FORTRA

Cobalt Strike
Installation Guide

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Before You Begin

Read this section before you install Cobalt Strike.

System Requirements

The following items are required for any system hosting the Cobalt Strike client and/or server components.

Java

Cobalt Strike's GUI client and Team Server require one of the following Java environments:

- Oracle Java 17 or higher
- OpenJDK 17 or higher (see ***Installing OpenJDK* on page 5** for instructions)

> **NOTE:**
> If your organization does not have a license that allows commercial use of Oracle's Java, we encourage you to use OpenJDK 17.

Supported Operating Systems

Cobalt Strike Team Server is supported on a Linux system that meets the Java requirements and has been tested on the following Debian based Linux distributions (other versions may work but have not been tested):

- Debian
- Ubuntu
- Kali Linux

Cobalt Strike Client runs on the following systems:

- Windows 7 and above
- macOS 10.13 and above
- GUI based Linux, such as: Debian, Ubuntu and Kali Linux (other versions may work but have not been tested)

Hardware

In addition to an accepted operating system, the below minimum requirements should be met:

- 2 GHz+ processor
- 2 GB RAM
- 500MB+ available disk space

On Amazon's EC2, use at least a High-CPU Medium (c1.medium, 1.7 GB) instance.

Linux glibc

Be aware that certain Linux distributions may be missing or don't have the correct version of glibc. If you run into that issue, review the Knowledge Article, glibc Missing From Older Linux Distributions, on the Fortra Portal.

Installing OpenJDK

Cobalt Strike is tested with OpenJDK 17 and its launchers are compatible with a properly installed OpenJDK 17 environment.

Linux (Kali 2018.4, Ubuntu 18.04)

1. Update APT:
   ```
   sudo apt-get update
   ```
2. Install OpenJDK 17 with APT:
   ```
   sudo apt-get install openjdk-17-jdk
   ```
3. Make OpenJDK 17 the default:
   ```
   sudo update-java-alternatives -s java-1.17.0-openjdk-amd64
   ```

Linux (Other)

1. Uninstall the current OpenJDK package(s).
2. Download OpenJDK for Linux/x64 at: https://jdk.java.net/archive/.
3. Extract the OpenJDK binary:
   ```
   tar zxvf openjdk-17.0.0.1+2_linux-x64_bin.tar.gz
   ```
4. Move the OpenJDK folder to **/usr/local**:
   ```
   mv jdk-17.0.0.1 /usr/local
   ```

5. Add the following to **~/.bashrc**:
   ```
   JAVA_HOME="/usr/local/jdk-17.0.0.1"
   PATH=$PATH:$JAVA_HOME/bin
   ```
6. Refresh your **~/.bashrc** to make the new environment variables take effect:
   ```
   source ~/.bashrc
   ```

macOS

1. Download OpenJDK for macOS/x64 at: https://jdk.java.net/archive/.
2. Open a Terminal and navigate to the **Downloads/** folder.
3. Extract the archive:
   ```
   tar zxvf openjdk-17.0.2_osx-x64_bin.tar.gz
   ```
4. Move the extracted archive to **/Library/Java/JavaVirtualMachines/**:
   ```
   sudo mv jdk-17.0.2.jdk/ /Library/Java/JavaVirtualMachines/
   ```

The java command will use the highest Java version in /Library/Java as the default.

Windows

1. Download OpenJDK for Windows/x64 at: https://jdk.java.net/archive/.
2. Extract the archive to **c:\program files\jdk-17.0.2**.
3. Add **c:\program files\jdk-17.0.2\bin** to your user's PATH environment variable:
   a. Go to **Control Panel-> System-> Change Settings-> Advanced-> Environment Variables...**.
   b. Highlight **Path** in **User variables for user**.
   c. Press **Edit**.
   d. Press **New**.
   e. Type: **c:\program files\jdk-17.0.2\bin**.
   f. Press **OK** on all dialogs.

Wayland Desktop - Not Supported

Wayland is a modern replacement for the X Windows System. Wayland has made great strides, as a project, and some desktop environments use it as their default window system. Don't let the adoption fool you though. Not all applications or application environments work 100% perfectly on Wayland. There are still bugs and issues to address.

There are bugs in Java (or Wayland) that may cause a graphical Java application to crash, during normal use, when run in a Wayland desktop. These bugs affect Cobalt Strike users. **Fortra does not support the use of Cobalt Strike on Wayland desktops.**

Am I using Wayland?

Type `echo $XDG_SESSION_TYPE` to find out if you're on wayland or x11.

How to disable Wayland on Kali Linux

The latest version of Kali Linux 2017 Rolling uses a Wayland desktop by default. To change this back to X11:

1. Open **/etc/gdm3/daemon.conf** with your favorite text editor.
2. Find the **[daemon]** section.
3. Add **WaylandEnable=false** and reboot your system.

Installing Cobalt Strike

Follow these instructions to install Cobalt Strike.

> **NOTE:**
> The Cobalt Strike **Distribution Package** (steps 1 and 3) contains the OS-specific Cobalt Strike launcher(s), supporting files, and the updater program. It does not contain the Cobalt Strike program itself. Running the **Update Program** (step 4) downloads the Cobalt Strike product and performs the final installation steps.

1. Download a Cobalt Strike distribution package for a supported operating system. (an email is provided with a link to the download)
2. Setup a recommended Java environment. (see ***Installing OpenJDK* on page 5** for instructions)
3. Extract, mount or unzip the distribution package. Based on the operating system perform one of the following.
    a. For Linux:
        i. Extract the **cobaltstrike-dist-linux.tgz**:
        ```
        tar zxvf cobaltstrike-dist-linux.tgz
        ```
    b. For macOS:
        i. Double-click the **cobaltstrike-dist.dmg** file to mount it.
        ii. Drag the **Cobalt Strike** folder to the **Applications** folder.
    c. For Windows:
        i. Disable anti-virus before you install Cobalt Strike.
        ii. Use your preferred zip tool to extract the **cobaltstike-dist-windows.zip** file to an install location.
4. Run the update program to finish the install. Based on the operating system perform one of the following.
    a. For Linux:
        i. Enter the following commands:
        ```
        cd /path/to/cobaltstrike
        ./update
        ```

b. For macOS:
    i. Navigate to the **Cobalt Strike** folder.
    ii. Double-click **Cobalt Strike Update.command**.
        1. If a dialog appears that states "The application "Cobalt Strike" can't be opened.", do the following in macOS:
            a. Open **System Settings**.
            b. Select **Privacy & Settings**.
            c. Go to the **Security** section.
            d. Find the message "Cobalt Strike" was blocked to protect your Mac." and then click **Open Anyway**.
            e. In the dialog that appears, click **Open Anyway** to allow Cobalt Strike to run on your Mac.
c. For Windows:
    i. Navigate to the **Cobalt Strike** folder.
    ii. Double-click **update.bat**.

Make sure you update both your Team Server and client software with your license key. Cobalt Strike is generally licensed on a per user basis. The Team Server does not require a separate license.

After You are Done

Congratulations! Cobalt Strike is now installed. Read the following for additional information and your next steps.

Next Steps

Refer to the user guide for information about starting the Cobalt Strike Team Server and Cobalt Strike Client.