

## **Introduction**

E-stamping application's Print Control functionality has thus far used a Java applet (Print Control Applet – PCA) running in your browser to enable you to print to your local printer. In recent months, major browser developers including Microsoft, Google and Mozilla have announced plans to remove or restrict support for Java applets.

In view of this, a new printing control program called Print Control Proxy (**PCP**) was developed. This PCP is a small Windows-based client-side service program that you download once and run on your windows machine. Like the current print control program which is using java applet, the PCP allows secured documents to be printed in a controlled manner at a printer connected to your machine. PCP also eliminates the dependency on Java's browser plug-in, often considered a security vulnerability.

## **Installation and Usage**

### **1) PCP System Requirements**

The following are the system requirements for the end-user's machine:

**Operating System:** Windows 7 or later

**.NET Framework:** version 3.0 or higher (typically part of the default Windows installation)

**Web browser:** Internet Explorer 10 or higher. Alternatively, the latest version of Mozilla Firefox or Chrome can also be used

**Note:** PCP is not supported in Microsoft Edge browser at the moment. Windows10 users can use PCP with Internet Explorer 11

### **2) Download, install and run**

Upon accessing the application's printing page for the first time in your browser, you will see a message prompting you to download and install the PCP. Follow the instructions and Click on the link to download the PCP. You will be prompted to save (or run) the file. The below figures show the visuals for various browsers.

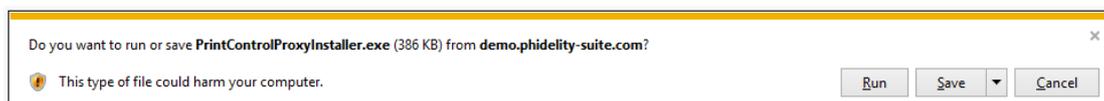


Figure 1: Installing the PCP (Internet Explorer)

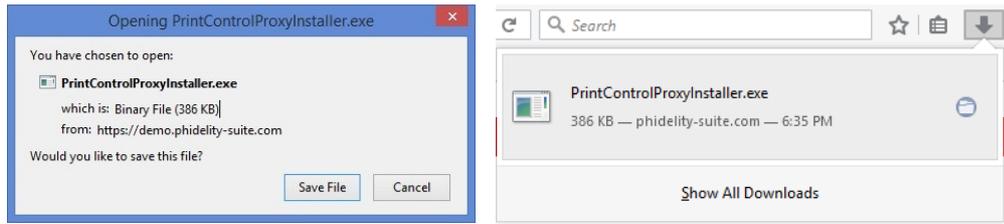


Figure 2: Installing the PCP (Firefox)

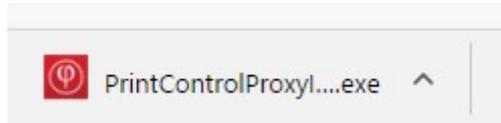


Figure 3: Installing the PCP (Chrome)

Run the installation with administrator privileges.

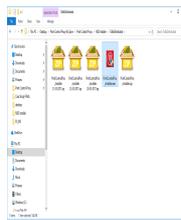


Figure 4: Running the installer

The installer should run and the following screen should appear. Click on **Install** to proceed.

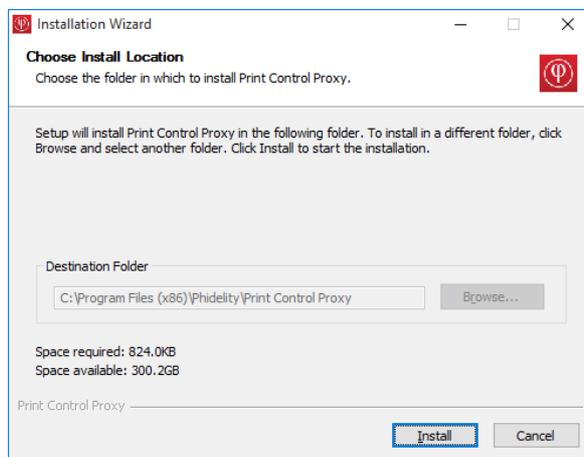


Figure 5: Installation confirmation window.

The installation will run, and you should see the following screen when it completes. Click **Close** to finish the installation.

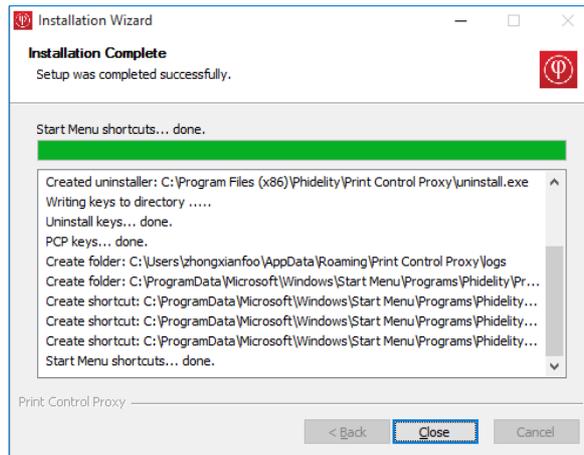


Figure 6: Installation complete.

If alerted by the certificate installation warning, click 'Yes'.

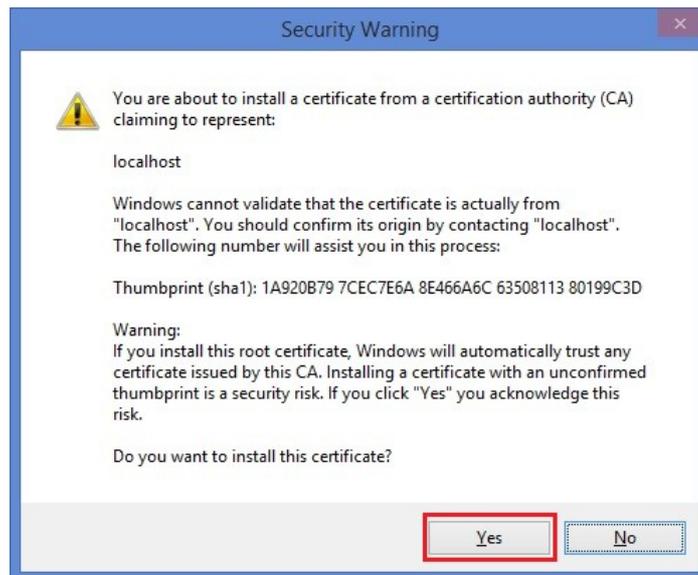


Figure 7: Certificate Installation Warning

A popup indicating successful installation appears.

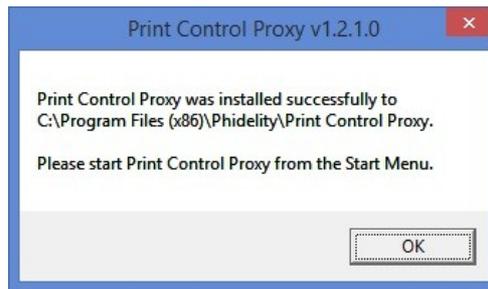


Figure 8: Installation successful

A prompt should appear saying that PCP is running.

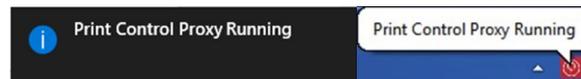


Figure 9: "Print Control Proxy is running" prompts.

The PCP icon will appear in the System Tray at the bottom right of your screen.



Figure 10: PCP running in System Tray

**Note:** Mozilla Firefox users may need to follow steps (a) and (b) below:

(a) Go to <https://127.0.0.1:50000>. Click on **Advanced** and **Add Exception...**

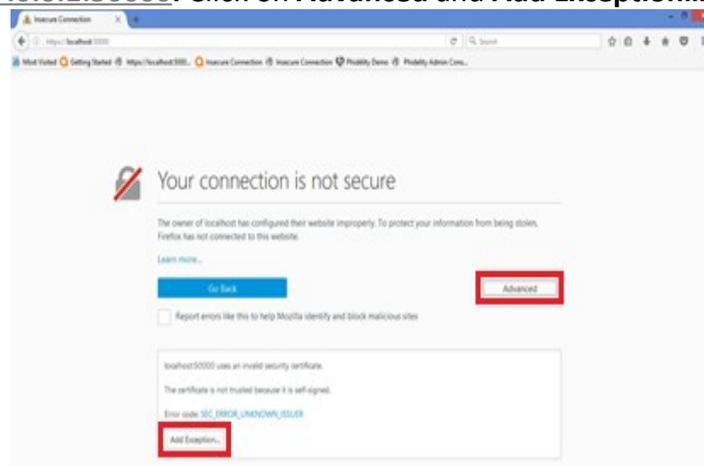


Figure 11: Visit 127.0.0.1 in Mozilla

a. Click on **Confirm Security Exception**



Figure 12: Confirm Security Exception

Finally, to verify that PCP is installed and running, go to <https://127.0.0.1:50000>. You should see the following screen:

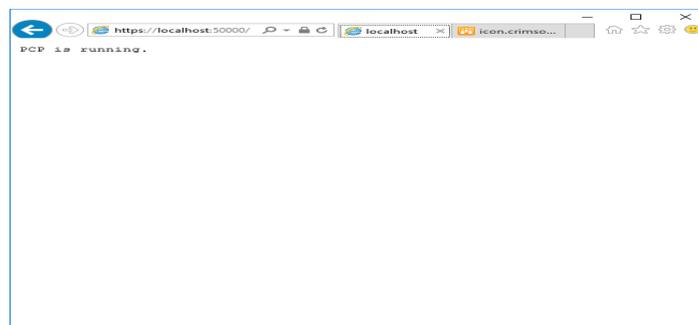


Figure 13: PCP successfully running

**Note:** Refer to the [troubleshooting section](#) if the above screen does not appear.

### 3) Using the PCP

Access the printing page in the application. Once the application's printing page detects that PCP is running, the page will show a list of available printers. To print, select the desired printer from the drop-down box and click Print.



Figure 14: Using the PCP

You can click Refresh at any point to update the list of printers displayed in the drop-down box (this may be useful if you install a new printer).