



WebDriverUpdater Tool

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PAMRNI-13-0-2-1

Overview

The WebDriverUpdater tool facilitates the upgrade of Chrome and Edge driver updates. CyberArk plugins and Connection Components use web drivers to connect to web-based targets. For the connection to succeed, the driver and browser versions must be the same. This applies to both Chrome and Edge drivers. The WebDriverUpdater ensures that the CyberArk components are running the same driver and browser versions.

This tool supports both Chrome and Edge in both 32-bit and 64-bit architectures

How it works

The WebDriverUpdater runs every hour and checks the driver and browser versions installed on the CyberArk component machines. If, for some reason, these are not the same, the WebDriverUpdater downloads the latest drivers from the relevant Google and Microsoft sites accordingly. In case there are no drivers detected in the path specified in the component configuration, the WebDriverUpdater downloads the driver version that complies with the browser version.

The WebDriverUpdater uses SSL, verifies the target certificate, and checks the correct domain for Google and Microsoft sites.

Supported versions

Product	Component	Version
Privilege Cloud	Privilege Cloud Connector (Applies to CPM & PSM components)	13.1
PAM Self-Hosted	CPM	11.5 and above
PAM Self-Hosted	PSM	13.2

Considerations

- Where to install the WebDriverUpdater tool:
The WebDriverUpdater can be installed on both the CPM or PSM machines, assuming they are running the required component versions, and the required webapp framework.
- WebDriverUpdater in a hardened vs. non-hardened environment:

- When the WebDriverUpdater runs on a hardened PSM, after updating the drivers, the WebDriverUpdater runs a dedicated script (UpdateAppLockerRule.ps1), to adjust the rules for the drivers' new hash value.
- When WebDriverUpdater runs on a non-hardened PSM or on any CPM, no additional action will be performed.
- Google and Microsoft sites for driver and browser updates:
 - Chrome: <https://chromedriver.storage.googleapis.com>
 - Edge: <https://msedgewebdriverstorage.blob.core.windows.net>

Disclaimer

It is clarified that the drivers that are downloaded by the WebDriverUpdater are subject to their respective terms of use as provided by their vendors, and CyberArk disclaims any and all warranties and liabilities with regards to such drivers and their use by the customer.

To set up the WebDriverUpdater tool

1. Download the WebDriverUpdater from CyberArk marketplace.
2. Install WebDriverUpdater on the CPM or PSM machines, according to WebApp-based connection component or web plugins are used.
3. Ensure Chrome or Edge are installed on the CPM and PSM machines.
4. Verify that the following URLs are not blocked on PSM and CPM servers.
 - a. Chrome Drivers
 - a.1. <https://chromedriver.storage.googleapis.com> – ver 114 and below
 - a.2. <https://storage.googleapis.com> – ver 115 and above
 - a.3. <https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/> - Alternative source for ver 115 and above.
 - a.4. <https://googlechromelabs.github.io> ver 115 and above
 - b. Edge Drivers
 - b.1 <https://msedgewebdriverstorage.blob.core.windows.net/edgewebdriver/>
 - b.2 <https://msedgedriver.microsoft.com> ver 115 and above .Alternative source for ver 115 and above.

5. In **WebDriverUpdater.exe.config** enter the following parameters.

Parameter	Description
PathToPSMDrivers	The storage directory for PSM drivers. Default drivers' location: C:\Program Files (x86)\CyberArk\PSM\Components\ Required: Only for machines with PSM
PathToCPMDrivers	The storage directory for CPM drivers. Default drivers' location: C:\Program Files (x86)\CyberArk>Password Manager\bin\ Required: Only for machines with CPM
CPM and PSM on the same machine	PathToPSMDrivers is required PathToCPMDrivers is required

PathToUpdateAppLockerRuleScript	The path where the UpdateAppLockerRule.ps1 script is located. Default location: C:\Program Files (x86)\CyberArk\PSM\Scripts Note: Required only if only if the PSM machine is hardened, otherwise field should be empty
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6. In each server where create a scheduled task.
 - a. In the **Task Scheduler** application, select **Create Task**.
 - b. In the **General** tab, enter the following:
 - **Name of task:** Enter a name such a Update drivers
 - **Security options:** select **Run** whether user is logged on or not and specify the username and password of the user who will run the task. The task will be run without logging on to the machine.
 - c. In the **Triggers** tab, click **New** and specify the schedule for running the task. Recommended configuration is daily, every 1 hour. In this recommended setting, the maximum time to elapse after the browser was updated is 1 hour until the driver is updated.
 - d. In the **Action** tab, click **New**. Find the application on the machine and select **WebDriverUpdater.exe**.
 - e. Save the task.

After the WebDriverUpdater is installed, the machine registry is updated with the following:

 - HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\App Paths\
 - HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\App Paths\

Logs

Check the WebDriverUpdater activities in the following logs:

- All steps are logged in {{installation}}/WebdriverUpdater/Logs.
- The HTTPS addresses that the WebDriverUpdater calls to download the drivers are logged in the EventViewer.

Errors table

Error name	Error code	Description
SUCCESS	0	The process of updating drivers finished successfully.
INVALID_EMPTY_PATH_TO_DRIVERS	1601	It means that both path to CPM and PSM drivers are empty. Need to file at least one of them
INVALID_PATH_DOES_NOT_EXIST	1602	Path what was specified in configuration doesn't exist. Ensure that path is correct
INVALID_SSL_CERTIFICATE	1605	The certificate from which the drivers are downloaded is invalid (source of drivers)
INVALID_SSL_CERTIFICATE_EXPIRED	1606	The certificate from which the drivers are downloaded has expired

INVALID_APPLOCKER_SCRIPT_FINISHED_WITH_ERRORS	1607	AppLocker script ended with errors. Need to check logs for more information
ENDED_WITH_ERRORS	1608	If more than 1 error occurred, then you will see this error. If chrome ended with error and edge ended with different error this error will appear.
INVALID_CANNOT_GET_URL	1609	Cannot get url to drivers. E.g Chrome need t call API to get proper url to drivers. If lost connection during get url then this error will appear
GENERAL_ERROR	1699	General error to catch unhandled exceptions.