

# YubiKey Token Reprogramming

## Generating YubiKey Device CSV for Authlogics MFA

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## Introduction

This document describes the process for configuring your YubiKey device so that it can be used to authenticate YubiKey generated One Time PIN (OTP) locally and not require access to the internet-based YubiKey servers for validation.

## Consideration

Authlogics Multi-Factor Authentication version 4 and above needs to be installed, configured and fully operationally. Furthermore, users issued with YubiKey devices will need be provisioned to Authlogics PINpass prior to customising and provisioning YubiKeys for local Authlogics server validation.

## YubiKey Personalisation

Authlogics introduced the ability to locally process YubiKey generated one-time codes in Multi-Factor Authentication solution version 4. Before YubiKeys can be used locally and no longer be validated using the YubiKey published servers over the internet, the devices will need to be customised and configured for Authlogics use.

The process defined below will generate a Comma Separated Value (CSV) file which will need to be imported into Authlogics MFA.

If the YubiKey is not customised as per the instructions below, YubiKey OTPs will still be sent to YubiKey hosted servers on the Internet and no local server processing will occur. As such, outbound Internet access to the YubiKey servers will be required from the Authlogics Authentication servers will be required.

## Configuring YubiKey Devices

Customisation is performed through the YubiKey Personalization Tool. We recommend using the Graphical User Interface version and not the command-line tool. This tool can be downloaded from <https://www.yubico.com/products/services-software/download/yubikey-personalization-tools/>



## YubiKey personalization tools

Home / The YubiKey / Services & Software / Downloads / YubiKey Personalization Tools

**Note | This project is no longer under active development. Use YubiKey Manager to configure a YubiKey device.**

Use the YubiKey Personalization Tool to configure the two slots on your YubiKey on Windows, macOS, and Linux operating systems. The tool works with any YubiKey (except the Security Key). You can also use the tool to check the type and firmware of a YubiKey, or to perform batch programming of a large number of YubiKeys. In addition, you can use the extended settings to specify other features, such as to disable fast triggering, which prevents the accidental triggering of the nano-sized YubiKeys when only slot 1 is configured.

(This tool works on all Yubico devices except the FIDO U2F Security Key, the Security Key by Yubico, and the Security Key NFC by Yubico.)

### YubiKey Personalization Tool (preferred) v3.1.25

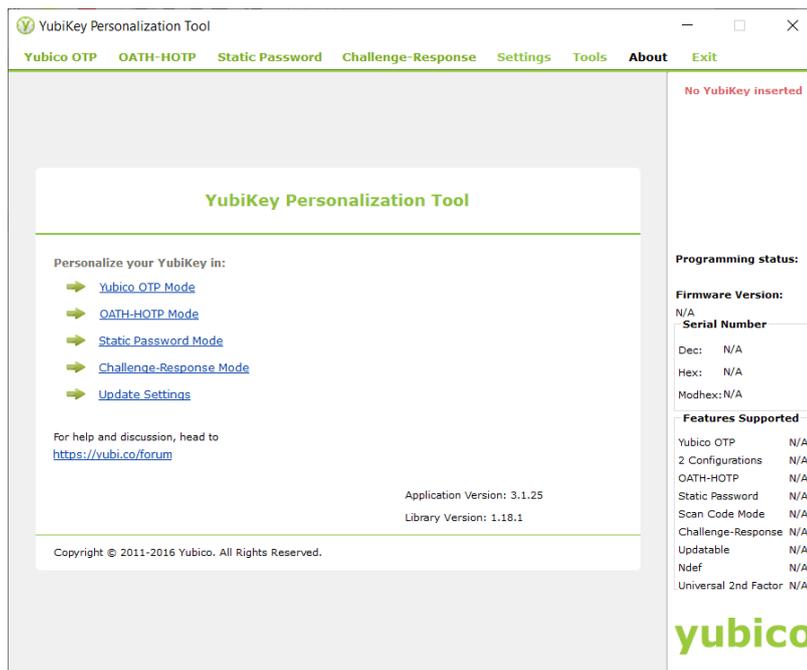
- [Linux Download](#)
- [Mac Download \(.pkg file\)](#)
- [Microsoft Windows Download](#)

### YubiKey Personalization Tool (command line interface) v1.19.0

- [Linux Download](#)
- [Mac Download](#)
- [Microsoft Windows 64-Bit Edition Download](#)
- [Microsoft Windows 32-Bit Edition Download](#)

Once installed and executed, please follow the instructions to customise the YubiKey. To start, ensure that no YubiKey devices are inserted into the workstation.

- (1) Start the YubiKey Personalization Tool and select **Yubico OTP Mode**.



## (2) Select Settings

**Settings**

**General Settings**

Use and enforce customer prefix

Decimal:  ModHex:  Hex:

**Output Settings**

**Output Format**

Tab Public ID Tab OTP Tab Enter

**Output Speed Throttling**

Output Character Rate: Standard

Add a short delay before sending OTP part  Add a short delay after sending OTP part

**Serial # Visibility Settings**

Button at startup (2.2+)

USB descriptor (2.2+/3.2+)

API call (2.2+/3.0+)

**Update Settings**

Enable updating of YubiKey configuration (2.3+/3.0+)

**Static Password Settings**

Enable manual update using the button (2.0+)

**Extended Settings**

Use numeric keypad for digits (2.3+)

Use fast triggering if only slot 1 is programmed (2.3+)

Invert led behaviour (2.4+/3.1+)

**Logging Settings**

Log configuration output Traditional format

**Application Settings**

Enable configuration export and import (experimental)

**Actions**

Settings are saved automatically Update is available for YubiKey 2.3 and later

Restore Defaults Update Settings...

**Programming status:**

**Firmware Version:** N/A

**Serial Number**

Dec: N/A Hex: N/A Modhex: N/A

**Features Supported**

Yubico OTP N/A  
2 Configurations N/A  
OATH-HOTP N/A  
Static Password N/A  
Scan Code Mode N/A  
Challenge-Response N/A  
Updateable N/A  
Ndef N/A  
Universal 2nd Factor N/A

yubico

## (3) In General Settings, enable **Use and enforce customer prefix** and specify a value between **01** and **FF** in the **HEX** field

**Settings**

**General Settings**

Use and enforce customer prefix

Decimal: 1 ModHex: cb Hex: 01

**Output Settings**

**Output Format**

Tab Public ID Tab OTP Tab Enter

**Output Speed Throttling**

Output Character Rate: Standard

Add a short delay before sending OTP part  Add a short delay after sending OTP part

**Serial # Visibility Settings**

Button at startup (2.2+)

USB descriptor (2.2+/3.2+)

API call (2.2+/3.0+)

**Update Settings**

Enable updating of YubiKey configuration (2.3+/3.0+)

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**Firmware Version:** N/A

**Serial Number**

Dec: N/A Hex: N/A Modhex: N/A

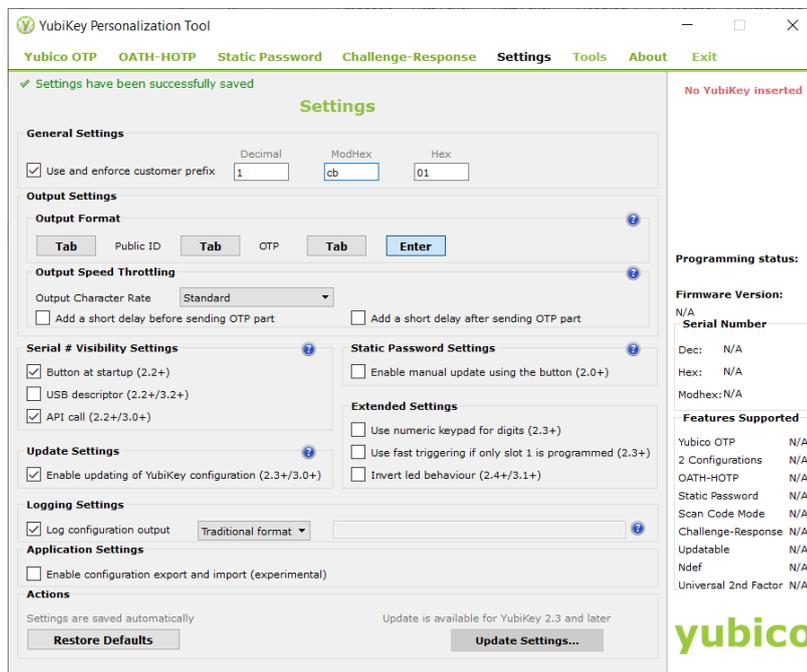
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Challenge-Response N/A  
Updateable N/A  
Ndef N/A  
Universal 2nd Factor N/A

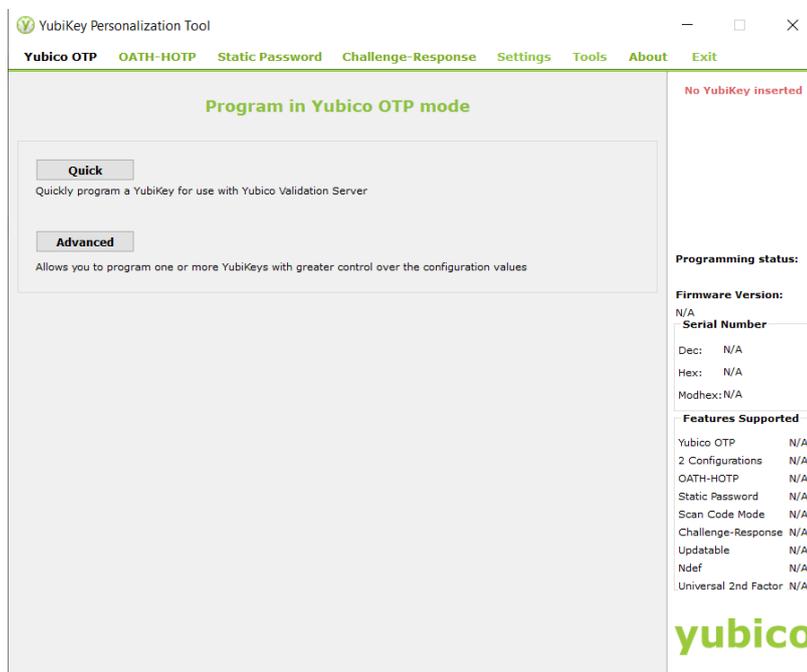
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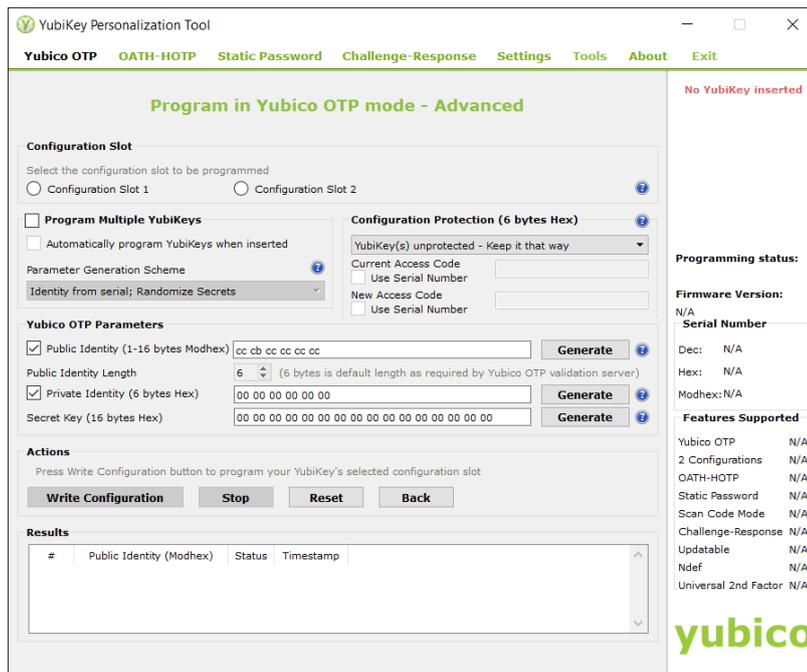
- (4) Once a Hex has been added, click on the Decimal or ModHex fields for the settings to be saved. The message *Settings has been successfully saved* will be displayed in the top left corner.



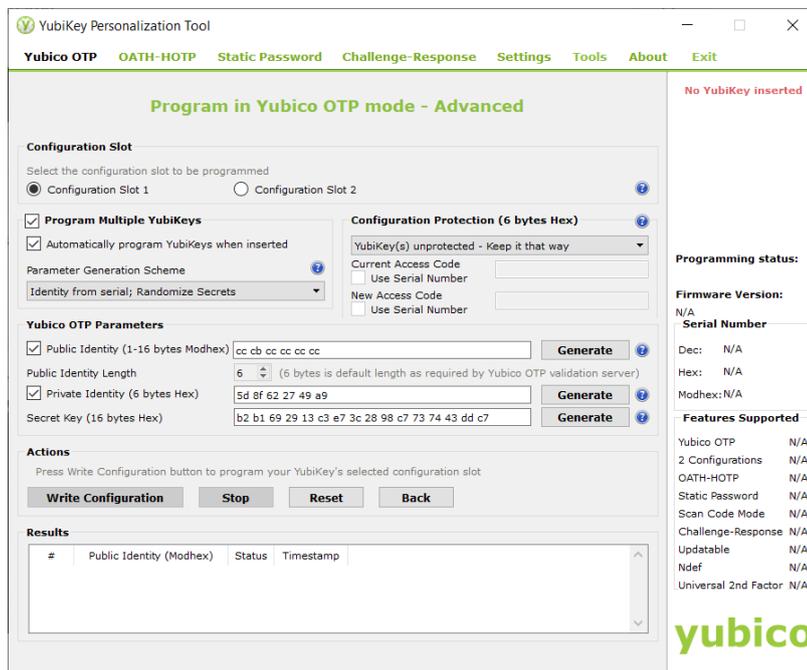
- (5) Select Yubico OTP



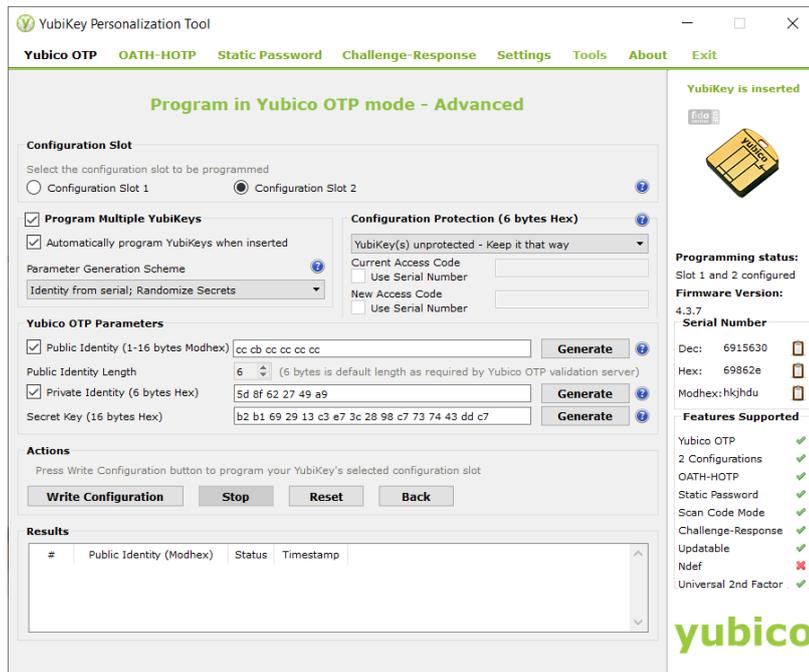
(6) Select **Advanced**



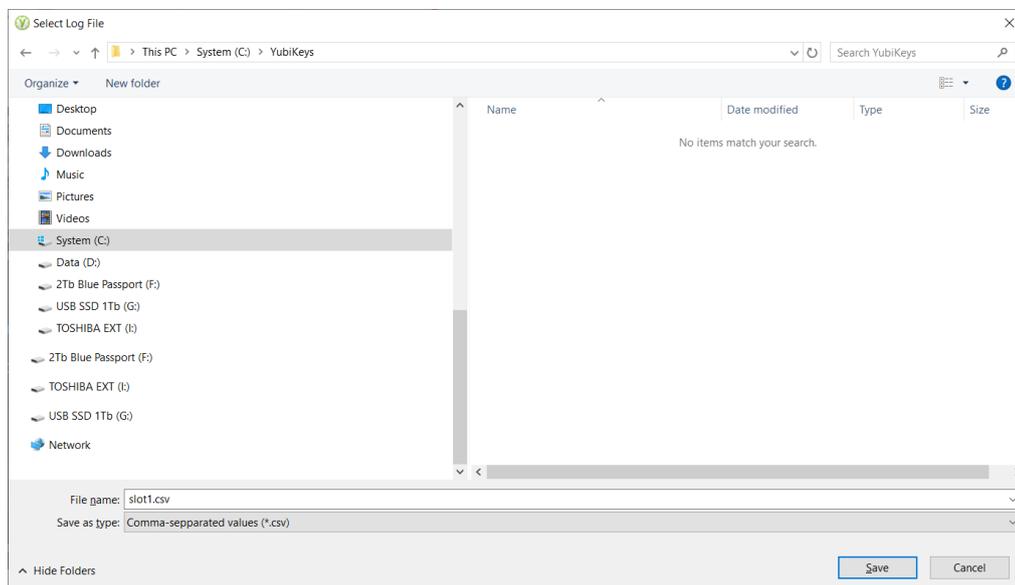
(7) Select **Configuration Slot 1** to re-program the short press slot of your YubiKey device. Enable **Program Multiple YubiKeys** and **Automatically program Yubikeys when inserted**.



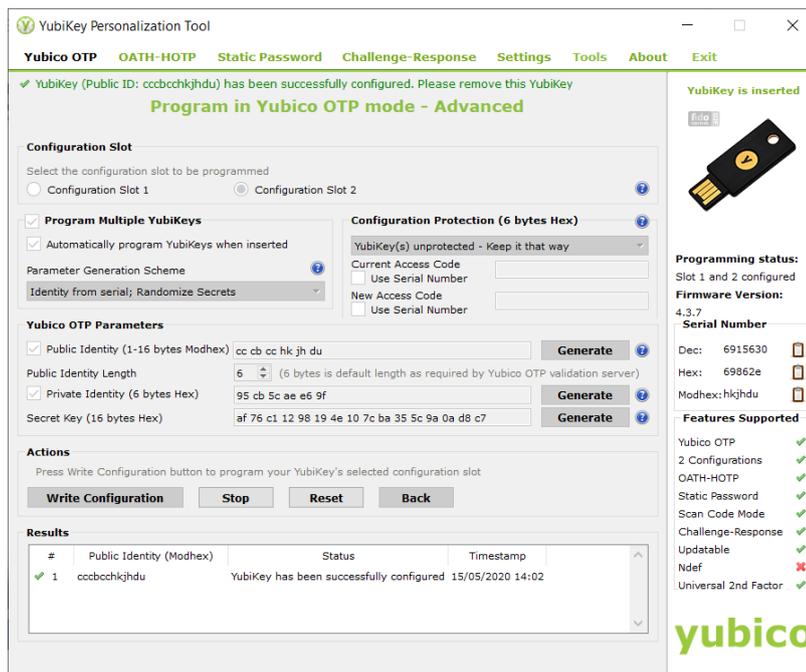
- (8) Insert your YubiKey device into the workstation and select **Write Configuration** under Actions.



When Write Configuration is selected, a CSV file (slot1.csv) will be created and saved in a folder that you select.

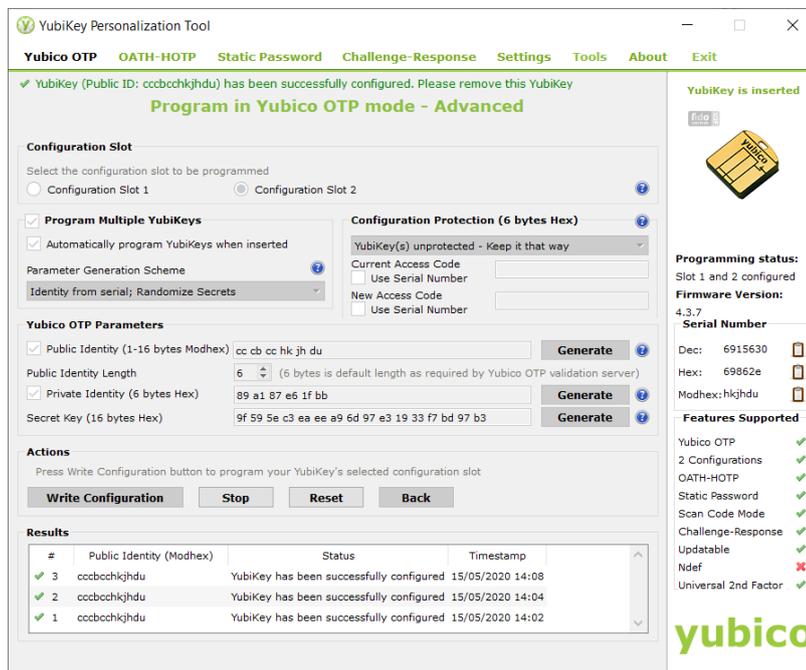


The Results field will reflect the changes to the YubiKey device.



- (9) Remove your YubiKey device and insert the next device. Each device inserted will be reprogrammed with the details written to the CSV file selected in Step 8.

All new devices inserted will be listed in the Results pane.



All your devices will now have been reprogrammed and the CSV file is ready for importing into the Authlogics Authentication Server. Details for importing can be found in the Authentication Server Installation and Configuration Guide:

<https://authlogics.com/download/authentication-server-installation-and-configuration-guide>

