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OpenText™ Fortify WebInspect and OAST on Docker

Software Version: 25.2.0
Windows® and Linux® Operating Systems

User Guide

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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 May 13, 2025.

Contents

Preface

Contacting Customer Support

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- Create and manage technical assistance requests
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For more information

For more information about OpenText Application Security Testing products, visit OpenText Application Security.

Product feature videos

You can find videos that highlight OpenText Application Security Software products and features on the Fortify Unplugged YouTube™ channel.

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
25.2.0	Added: • System requirements, formerly documented in the *OpenText™ Application Security Software System Requirements*. See "WebInspect on Docker system requirements" on page 15. Removed: • Configuration content for "ScanCentral DAST mode" and "ScanCentral DAST Utility Service mode." Information for ScanCentral DAST is included in the *OpenText™ ScanCentral DAST Configuration and Usage Guide*.
24.4.0	Updated: • Content related to the Linux version with note regarding Docker compose deployment limitation. See Running the Linux Container in ScanCentral DAST Mode.
24.2.0	Added: • Information related to external SQL Server for Linux image version. See the following topics: ◦ "Optional external SQL Server for CLI and API Modes" on page 31 ◦ "Configuring an external SQL Server using a Docker compose file " on page 32 ◦ "Configuring an external SQL Server using Helm charts" on page 34 Updated: • Licensing information with new LIM URL format. See the following topics: ◦ "Configuring the environment file for CLI and API modes" on

Software Release / Document Version	Changes
	page 20 • "Editing the environment file for Linux" on page 27 • "Running Fortify WebInspect on Docker Windows version with Fortify OAST" on page 49
23.2.0	Added: • Content for updating SecureBase in containers. See "Updating SecureBase in the container" on page 36. Updated: • Docker image version numbers.

Chapter 1: Fortify WebInspect and OAST on Docker

OpenText engineers have created OpenText DAST (Fortify WebInspect) images that are available for download on the Docker® container platform. Microsoft Windows® and Red Hat® image versions are available. For more information about available versions, see "Using the WebInspect Docker images" on page 18.

Fortify OAST

OpenText engineers have created an out-of-band application security testing (OAST) server image that is available for download on the Docker® container platform. The image enables you to configure local DNS service and is intended for use in networks that lack an Internet connection.

Tip: By default, Fortify WebInspect build 21.2.0.117 (or later) or Fortify WebInspect on Docker® 21.2.0.118 (or later) use the OpenText public OAST server. For networks that have Internet access, configuring a local OAST infrastructure is not necessary.

Important! You must use the OpenText™ Fortify OAST image with Fortify WebInspect build 21.2.0.117 (or later) or Fortify WebInspect on Docker® 21.2.0.118 (or later). Only these versions of Fortify WebInspect support Fortify OAST.

What is Docker?

Docker® is a platform that facilitates creating, deploying, and running applications. Developers can package their application and all dependencies, including the platform and all its dependencies, into one logical package called a container or image. You can download a Docker® image and run the application contained therein on a virtual machine (VM).

Benefits of Docker

Using a Docker® image makes configuring the various prerequisite dependencies unnecessary, and can reduce the time it takes to deploy an instance of the application.

Docker® is command-line driven, so it is easy to integrate into build processes, making Docker® perfect for automation. As part of an automated build process, you can download a Fortify WebInspect image from the Docker® repository, conduct a scan, and then remove the image from your VM.

For more information about Docker®, visit https://www.docker.com.

Supported Docker versions

This image supports x86_64 Docker® host operating systems only.

Audience

This document is intended for users who are familiar with Fortify WebInspect, in particular its CLI and API, and the OpenText™ Fortify License and Infrastructure Manager (LIM). Users should also have experience installing, configuring, and using Docker®.

Requesting access to Fortify Docker repository

Access to the Fortify Docker® repository requires credentials and is granted through your Docker® ID. To access the Fortify Docker® repository, email your Docker® ID to mfi-fortifydocker@opentext.com.

Setting up Docker

Before you can run Docker® containers, you must set up Docker® according to the process described in the following table.

Stage	Description
1.	Download and install the appropriate Docker® version on the host machine. **Note:** This image supports x86_64 Docker® host operating systems only.
2.	Configure your machine for Docker® containers.
3.	Register and start the Docker® service.

For additional Docker® documentation, see https://docs.docker.com/.

Product name changes

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

Previous name	New name
Fortify Static Code Analyzer	OpenText™ Static Application Security Testing (OpenText SAST)

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

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

Important! To prevent breaking current CI/CD automation, the Microsoft Windows® version of the Fortify WebInspect Docker® image has not been renamed.

Related documents

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

Note: Most guides are available in both PDF and HTML formats. Product help is available within the OpenText DAST product.

All products

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

Document / file name	Description
About OpenText Application Security Software Documentation appsec-docs-n-<*version*>.pdf	This paper provides information about how to access OpenText Application Security Software product documentation. **Note:** This document is included only with the product download.
What's New in OpenText Application Security Software <version>	This document describes the new features in OpenText Application Security Software products.

Document / file name	Description
appsec-wn-<*version*>.pdf	
OpenText Application Security Software Release Notes appsec-rn-<*version*>.pdf	This document provides an overview of the changes made to OpenText Application Security Software for this release and important information not included elsewhere in the product documentation.

OpenText ScanCentral DAST

The following documents provide information about OpenText ScanCentral DAST. These documents are available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-ScanCentral-DAST.

Document / file name	Description
OpenText™ ScanCentral DAST Configuration and Usage Guide sc-dast-ugd-<*version*>.pdf	This document provides information about how to configure and use OpenText ScanCentral DAST to conduct dynamic scans of Web applications.
OpenText™ Fortify License and Infrastructure Manager Installation and Usage Guide lim-ugd-<*version*>.pdf	This document describes how to install, configure, and use the Fortify License and Infrastructure Manager (LIM), which is available for installation on a local Windows server and as a container image on the Docker platform.
OpenText™ Dynamic Application Security Testing and OAST on Docker User Guide dast-docker-ugd-<*version*>.pdf	This document describes how to download, configure, and use OpenText DAST and Fortify OAST that are available as container images on the Docker platform. The OpenText DAST image is intended to be used in automated processes as a headless sensor configured by way of the command line interface (CLI) or the application programming interface (API). It can also be run as an OpenText ScanCentral DAST sensor and used in conjunction with Fortify Software Security Center. Fortify OAST is an out-of-band application security testing (OAST) server that provides DNS service for the detection of OAST vulnerabilities.

OpenText DAST

The following documents provide information about OpenText DAST (Fortify WebInspect). These documents are available on the Product Documentation website at https://www.microfocus.com/documentation/fortify-webinspect.

Document / file name	Description
OpenText™ Dynamic Application Security Testing Installation Guide dast-igd-<*version*>.pdf	This document provides an overview of OpenText DAST and instructions for installing and activating the product license.
OpenText™ Dynamic Application Security Testing User Guide dast-ugd-<*version*>.pdf	This document describes how to configure and use OpenText DAST to scan and analyze Web applications and Web services. **Note:** This document is a PDF version of the OpenText DAST help. This PDF file is provided so you can easily print multiple topics from the help information or read the help in PDF format. Because this content was originally created to be viewed as help in a web browser, some topics may not be formatted properly. Additionally, some interactive topics and linked content may not be present in this PDF version.
OpenText™ Dynamic Application Security Testing and OAST on Docker User Guide dast-docker-ugd-<*version*>.pdf	This document describes how to download, configure, and use OpenText DAST and Fortify OAST that are available as container images on the Docker platform. The OpenText DAST image is intended to be used in automated processes as a headless sensor configured by way of the command line interface (CLI) or the application programming interface (API). It can also be run as an OpenText ScanCentral DAST sensor and used in conjunction with Fortify Software Security Center. Fortify OAST is an out-of-band application security testing (OAST) server that provides DNS service for the detection of OAST vulnerabilities.
OpenText™ Fortify License and Infrastructure Manager Installation and	This document describes how to install, configure, and use the Fortify License and Infrastructure Manager

Document / file name	Description
Usage Guide lim-ugd-<*version*>.pdf	(LIM), which is available for installation on a local Windows server and as a container image on the Docker platform.
OpenText™ Dynamic Application Security Testing Tools Guide dast-tgd-<*version*>.pdf	This document describes how to use the OpenText DAST diagnostic and penetration testing tools and configuration utilities packaged with OpenText DAST and Fortify WebInspect Enterprise.
OpenText™ Dynamic Application Security Testing Agent Installation and Rulepack Guide dast-agent-igd-<*version*>.pdf	This document describes how to install the OpenText DAST Agent and describes the detection capabilities of the OpenText DAST Agent Rulepack Kit. OpenText DAST Agent Rulepack Kit runs atop the OpenText DAST Agent, allowing it to monitor your code for software security vulnerabilities as it runs. OpenText DAST Agent Rulepack Kit provides the runtime technology to help connect your dynamic results to your static ones.

WebInspect on Docker system requirements

The following table lists the host OS requirements for WebInspect on Docker®.

Package	Versions	Notes
Microsoft Windows®	Microsoft Windows Server® 2019	The Microsoft Windows® version supports the process isolation runtime mode.
Red Hat®	9.x (x86_64)	The Linux® version supports conducting scans of gRPC APIs.

Follow Docker® recommendations for the Docker® engine version to use for these versions of Microsoft Windows® and Red Hat® images.

Notes on image databases

SQL Server Express is the default database for the WebInspect images. There is a 10 GB scan database limit.

Hardware requirements

OpenText recommends that you install WebInspect on Docker® on a host that conforms to the supported components listed in the following table and configure the container to use these resources. OpenText does not support beta or pre-release versions of operating systems, service packs, and required third-party components.

Component	Requirement	Notes
Processor	2.5 GHz quad-core or faster	Complex applications might benefit from additional cores.
RAM	16 GB	Complex applications might benefit from additional memory. OpenText recommends 32 GB of memory to scan with single-page application (SPA) support.
Hard disk	40 GB	Using SQL Express and storing scans locally requires additional disk space per scan.

Fortify OAST system requirements

The following table lists the host OS requirements for Fortify OAST.

Package	Versions
Red Hat®	9.x (x86_64)
Ubuntu®	2004/2204 (x86_64)

Follow Docker® recommendations for the Docker® engine version to use for these versions of Red Hat® and Ubuntu® images.

Hardware requirements

OpenText recommends that you install Fortify OAST on a host that conforms to the supported components listed in the following table and configure the container to use these resources. OpenText does not support beta or pre-release versions of operating systems, service packs, and required third-party components.

Component	Requirement
Processor	Dual-core processor
RAM	4 GB

Chapter 2: Using the WebInspect Docker images

The following paragraphs describe the naming convention of the Fortify WebInspect images on Docker®, known limitations of using the Fortify WebInspect Docker® images, and the operation modes for the images in containers.

Image naming convention

The Fortify Docker® repository uses the following naming convention for the Microsoft Windows® version of the Fortify WebInspect image:

`fortifydocker/webinspect:<version>`

The Fortify Docker® repository uses the following naming convention for the Fortify WebInspect Linux® version image:

`fortifydocker/dast-scanner:<version.linux_os_version>`

For more information about the versions that are available, refer to the Readme file in the fortifydocker/webinspect repository.

Known limitations of WebInspect images

The following known limitations apply when using a Fortify WebInspect Docker® image:

- Currently, the Fortify WebInspect Docker® images do not support Kerberos authentication. Therefore, you cannot conduct a scan on a network that requires Kerberos authentication.
- When using client certificates for authentication on the Fortify WebInspect Linux® versions, only `.pfx` certificates are supported and the certificates must be exportable.

Understanding the operation modes

The Fortify WebInspect images can run in one of three operation modes in a container as described in the following table.

Mode	Description
`0`	**Self-deploy Configuration mode.** Use this mode to unpack the environment file and Docker® compose files needed to configure and run the Linux® versions of the Fortify

Mode	Description
	WebInspect image. **Note:** This mode applies only to the Linux® versions.
1	**WebInspect CLI mode.** Use this mode to conduct scans using options available in the command-line interface. For an entire list of CLI options, see the "Command Line Execution" topic in the *OpenText™ Dynamic Application Security Testing User Guide*.
2	**WebInspect API mode.** Use this mode to conduct scans using the endpoints available in the OpenText DAST (Fortify WebInspect) REST API. After the Docker® container starts, you can navigate to one of the following URLs to browse the Swagger documentation from your local machine: • On Microsoft Windows® – http://<*hostname*>:8083/webinspect/swagger/docs/v1 • On Linux® – http://<*hostname*>:8089/webinspect/swagger/index.html If you map ports from the container to the host machine as shown in the Docker® run command, you can access it using localhost as <*hostname*>. Otherwise, use the IP address of the Docker® host machine.
3	**ScanCentral DAST mode.** (Microsoft Windows® version only) Use this mode to conduct scans from the ScanCentral DAST user interface in OpenText™ Fortify Software Security Center. **Note:** This description is provided for informational purposes only. Configuration for the Microsoft Windows® version is documented in the *OpenText™ ScanCentral DAST Configuration and Usage Guide*.
4	**ScanCentral DAST Utility Service mode.** (Microsoft Windows® version only) Use this mode to run the Fortify WebInspect image as a ScanCentral DAST Utility Service container. **Note:** This description is provided for informational purposes only. Configuration for the Microsoft Windows® version is documented in the *OpenText™ ScanCentral DAST Configuration and Usage Guide*.

Using the Windows version

The Microsoft Windows® image includes the full version of Fortify WebInspect 25.2.0 software, but is intended to be used in automated processes as a headless scanner configured by way of the

command line interface (CLI) or the application programming interface (API).

This release of Fortify WebInspect 25.2 image is available in Microsoft Windows® version 1809.

Important! Before you can run the Fortify WebInspect image, you must install Microsoft update KB4561608 on the host machine. For more information, see https://support.microsoft.com/en-us/topic/june-9-2020-kb4561608-os-build-17763-1282-437af506-e3ef-a8a1-09e7-26cc94e509c7.

The Fortify WebInspect 25.2 image includes the SQL Server 2022 Express edition database.

Pulling a Windows image for API and CLI modes

After starting the Docker® service and requesting access to the private Fortify WebInspect repository on Docker® Hub, you can pull a Microsoft Windows® image of Fortify WebInspect from the Fortify Docker® repository as described in this topic.

To pull the current version of the Fortify WebInspect image:

- In PowerShell, enter the following command:

```
docker pull fortifydocker/webinspect:25.2
```

Configuring the environment file for CLI and API modes

After you download a Fortify WebInspect image from the Docker® repository, you must configure an environment (`.env`) file that defines how the image will operate. For more information, see https://docs.docker.com/compose/env-file.

In the environment file, configure the operation mode, licensing (if required), and options as described in the following sections.

Configuring the operation mode (required)

You must specify a mode for the image. For more information about the modes, see "Understanding the operation modes" on page 18.

In the environment file, specify the operation mode as follows:

```
# WebInspect Container Mode
mode=<number>
```

The following example sets the image to run in WebInspect CLI mode:

```
# WebInspect Container Mode
mode=1
```

Configuring licensing (required for CLI and API modes)

You must configure licensing for the image when running in CLI and API modes. Currently, licensing must be handled by a Fortify License and Infrastructure Manager (LIM). In the environment file, type the following information for your LIM installation to configure licensing for this instance of Fortify WebInspect:

```
# Licensing

limURL=http://<server-url>:<port>

limPool=<LIM_pool>

limPswd=<LIM_password>
```

Note: If using a version of the LIM prior to 24.2.0, the format is `https://<server-url>:<port>/<service-directory>` where:

- *server-url* is the site specified during LIM initialization as the root web site.
- *service-directory* is the directory specified during LIM initialization as the Service Virtual Directory name (the default is “LIM.Service” or "LIM.API").

For more information about using the LIM, see the *OpenText™ Fortify License and Infrastructure Manager Installation and Usage Guide*.

Configuring CLI mode options

You must configure CLI options to use WebInspect CLI mode. You can configure any of the available CLI options as scan arguments in the environment file. For the complete list of CLI options, see the "Command Line Execution" topic in the *OpenText™ Dynamic Application Security Testing User Guide*.

In the environment file, type the following to configure the CLI options to use in the scan. Substitute *<options>* with your specific options:

```
# WebInspect CLI scan options

scanArgs=<options>
```

The following example performs a crawl-only scan of zero.webappsecurity.com and exports the results to the `zero.scan` file:

```
# WebInspect CLI scan options

scanArgs=-u http://zero.webappsecurity.com -c -es zero.scan
```

Sample CLI environment file

The following is a sample environment file for WebInspect CLI mode to run a full audit:

```
#!-- WebInspect Docker Mode. --!
#!-- Sample configuration for CLI mode. --!

# 1 = CLI mode
mode=1

# Licensing
limURL=http://<server-url>:<port>
limPool=<LIM_pool>
limPswd=<LIM_password>

# WebInspect options - for use in scan mode
# Full audit
scanArgs=-u http://zero.webappsecurity.com -es c:\host\zero.scan

# Full audit with macro
#scanArgs=-u http://zero.webappsecurity.com -xd -es c:\host\zero.scan -
macro c:\host\zero_macro.webmacro

# Crawl only
#scanArgs=-u http://zero.webappsecurity.com -es c:\host\zero.scan -c

# Full audit with settings file and reporting
#scanArgs=-u http://zero.webappsecurity.com -s c:\host\Settings.xml -r
Vulnerability -y Standard -f c:\host\Report -gp -es c:\host\zero.scan
```

The full audit with macro, crawl only, and full audit with settings file and reporting examples are commented out in this sample file.

Configuring API mode options

You must configure API options to use WebInspect API mode. To conduct a scan that uses the OpenText DAST (Fortify WebInspect) API, you must provide the host, port, and authentication type parameters for the API server as described in the following table.

Parameter	Description
`RCServerHost`	Specifies the hostname that the WebInspect API Server should listen on. Use `+` for all.

Parameter	Description
`RCServerPort`	Specifies the WebInspect API Server port to listen on.
`RCServerAuthType`	Specifies the WebInspect API Server authentication type. The value can be one of the following: • `None` • `Basic` • `NTLM` • `ClientCert`

In the environment file, provide the details for your OpenText DAST (Fortify WebInspect) REST API using the following parameters:

```
# WebInspect API
RCServerHost=<hostname>
RCServerPort=<port_number>
RCServerAuthType=<auth_type>
```

Sample API environment file

The following is a sample environment file for WebInspect API mode:

```
#!-- WebInspect Docker Mode. --!
#!-- Example configuration for API mode. --!

# 2 = WebInspect API mode
mode=2

# Licensing
limURL=http://<server-url>:<port>
limPool=<LIM_pool>
limPswd=<LIM_password>

# WebInspect API settings
RCServerHost=+
RCServerPort=8083

# RCServerAuthType: None, Basic, NTLM, ClientCert
RCServerAuthType=None
```

What's next?

After you have configured and saved your environment file, you can run the image in a container. Go to "Running the Windows container in CLI and API modes" below.

Running the Windows container in CLI and API modes

This topic provides a sample Docker® run command for the Microsoft Windows® version of WebInspect in the CLI and API modes. The Docker® run command uses CLI options that define the container's resources at runtime. To understand how the Docker® CLI options used in the samples determine how the container is run, see "Understanding the Docker CLI options" below.

Note: If proxy settings are required, see "Using proxy settings in Windows" on the next page.

Sample Docker run command for CLI mode

The following example uses Docker® CLI options to run the container in CLI mode:

```
docker run -d --rm -v c:/scans:c:/host --env-file ScanMode.env --memory=16g
--cpus=4 --name webinspect fortifydocker/webinspect:25.2
```

For more information about image filenames and version numbers, see "Image naming convention" on page 18.

Sample Docker run command for API mode

The following example uses Docker® CLI options to run the container in API mode:

```
docker run -d --rm -p 8083:8083 --env-file APIMode.env --memory=16g --
cpus=4 --name webinspect_api fortifydocker/webinspect:25.2
```

For more information about image filenames and version numbers, see "Image naming convention" on page 18.

Understanding the Docker CLI options

The following table describes the Docker® CLI options used in "Sample Docker run command for CLI mode" above and "Sample Docker run command for API mode" above.

Option	Description
`-d`	Runs the container in the background and displays the container ID.
`--cpus`	Specifies the number of CPUs to allocate to the container. We recommend 2 CPUs.

Option	Description
`--env-file`	Identifies the `.env` file to use. For more information, see "Configuring the environment file for CLI and API modes" on page 20.
`--memory`	Specifies the amount of memory to allocate to the container. We recommend 16 GB.
`-p`	Maps a port inside the container to a port on the host system. **Important!** This option is required when using WebInspect API mode.
`--rm`	Automatically removes the container when it exits.
`-v`	Maps the volume (or folder) from the container to a folder on the host system. Separate multiple folder names with a colon.

Tip: For more information and a complete list of Docker® run options, see https://docs.docker.com/engine/reference/commandline/run.

Using proxy settings in Windows

You cannot pass proxy settings directly to the Microsoft Windows® WebInspect container through command line arguments or in the .env file. However, you can use the following process to use proxy settings for a scan.

Stage	Description
1.	Create a custom WebInspect settings file that includes the proxy settings.
2.	Save the file on the Docker® host machine.
3.	Use the following options: • The `-s` WebInspect CLI option as a scan argument (`scanArgs`) in the .env file to pass the settings file, as shown in the following example: `scanArgs=-u http://zero.webappsecurity.com/ -s c:\host\CustomSettings.xml -es c:\host\zero.scan -xd` • The `-v` Docker® CLI option in the Docker® run command to map the folder with the settings to a folder in the container, as shown in the following example: `docker run -v c:/widocker:c:/host --env-file config.env fortifydocker/webinspect`

Using the Linux version

The Linux® image is available for the Red Hat® Linux® distribution. The image launches the following containers:

- wi application for scan logic (also called a scanner)
- Datastore for scan data
- WebInspect script engine (WISE) for JavaScript execution and Web Macro Recorder macro playbacks
- 2FA server to synchronize two-factor authentication requests (used only if the scan is configured to playback a two-factor authentication login macro). For more information about conducting scans using two-factor authentication, see the following documents:
  - *OpenText™ ScanCentral DAST Configuration and Usage Guide*
  - *OpenText™ Dynamic Application Security Testing User Guide*
  - *OpenText™ Dynamic Application Security Testing Tools Guide*

Process overview for using a Linux version

The Fortify WebInspect Linux® version image uses a Docker® compose YAML file to configure and start the sensor container and its auxiliary containers. An environment file and several Docker® compose file templates are embedded in the scanner image with logic for unpacking the configurations onto the Docker® host. You can then modify the environment file as needed and start the required mode for the sensor container.

The following table describes the process.

Stage	Description
1.	Pull the Docker® image. For more information, see "Pulling a Linux image for API and CLI modes" on the next page.
2.	Unpack the environment file and Docker® compose files. For more information, see "Unpacking the configuration files for Linux" on the next page.
3.	Edit the environment file. For more information, see "Editing the environment file for Linux" on the next page.
4.	Run the image in a container. For more information, see "Running the Linux container in API or CLI mode" on page 29.

Pulling a Linux image for API and CLI modes

After starting the Docker® service and requesting access to the private Fortify WebInspect repository on Docker® Hub, you can pull a Linux® image of Fortify WebInspect from the Fortify Docker® repository as described in this topic.

To pull the current version of the Fortify WebInspect image:

- At the terminal prompt on the Red Hat® Linux® Docker® host machine, enter the following command:

```
docker pull fortifydocker/dast-scanner:25.2.ubi.9
```

Unpacking the configuration files for Linux

An environment file, Helm charts, and a Docker® compose (YAML) file template are embedded in the scanner image. You must use the Docker® run command in Mode 0 to unpack the files and copy them to the configuration directory on the Docker® host. Mode 0 unpacks the files to the configuration directory and displays instructions on how to start the Fortify WebInspect scanner.

To unpack the configuration files:

- At the terminal prompt on the Red Hat® Linux® Docker® host machine, enter the following commands:

```
mkdir -p "$HOME/widocker" && \
docker run -e "WI_MODE=0" -v "$HOME/widocker:/etc/wi/docker-configs" \
--rm fortifydocker/dast-scanner:25.2.ubi.9
```

About the Helm charts

You can use the Helm charts for deployment in Kubernetes. For more information about using Helm deployment, see the `readme.txt` file that is included in the Helm charts.

About the YAML file

The Linux® image includes a `docker-compose.yaml` file that configures and starts the Linux® sensor in Mode 2. For more information about these modes, see "Understanding the operation modes" on page 18.

Advanced users may modify this file with additional configuration changes, such as for more complex network configurations. However, these changes are not described in this document.

Editing the environment file for Linux

To use the scanner in API or CLI Mode, then you must edit the LIM settings in the environment file. You can also change the scanner port that is exposed. The default port setting is `8089`.

Tip: You can locate the environment file at `~/widocker`. A `readme.txt` file in the same location provides instructions on how to configure and run the WebInspect scanner container.

Editing for Mode 1 or 2

To edit the LIM information in the environment file for Mode 1 or 2:

1. At the terminal prompt on the Linux® Docker® host machine, enter the following command:

   ```
   cd ~/widocker
   ```
2. Enter the following command:

   ```
   nano .env
   ```
   The environment file is opened for editing.
3. Locate the following lines:

   ```
   #[5]. License and Infrastructure Manager (LIM):
   # Applicable for WI_MODE 1 and 2
   LIM=http://<HOST_OR_IP:PORT>/Lim.API/
   LIM_POOL_NAME=<NAME>
   LIM_POOL_PSWD=<PASSWORD>
   ```
4. Continue according to the following table:

For this variable...	Provide this information...
`LIM`	The LIM URL, which uses the format `https://<server-url>:<port>`. **Note:** If using a version of the LIM prior to 24.2.0, the format is `https://<server-url>:<port>/<service-directory>` where: • *server-url* is the site specified during LIM initialization as the root web site. • *service-directory* is the directory specified during LIM initialization as the Service Virtual Directory name (the default is "LIM.API").
`LIM_POOL_NAME`	The name of the LIM pool to use for licensing the scanner.
`LIM_POOL_PSWD`	The password for the LIM pool.

For more information about using the LIM, see the *OpenText™ Fortify License and Infrastructure Manager Installation and Usage Guide*.

5. Optionally, if you need to change the scanner port that is exposed, locate in the following line in the `#[2]. Exposed services configuration:` section of the environment file and change the port setting:

   ```
   FORTIFY_SCANNER_EXPOSED_PORT=8089
   ```
6. Optionally, if you are using the Linux® image in conjunction with a local OAST server, locate the following lines and provide the local WebInspect OAST domain name:

   ```
   #[4]. Local Fortify OAST server domain name (optional):
   FORTIFY_LOCAL_OAST_SERVER=
   ```

   For more information about OAST, see "Using the OAST Docker image" on page 40.
7. Save your edits.

Running the Linux container in API or CLI mode

After you have edited the environment file with the required changes for Mode 1 or 2, you can use the Docker® compose file to start the four Linux® containers that comprise the OpenText DAST (Fortify WebInspect) sensor and create the internal communication network for the containers.

To start the containers:

- At the terminal prompt on the Linux® Docker® host machine, enter the following command:

  ```
  docker compose up -d
  ```
  The database, WISE, scanner, and 2FA server containers are started, and the internal communication network is created.

Viewing the running containers

By default, the scanner container name is `widocker-scanner-1`. The prefix `widocker-` is the default directory where the Docker® compose YAML files are unpacked. If you unpack the files to a different directory, the prefix will not be `widocker-`. The suffix `-1` is automatically applied by Docker® to allow multiple instances of the container to be started from the Docker® compose file. OpenText does not support starting the same container multiple times, so the suffix is always `-1`.

To view the running containers:

- At the terminal prompt on the Linux® Docker® host machine, enter the following command:

  ```
  docker ps
  ```
  The list of containers should include the following names:

  ```
  widocker-scanner-1
  widocker-datastore-1
  widocker-wise-1
  widocker-twofa-1
  ```

Viewing the scanner console logs

Optionally, you can check the scanner console logs to troubleshoot issues with the containers.

To check the logs:

- At the terminal prompt on the Linux® Docker® host machine, enter the following command:

  ```
  docker compose logs <container_name>
  ```

Tip: When using the default YAML file, you can use `scanner` as the container name without the prefix or suffix as described in "Viewing the running containers" on the previous page.

```
docker compose logs scanner
```

Using the exposed scanner port for CLI mode

You can use the exposed Fortify WebInspect scanner port number to configure and run scans by way of `wi.exe`. The following example shows how to conduct a scan using `wi.exe` on the scanner container:

```
docker exec <container_name> wi -u <url>
```

For more information about using `wi.exe`, see *OpenText™ Dynamic Application Security Testing User Guide*.

Accessing the scanner Swagger UI

To access the Fortify WebInspect Swagger UI of the scanner container, you must know the IP address for the exposed interface.

To view the IP addresses and locate the interface for the Swagger UI:

1. At the terminal prompt on the Linux® Docker® host machine, enter the following command:

   ```
   ifconfig
   ```
   A list of interfaces appears.
2. Select the IP address for the scanner container.
3. Copy and paste the IP address into a browser using the following format:

   ```
   <ip_address>:<port>/webinspect/swagger/index.html
   ```

For more information about using the Fortify WebInspect Swagger UI, see *OpenText™ Dynamic Application Security Testing User Guide*.

Stopping the Linux containers

When you have finished conducting scans, you can stop the containers and remove them.

To stop the containers:

- At the terminal prompt on the Linux® Docker® host machine, enter the following command:

  ```
  docker compose down
  ```
  The database, WISE, scanner, and 2FA server containers are stopped. The containers and wi_net communications network are removed.

Using proxy settings in Linux

You cannot pass proxy settings directly to the WebInspect Linux® container through command line arguments or in the .env file. However, you can use the following process to use proxy settings for a scan.

Stage	Description
1.	Create a custom WebInspect settings file that includes the proxy settings.
2.	Do one of the following: • Use the OpenText DAST (Fortify WebInspect) API to upload the scan settings with proxy. • Use scan setting overrides that apply proxy settings for the scan. • Copy the scan settings into scanner container as shown in the following example: `docker cp <directory_path>/<scan-settings>.xml widocker-scanner-1:/etc/wi/.widata/shared/Settings` Use the scan settings in the command line as follows: `docker exec widocker-scanner-1 wi -s /etc/wi/.widata/shared/Settings/scan-settings.xml`

Optional external SQL Server for CLI and API Modes

When using the default local SQL express database in CLI and API modes, the sensor creates a separate `*.mdf` database file for each new scan. Creating a separate database for each scan allows multiple scans and avoids the 10 GB limit for a single SQL Express scan database. Additionally, the Docker® engine provides Docker® volumes that help to configure where each volume is stored, and space is only limited by the disk partition size where the Docker® volume is located.

Facts about external SQL Servers

If you feel an external scan database might be needed, consider the following facts when making your determination:

- Each sensor should use its own database on the external SQL Server. A sensor's database should not be used by other sensors. The same best practice applies to the standard WebInspect desktop configuration that uses an external scan database.
- Network latency communication to the external SQL Server might be worse than with the local SQL Server Express and might affect scan duration.

- The external shared SQL Server might be loaded by parallel tasks from other clients, which can cause interferences and adversely affect scan duration.
- The sensor is a light version of Fortify WebInspect, and it does not contain functionality for upgrading scan databases from previous versions. With each sensor using its own database on the external SQL Server, you must manage scan database upgrades manually using an upgrade script from a Fortify WebInspect desktop version.

Options for configuring an external SQL Server

If you decide to use an external SQL Server, you can configure the external SQL Server settings in either the Docker® compose file or the Helm charts. For more information, see the following topics:

- "Configuring an external SQL Server using a Docker compose file " below
- "Configuring an external SQL Server using Helm charts" on page 34

Configuring an external SQL Server using a Docker compose file

When using a Docker® compose file to start the sensor container, you must edit the database settings in the environment file and the Docker® compose (YAML) file for API or CLI mode.

Editing the environment file for an external SQL Server

In addition to the edits described in "Editing the environment file for Linux" on page 27, you must edit the database password in the environment file.

To update the database password:

1. Locate the following line in the `#[3]. Internal services configuration:` section of the environment file and type the remote SQL Server sa password for the setting:

   `FORTIFY_SCANNER_DB_PSWD=<SA_Password>`
2. Save your edits.

Editing the Docker compose file for an external SQL Server

To use the sensor in API or CLI Mode connected to an external SQL Server, then you must edit the `docker-compose.yaml` file.

To edit the Docker® compose file:

1. Locate the local datastore service content and add a number sign (#) at the start of each line to comment out the lines as shown here.

```
version: "3"
services:
    #datastore:
    #    image: ${FORTIFY_SCANNER_DB_IMAGE:-mcr.microsoft.com/mssql/...
    #    restart: unless-stopped
```

```
#    environment:
#      - ACCEPT_EULA=Y
#      - MSSQL_PID=Express
#      - SA_PASSWORD=${FORTIFY_SCANNER_DB_PSWD}
#    networks:
#      - wi_net
#    volumes:
#      - scandata:/etc/wi/.widata/user/ScanData
#    logging:
#      driver: none
```

2. Locate the scanner service environment variables and make the following edits:
   a. Remove the number sign (#) from the start of the line for the `WI_SCANDB` environment variable and edit its arguments as follows:
      - For `Server`, type the IP address or hostname of the external SQL Server.
      - For `Database`, type a database name to be created and used by the sensor.
   b. Add a number sign (#) at the start of the line for the `WI_SQLEXPRESS` environment variable to comment out the line.

```
scanner:
    ...
    environment:
      ...
      #Single shared Scan DB:
      - WI_SCANDB=Server=<IP_Address>;Database=<DB_Name>;User
Id=sa;Password=${FORTIFY_SCANNER_DB_PSWD};
      #Multiple separated MDF Files DB:
      #- WI_SQLEXPRESS=Data Source=datastore;User
Id=sa;Password=${FORTIFY_SCANNER_DB_PSWD};
```

3. Save your edits.

Running the container with an external SQL Server

After you have edited the environment file and the Docker® compose file with the required changes for an external SQL Server, you can use the Docker® compose file to start the Linux® containers.

To start the containers:

- At the terminal prompt on the Linux® Docker® host machine, enter the following command:

  ```
  docker compose up -d
  ```

  The WISE, scanner, and 2FA server containers are started, and the internal communication network is created. The database container is not started because scan data is written to the sensor's database on the external SQL Server.

Configuring an external SQL Server using Helm charts

When using Helm charts to start the sensor container, you must edit the database settings in the `scanner-k8s-config.yml` file.

Editing the configuration file

To edit the `scanner-k8s-config.yml` file:

1. At the terminal prompt on the Linux® Docker® host machine, enter the following commands:

   ```
   cd "$HOME/widocker"
   tree .
   ```

   The commands return a directory structure similar to the following:

   ```
   ├── docker-compose.yaml
   ├── .env
   ├──helm-charts
   │   ├── scanner
   │   │    ├── .helmignore
   │   │    ├── Chart.yaml
   │   │    ├── readme.txt
   │   │    ├── values.yaml
   │   │    └── templates
   │   │         ├── scanner-k8s-config.yml
   │   │         └── scanner-pull-secret.tpl
   │   └── wise-statefulset
   │        ├── .helmignore
   │        ├── Chart.yaml
   │        ├── readme.txt
   │        ├── values.yaml
   │        └── templates
   │             ├── wise-pull-secret.tpl
   │             └── wise-sset.yaml
   └── readme.txt
   ```

2. Enter the following command:

   ```
   nano "./helm-carts/scanner/templates/scanner-k8s-config.yml"
   ```

   The helm chart file is opened for editing.
3. Locate the local datastore container content and add a number sign (#) at the start of each line to comment out the lines as shown here.

```
containers:
      #- name: datastore
      #  image: "{{ index .Values.images.scandb .Values.images.base }}"
      #
      #  imagePullPolicy: {{ .Values.images.pull.policy }}
      #  volumeMounts:
      #  - name: scandata
      #    mountPath: /etc/wi/.widata/user/ScanData
      #  env:
      #  - name: ACCEPT_EULA
      #    value: "Y"
      #  - name: MSSQL_PID
      #    value: "Express"
      #  - name: SA_PASSWORD
      #    valueFrom:
      #      secretKeyRef:
      #        name: "{{ .Values.scanner.name }}-secrets"
      #        key: datastore
```

4. Locate the scanner container environment variables and make the following edits:
   a. Remove the number sign (#) from the start of the line for the `WI_SCANDB` environment variable and edit its arguments as follows:
      - For `Server`, type the IP address or hostname of the external SQL Server.
      - For `Database`, type a database name to be created and used by the sensor.
      - For `Password`, type the SQL Server sa password.
   b. Add a number sign (#) at the start of the line for the `WI_SQLEXPRESS` environment variable to comment out the line.

```
    #Single shared Scan DB:
       - name: WI_SCANDB
         value: "Server=<IP_Address>;Database=<DB_Name>;User
Id=sa;Password=<SA_Password>;"
       #Multiple separated MDF Files DB:
       #- name: WI_SQLEXPRESS
       #    value: "Data Source=127.0.0.1;User Id=sa;Password=$(WI_
SCANDB_SECRET);"
```

5. Save your edits.

Running the container with an external SQL Server

After you have edited the configuration file with the required changes for an external SQL Server, you can run the Helm installation following the instructions in the `helm-charts/readme.txt`.

Updating SecureBase in the container

SecureBase is OpenText's database of adaptive agents, vulnerability checks, and policy information. The database is updated regularly with the latest threats and improvements to vulnerability detection. Each Fortify WebInspect image includes a SecureBase that was up-to-date at the time the image was created. However, you can use the SecureBase Manager CLI tool to ensure that you have the latest content.

Note: You can also use the SecureBase update endpoints in the OpenText DAST (Fortify WebInspect) REST API. For information on how to access the OpenText DAST REST API Swagger UI, refer to the *OpenText™ Dynamic Application Security Testing User Guide*

Important! The SecureBase Manager CLI tool applies only check and policy updates to the database. It does not update the Fortify WebInspect version.

Updating Linux containers

For Linux®, the SecureBase Manager CLI tool is called **sbm** and is included in the scanner container. Therefore, you must use the tool after all required Linux® containers have been started. For more information, see "Running the Linux container in API or CLI mode" on page 29.

To launch the SecureBase Manager CLI tool in Linux®:

- At the terminal prompt on the Red Hat® Linux® Docker® host machine, enter the following command:

  ```
  docker compose exec scanner sbm
  ```

  The SecureBase Manager CLI tool starts and displays available options. For more information, see "Understanding the SecureBase Manager CLI tool options" on the next page.

Use the options as shown in the following syntax:

```
docker compose exec scanner sbm -<option>
```

For example, to check for an updated version of SecureBase, use the following text:

```
docker compose exec scanner sbm -ck
```

If updates are available, then to download and install the updates, use the following text:

```
docker compose exec scanner sbm -up
```

Updating Windows containers

For Microsoft Windows®, the SecureBase Manager CLI tool is an executable file named **SecureBaseManager.exe** and is located in the Fortify WebInspect installation directory. By default, the installation directory is:

```
C:\Program Files\Fortify\Fortify WebInspect
```

Tip: Although the tool is designed for use in a Docker® container, you can also use it in a classic Microsoft Windows® desktop installation.

To launch the SecureBase Manager CLI tool on Microsoft Windows®:

1. At the command prompt, use the `cd` command to change the current working directory to the directory where the tool is installed.
2. Enter the following command:

   ```
   SecureBaseManager.exe
   ```

   The SecureBase Manager CLI tool starts and displays available options. For more information, see "Understanding the SecureBase Manager CLI tool options" below.

Use the options as shown in the following syntax:

```
SecureBaseManager.exe -<option>
```

For example, to check for an updated version of SecureBase, use the following text:

```
SecureBaseManager.exe -ck
```

If updates are available, then to download and install the updates, use the following text:

```
SecureBaseManager.exe -up
```

Understanding the SecureBase Manager CLI tool options

The following table describes the tool options.

Option	Description
`-h`	Displays the help.
`-ck`	Checks for an updated version of SecureBase. This option returns results similar to the following: `* Smartupdate Server : https://smartupdate.fortify.microfocus.com/` `* Engine Version : 4.31.00`

Option	Description
	`` * Last Updated Date : 5/15/2025 21:02:57 * Language Id : 1, (en-us) * Pending Enabled : False * Status : New Updates Available ``` These results are explained as follows: • `Smartupdate Server` – Identifies the OpenText server used for obtaining check and policy updates. • `Engine Version` – Indicates the engine version of the updater application. • `Last Updated Date` – Indicates the date and time the SecureBase was last updated. This information comes from the SmartUpdate server. • `Language Id` – Indicates the language that is currently in use for the local SecureBase content. Language numbers are shown under "-ls" below. • `Pending Enabled` – Indicates whether checks that are pending release should be included in the updated content. • `Status` – Indicates whether the database content is current. Possible values are `New Updates Available` and `Already up to date`.
`-up`	Updates SecureBase.
`-fr`	Disables Docker® interactive mode.
`-ps`	For advanced users only, specifies a proxy server for accessing the SmartUpdate server. Specify the address and port in the following format: `-ps <address>:<port>`
`-pn`	Includes data for checks that are pending release. **Important!** Do not use this option unless instructed to do so by OpenText Support.
`-su`	Specifies the SmartUpdate server to access. Specify the server in the following format: `-su https://<smartupdate.address>/` **Important!** Do not use this option unless instructed to do so by OpenText Support.
`-ls`	Lists the available languages for SecureBase content. This option returns results similar to the following:

Option	Description
	`` ► 1: en-us, English | Installed 2: ja-jp, Japanese | 3: ko-kr, Korean | 4: zh-cn, Simplified Chinese | 5: zh-tw, Traditional Chinese | 6: es-es, Spanish | Installed 7: pt-br, Portuguese | ``` In the preceding example, English and Spanish versions are installed. The ► symbol indicates that English is the version that is currently in use.
`-ln`	Switches SecureBase content to another language. Specify the desired language in the following format: `-ln <Language_number>` Language numbers are shown under "-ls" on the previous page. **Important!** If the desired language has not been downloaded, then you must download a new SecureBase in the target language from the SecureBase server. Depending on your network, it may take up to 30 minutes to complete. During the process, the existing SecureBase is temporarily removed from its default location and replaced with an empty SecureBase. Do not attempt to run any scans until this process has completed. After the language is downloaded and installed, switching between the languages takes very little time.

Chapter 3: Using the OAST Docker image

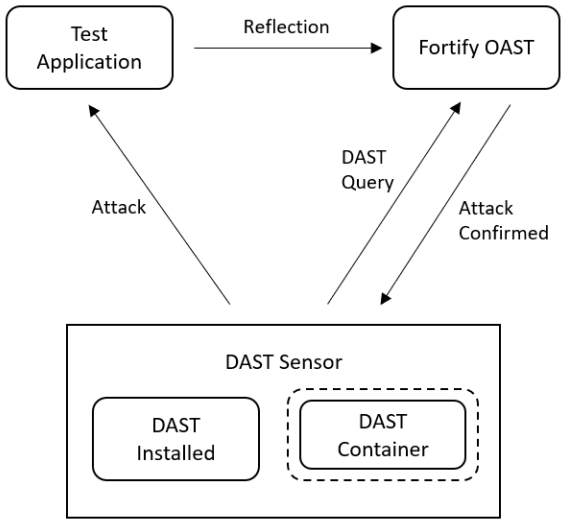
The following paragraphs describe how the Fortify OAST on Docker® image works and how to configure and run it in a container.

How Fortify OAST works

OAST vulnerabilities do not reflect back to OpenText DAST (Fortify WebInspect), making them difficult to detect with traditional DAST scanning. The Fortify OAST server provides DNS service for the detection of out-of-band attack vulnerabilities, such as Log4Shell, Generic Deserialization, and General JNDI Injection. You configure and use the server with a desktop version of OpenText DAST or with WebInspect on Docker®.

With the Log4Shell vulnerability, if OpenText DAST is able to detect the vulnerability, then the application server under test will send a DNS lookup to the Fortify OAST server. OpenText DAST will then query the Fortify OAST server to determine whether it received the DNS lookup. If the Fortify OAST server received it, then the application server is susceptible to the vulnerability.

The following diagram illustrates how OpenText DAST works with Fortify OAST during a scan to detect the Log4Shell vulnerability.



Ubuntu and Alpine

This document assumes that the Ubuntu® 2004/2204 (x86_64) operating system is used on the Docker® host machine for the Alpine image version. In this document, Ubuntu® refers to the Docker® host machine and Alpine refers to the Docker® image.

Understanding the Configuration Process

The following table describes the process of configuring and using Fortify OAST in conjunction with a OpenText DAST scan.

Stage	Description
1.	Prepare a Linux® VM machine and install the appropriate Docker® Engine. This machine will be the host for the Fortify OAST image. **Note:** Follow Docker® recommendations for the Docker® engine version to use for Red Hat® Universal Base Image (UBI) 9.x (x86_64) and Ubuntu® 2004/2204 (x86_64) host operating systems.
2.	Pull the Fortify OAST Docker® image. See "Pulling the Fortify OAST image" on the next page.
3.	Configure settings on the Linux® Docker® host machine to disable the embedded DNS server and use a manual DNS configuration. For Ubuntu®, see "Configuring the Ubuntu Linux Docker host machine" on page 43. For Red Hat®, refer to your Red Hat® documentation for manually configuring the `/etc/resolv.conf` file.
4.	Run the Fortify OAST container. See "Running the OAST container" on page 45.
5.	Do one of the following: • Configure Fortify WebInspect to use the Fortify OAST server. See "Configuring OpenText DAST for OAST" on page 47. • Pass environment variables in the Docker® run command to start your Fortify WebInspect Microsoft Windows® container and use the Fortify OAST server. See "Running Fortify WebInspect on Docker Windows version with Fortify OAST" on page 49. • Edit the environment file for the Linux® images and use the Docker® compose file to start the Linux® container with the local OAST server. See "Editing the environment file for Linux" on page 27 and "Running the Linux container in API or CLI mode" on page 29.
6.	Do one of the following: • Configure the target web application to use the Fortify OAST server. See "Configuring

Stage	Description
	the target application for OAST " on page 51. • Run the target application container with the Fortify OAST server. See "Running the target application in Docker with OAST" on page 52.

About the OAST image

The Fortify OAST image runs on a Linux® VM Machine and is available for the Ubuntu® Linux® distribution and for the Red Hat® Linux® distribution. It provides DNS service for the detection of OAST vulnerabilities, and it is intended for use in networks that lack an Internet connection.

Image naming convention

The Fortify Docker repository uses the following naming convention for the Fortify OAST image:

`fortifydocker/fortify-oast:<version.linux_os_version>`

The latest Alpine image version that is available as of this writing is:

`fortifydocker/fortify-oast:25.2.alpine.3.18`

The latest Red Hat® image version that is available as of this writing is:

`fortifydocker/fortify-oast:25.2.ubi.9`

Note: These image versions include the Alpine or Red Hat® Linux® operating system build number that is used in the image.

For more information about the version that is available, refer to the Readme file in the fortifydocker/fortify-oast repository.

Pulling the Fortify OAST image

After starting the Docker service, you can pull an image of Fortify OAST from the Fortify Docker® repository as described in this topic.

Pulling the Alpine image

To pull the current version of the Fortify OAST image:

- At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following command:

```
docker pull fortifydocker/fortify-oast:25.2.alpine.3.18
```

Pulling the Red Hat image

To pull the current version of the Fortify OAST image:

- At the terminal prompt on the Red Hat® Linux® Docker® host machine, enter the following command:

```
docker pull fortifydocker/fortify-oast:25.2.ubi.9
```

Configuring the Ubuntu Linux Docker host machine

You must determine if the ports needed by the Fortify OAST server are currently in use. If they are, you must edit the default settings in the `resolved.conf` file on the Ubuntu® Linux® Docker host machine to disable the embedded DNS server and use a manual DNS configuration. Afterward, you must reboot the host machine.

Checking port usage

The Fortify OAST server requires the following ports:

- 443/TCP
- 53/TCP
- 53/UDP

By default, the Ubuntu® OS allocates its local DNS resolver to ports 53/TCP and 53/UDP. However, port 443 is not allocated.

To check whether these required ports are used on the Ubuntu® Linux® Docker host machine:

- At the terminal prompt on the host machine, enter the following command:

```
netstat -antu
```

If port 443 is in use, either find the server that is using it and free the port or use an Ubuntu® OS with default settings. If ports 53/TCP and 53/UDP are in use, you can free them as described in "Editing the configuration file to free ports" below.

Editing the configuration file to free ports

Ubuntu® 20.04 may allocate 53/TCP and 53/UDP ports by default for the `systemd-resolved` system service that provides network name resolution on the local DNS server. You can reconfigure them in the `resolved.conf` file.

To edit the configuration file:

1. At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following command:

   ```
   sudo nano /etc/systemd/resolved.conf
   ```

   The following example shows the `resolved.conf` file contents.

   ```
   [Resolve]
   #DNS=
   #FallbackDNS=
   #Domains=
   #LLMNR=no
   #MulticastDNS=no
   #DNSSEC=no
   #Cache=yes
   #DNSStubListener=yes
   ```

2. Remove the number sign (#) from the start of the line for `DNS`.
3. After `DNS=`, enter the IP address for your working primary local network DNS server.
4. Remove the number sign (#) from the front of the line for `DNSStubListener`.
5. Change the `DNSStubListener` setting to `no`.

   The updated `resolved.conf` file should resemble the following example.

   ```
   [Resolve]
   DNS=<ip_address>
   #FallbackDNS=
   #Domains=
   #LLMNR=no
   #MulticastDNS=no
   #DNSSEC=no
   #Cache=yes
   DNSStubListener=no
   ```

6. Save your changes.

Creating a symbolic link

At this point, the Ubuntu® embedded DNS server is disabled. You must configure Ubuntu® Linux® to use manual DNS configuration to resolve hostnames. For manual DNS configuration, Linux® reads settings from `/etc/resolv.conf`. Therefore, you must create a symbolic link to this file from the `systemd` service that provides network name resolution to local applications.

To create the symbolic link:

- At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following command:

```
sudo ln -sf /run/systemd/resolve/resolv.conf /etc/resolv.conf
```

The following table describes the options used in the command.

Option	Description
`-s`	Creates a symbolic link instead of a hard link.
`-f`	Removes existing files from the destination directory.

Rebooting the Ubuntu Linux Docker host machine

After configuring the changes, you must reboot the Ubuntu® Linux® Docker® host machine. Refer to your Ubuntu® documentation for details.

Running the OAST container

After your DNS configurations are complete and the host machine has been rebooted, you can run the OAST container.

Running the Alpine version

To run the container:

- At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following commands:

```
mkdir -p "<host_path>/certs"
docker run -d \
    --name <string> \
    --restart unless-stopped \
    -p 443:443 \
    -p 0.0.0.0:53:53/tcp \
    -p 0.0.0.0:53:53/udp \
    -e "WIH_DOMAIN=<domain_name>" \
    -e "WIH_IPv4_PUBLICIP=<ip_address>" \
    -v "<host_path>/certs:/etc/wihorizon/certs" \
    --log-opt max-size=20m \
    --log-opt max-file=5 \
```

```
    fortifydocker/fortify-oast:25.2.alpine.3.18
```

Tip: The backslash (\) indicates the end of line for the Linux® OS.

Running the Red Hat version

To run the container:

- At the terminal prompt on the Red Hat® Linux® Docker® host machine, enter the following commands:

```
mkdir -p "<host_path>/certs"
docker run -d \
    --name <string> \
    --restart unless-stopped \
    -p 443:443 \
    -p 0.0.0.0:53:53/tcp \
    -p 0.0.0.0:53:53/udp \
    -e "WIH_DOMAIN=<domain_name>" \
    -e "WIH_IPv4_PUBLICIP=<ip_address>" \
    -v "<host_path>/certs:/etc/wihorizon/certs" \
    --log-opt max-size=20m \
    --log-opt max-file=5 \
    fortifydocker/fortify-oast:25.2.ubi.9
```

Understanding the run command options

The following table describes the options used in the run command.

Option	Description
`-d`	Runs the container in the background and prints the container ID.
`--name`	Specifies the name of your Fortify OAST container. Any string is valid. Examples in this table use `wihorizon`.
`--restart unless-stopped`	Restarts the container unless the container is manually stopped.
`-p 443:443`	Publishes the container's main TCP ingress port to the host.
`-p 0.0.0.0:53:53/udp`	Publishes the container's UDP DNS server port to the host.

Option	Description
`-p 0.0.0.0:53:53/tcp`	Publishes the container's TCP DNS server port to the host.
`-e "WIH_DOMAIN=<domain_name>"`	Configures the local domain name. For example: `-e "WIH_DOMAIN=local-fortify-oast.net"`
`-e "WIH_IPv4_PUBLICIP=<ip_address>"`	Configures the local IP address for the Ubuntu® Linux® Docker® host machine that is exposed to the OpenText DAST sensor.
`-e "WIH_API_PORT=8443"`	Optionally, if your security policy prevents services from running on ports below 1024, you may add this option to the command and publish the assigned port using the `-p` option.
`-v "<host_path>/certs:/etc/wihorizon/certs"`	Adds a volume for a Fortify OAST auto-generated certificates directory. This directory safeguards the certificates in case the Fortify OAST container needs to be removed or upgraded. For example: `-v "$HOME/.wihorizon/certs:/etc/wihorizon/certs" \`
`--log-opt max-size=20m`	Limits the Docker® log file size to the specified number of megabytes. This setting prevents log files from consuming too much disc space.
`--log-opt max-file=5`	Limits the number of Docker® log files to the specified number. When the number is reached, Docker® removes the oldest log file and starts a new one.

Configuring OpenText DAST for OAST

You can use the Fortify OAST server with a classic OpenText DAST (Fortify WebInspect) installation or with the Fortify WebInspect on Docker® image. This topic describes the required configuration changes to support the Fortify OAST server with a classic installation. For information using Fortify

OAST with the Fortify WebInspect container, see "Running Fortify WebInspect on Docker Windows version with Fortify OAST" on the next page.

Configuring access to the Fortify OAST server

You must configure either your network or your sensor to provide access to the Fortify OAST server.

To configure access, do one of the following:

- Add the domain name that you configured for the `WIH_DOMAIN` option to your local DNS server.
- Edit the host file on the OpenText DAST machine to point to the Docker® host IP address that you configured for `WIH_PUBLICIP` option.

For more information, see "Running the OAST container" on page 45.

Verifying access to the Fortify OAST server

Verify that the Fortify OAST server works on the OpenText DAST machine.

To verify access:

- In PowerShell on the sensor machine, enter the following command:

  `nslookup 00000000-0000-0000-0000-000000000000.<WIH_DOMAIN> <WIH_DOMAIN>`

  Using the example from "Running the OAST container" on page 45, the command would be as follows:

  ```
  nslookup 00000000-0000-0000-0000-000000000000.local-fortify-oast.net
  local-fortify-oast.net
  ```

  If the Fortify OAST server works, you should see `127.0.0.1` as the resolved address, as shown in the following example:

  ```
  Server:         local-fortify-oast.net
  Address:        <WIH_IPv4_PUBLICIP>#53

  Name:   00000000-0000-0000-0000-000000000000.local-fortify-oast.net
  Address: 127.0.0.1
  ```

Verify the Fortify OAST Docker logs

Verify that the Fortify OAST server is logging its connection to the sensor in the Docker® container log file.

To verify log files:

- At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following commands:

  `docker logs <fortify_oast_container_name>`

  Using the example from "Running the OAST container" on page 45, the command would be as follows:

  ```
  docker logs wihorizon
  ```

  You should see output similar to the following:

  ```
  0/00, 00:00:00  00 | [DNS] Detected correlation GUID 00000000-0000-0000-
  0000-000000000000 p0
  ```

Configure OpenText DAST to use the local domain

You must configure the sensor to use the local domain name that you configured for the `WIH_DOMAIN` option.

To use the local domain:

1. Close all OpenText DAST instances.
2. On the sensor machine, open the command line prompt and navigate to the OpenText DAST installation directory.

   Tip: By default, the installation directory is `C:\Program Files\Fortify\Fortify WebInspect\`.

3. At the command prompt, enter the following command:

   `WIConfig.exe -WIOASTServerAddress "<WIH_DOMAIN>"`

   Using the example from "Running the OAST container" on page 45, the command would be as follows:

   ```
   WIConfig.exe -WIOASTServerAddress "local-fortify-oast.net"
   ```

Running Fortify WebInspect on Docker Windows version with Fortify OAST

You can pass environment variables in the Docker® run command to start your Fortify WebInspect to use the Fortify OAST server that you configured.

To start the Microsoft Windows® sensor with Fortify OAST:

- In PowerShell on the sensor machine, enter the following command:

```
docker run -d `
       --name <container_name> `
       -p 8089:8089 `
       -e 'mode=<number>' `
       -e 'limURL=http://<server-url>:<port>' `
       -e 'limPool=<string>' `
       -e 'limPswd=<string>' `
       -e 'RCServerHost=+' `
       -e 'RCServerPort=<port_number>' `
       -e 'RCServerAuthType=None' `
       -e 'WIOASTServerAddress=<WIH_DOMAIN>' `
fortifydocker/webinspect:25.2
docker exec webinspect cmd /c "echo <WIH_IPv4_ADDRESS> <WIH_DOMAIN> >>
C:\Windows\System32\drivers\etc\hosts"
```

Understanding the run command options

The following table describes the options used in the run command.

Option	Description
`-d`	Runs the container in the background and prints the container ID.
`--name`	Specifies the name of your Fortify WebInspect container. Any string is valid. Examples in this table use `webinspect`.
`-p 8089:8089`	Publishes the Fortify WebInspect REST API port to the host.
`mode`	Specifies the operation mode for the container. For more information, see "Understanding the operation modes" on page 18.
`limURL`, `limPool`, `limPswd`	Configures licensing. For more information, see "Configuring licensing (required for CLI and API modes) " on page 21.
`RCServerHost`, `RCServerPort`, `RCServerAuthType`	Configures access to the Fortify WebInspect API server. For information about the API server options, see "Configuring API mode options" on page 22.
`WIOASTServerAddress`	Configures Fortify WebInspect to use the local Fortify OAST server. Using the example from "Running the OAST container" on page 45, the command would be as follows:

Option	Description
	`-e 'WIOASTServerAddress=local-fortify-oast.net' `

Configuring the target application for OAST

You must configure the target web application to use the Fortify OAST server for DNS lookup requests from Fortify WebInspect or run the target application container with Fortify OAST. This topic describes the required changes to the target application. For information about running the target application container, see "Running the target application in Docker with OAST" on the next page.

Adding the local domain server

Add the local domain name that you configured for the `WIH_DOMAIN` option to the web application network as the primary DNS server or add it as a primary DNS server for the machine that hosts the target web application. In a Linux® OS, for example, you can edit the `/etc/resolv.conf` file by adding the Fortify OAST server as the primary DNS server and using the real network DNS server as secondary:

```
nameserver <WIH_IPv4_ADDRESS>
nameserver <dns_server_ip_address>
```

Verifying application access to the Fortify OAST server

Verify that the Fortify OAST server works for the target web application machine.

To verify access:

- At the terminal prompt on the web application machine, enter the following command:

  `nslookup 00000000-0000-0000-0000-000000000000.<WIH_DOMAIN>`

  Using the example from "Running the OAST container" on page 45, the command would be as follows:

  ```
  nslookup 00000000-0000-0000-0000-000000000000.local-fortify-oast.net
  ```

  If the Fortify OAST server works, you should see `127.0.0.1` as the resolved address, as shown in the following example:

  ```
  Server:         local-fortify-oast.net
  Address:        <WIH_IPv4_PUBLICIP>#53
  ```

```
Name:   00000000-0000-0000-0000-000000000000.local-fortify-oast.net
Address: 127.0.0.1
```

Verify the Fortify OAST Docker logs

Verify that the Fortify OAST server is logging its connection to the target web application in the Docker® container log file.

To verify log files:

- At the terminal prompt on the Ubuntu® Linux® Docker® host machine, enter the following command:

  ```
  docker logs <fortify_oast_container_name>
  ```

  Using the example from "Running the OAST container" on page 45, the command would be as follows:

  ```
  docker logs wihorizon
  ```

  You should see output similar to the following:

  ```
  0/00, 00:00:00  00 | [DNS] Detected correlation GUID 00000000-0000-0000-
  0000-000000000000 p0
  ```

Running the target application in Docker with OAST

If the target web application resides in a Docker® image, you can run the target application container with Fortify OAST.

To start the application with Fortify OAST:

- At the terminal prompt on the web application container, enter the following commands:

```
    docker run -d \
    --name <container_name> \
    --restart unless-stopped \
    -p <port>:<port> \
    --dns <WIH_IPv4_ADDRESS> \
    --dns <ip_address> \
    --dns <ip_address> \
    --log-opt max-size=20m \
    --log-opt max-file=5 \
<docker_repo>/<application_name>:latest
```

Understanding the run command options

The following table describes the options used in the run command.

Option	Description
`-d`	Runs the container in the background and prints the container ID.
`--name`	Specifies the name of your test application container.
`--restart unless-stopped`	Restarts the container unless the container is manually stopped.
`-p <port>:<port>`	Publishes the container's port to the host.
`--dns`	Indicates the various DNS servers to use. The first entry adds the Fortify OAST server as the primary DNS server. Each of the following `--dns` entries are real network DNS servers that respond to all regular nameserver queries so that the container environment can perform all required nslookups.
`--log-opt max-size=20m`	Limits the Docker® log file size to the specified number of megabytes. This setting prevents log files from consuming too much disc space.
`--log-opt max-file=5`	Limits the number of Docker® log files to the specified number. When the number is reached, Docker® removes the oldest log file and starts a new one.

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