating Fortify security content with the fortifyupdate utility.

Property	Details
	Default: 180 seconds
uploadclient.proxy.port	Specifies the proxy server port to access the Fortify Software Security Center server. **Default:** none
uploadclient.proxy.server	Specifies the proxy server name to access the Fortify Software Security Center server. **Default:** none
uploadclient.server	Specifies the URL of the Fortify Software Security Center server. **Default:** `http://localhost:8180/ssc`

Command-Line Tools Properties

The following table describes the properties in the *`<tools_install_dir>`*`/Core/config/fortify.properties` file that are used by the command-line tools.

Property	Details
com.fortify.log.console	Specifies whether logging messages are written to the console. Logging information is always written to the log file. **Default:** `false`

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