ColorCert IT Requirements

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Introduction

The ColorCert Ecosystem, comprising of the ColorCert Desktop Client (PC/Mac), ColorCert Scorecard Server, and ColorCert Repository Server, require some special considerations when being deployed in a managed IT environment. This is due to the common use of Firewalls, Proxy Servers, and other networking solutions that exist between the Client Workstation and the Cloud-Based Endpoint. The following list can be used as a general guideline when working with an IT entity to address these situations.

Workstation Specification

Macintosh System Requirements

- Operating Systems: macOS 10.14 (Mojave), macOS 10.15 (Catalina), macOS 11.0 (Big Sur)
- All Current System Updates
- Processor: 1 GHz or Greater
- Free Hard Disk Space: 1 GB or Greater
- Free Memory: 512 MB or Greater
- Display Resolution: 1400 x 900 Pixels or Greater
- Device Connection: USB or Bluetooth
- Broadband Internet Connection

Windows System Requirements

- Operating Systems: Windows 8, Windows 8.1, Windows 10; 32 Bit or 64 Bit
- All Current System Updates and Microsoft Visual C++ 2015 Redistributable
- Processor: 1 GHz or Greater
- Free Hard Disk Space: 1 GB or Greater
- Free Memory: 512 MB or Greater
- Display Resolution: 1400 x 900 Pixels or Greater
- Device Connection: USB or Bluetooth

Supported Languages

- English, French, German, Spanish, Italian, Polish, Portuguese, Finnish, Czech, Japanese, Chinese Simplified, Chinese Traditional, Vietnamese, and Korean

General

- Licenses are tied to individual computers, but the newer dongleless installations may be deactivated and moved to a new workstation by the operator.
- Installation of the ColorCert Client software needs to be done with Administrator privileges for both the software and the related drivers that need to be installed for the eXact instrument and HASP dongle (for legacy dongle-based licenses).
- All current operating system updates should be applied.
- Due to instrument drivers and licensing, thin client installations are not supported.
- TeamViewerQS is included within the ColorCert application folder to facilitate remote support. Note that this version does not require installation or perpetual connection, however, be aware that some IT resources may block its use. If the TeamViewer solution cannot be used or is not allowed, alternate options should be discussed.

Network Directories

- In multi-client installations, it is recommended to map the ColorCert Data folder to a Network Drive location. Often this is implemented as a mapped drive (e.g. Z:\) and selected as the 'Common Root' in the ColorCert Preferences > Files settings.

- The use of a Network Drive is still suggested even in implementations that use the Repository Server solution. Note that it is also acceptable to map specific sub-folders of the ColorCert Data folder hierarchy, keeping some local to the workstation, however reasons to do so are beyond the scope of this document.

- The ColorCert Client user account should have Read/<u>Write</u> access to the ColorCert Data folder. By default, this directory is in the following location:
    - Mac: /Users/Shared/ColorCert Data
    - Windows: C:\Users\Public\Public Documents\ColorCert Data

- The advanced permissions tab may optionally be set up so the operator accounts cannot delete from the ColorCert Data directory. This suppresses the risk that such accounts cannot delete/move core workflow files (e.g. CCJ's, CCR's, CCA's, etc). However this can be very limiting to an efficient workflow.

- The ColorCert Client user account should have Read/<u>Write</u> access to the ColorCert Preferences folder. The preferences folder should NEVER be mapped to a Network Drive. These are workstation-specific and contain licensing data or user authentication data that cannot be moved. For more details on this topic, see the following support article:

    https://www.xrite.com/service-support/where_are_colorcert_preferences_stored

Firewalls & Proxy Servers

- Firewall Exemptions should not reference IP addresses directly for a given Scorecard Server or Repo Server. Since we use load-balancing, the IP addresses can change. There is also a chance that we adjust our internal hosting environment, which also could lead an IP address to change. Since we do not have a comprehensive list of what they may be, or when they may chance, it is strongly advised that the wildcarded domain names be whitelisted for Port 80 (HTTP) and Port 443 (SSL).

Trusted Domains that shall be accessible by all ColorCert Workstations

Domain	Description
*.cc-scorecard.com	ColorCert Scorecard Servers
*.cc-repo.com	Repository Server Base Domain; Typical for Customer
*.pantonelive-portal.com	Repository Server Base Domain; Typical for Brand
*.cloudfront.net	AWS Asset Distribution Service (Dependent on Implementation)
*.s3.amazonaws.com	AWS Asset Distribution Service (Dependent on Implementation)
*.pantonelive.com	PantoneLIVE Service
*.colorcert.com	ColorCert Backend Services
*.wyday.com	ColorCert Licensing Services

- If wildcarded domain names cannot be accommodated, and the domain names need to be fully qualified (FQDN), then you will need to use the implementation-specific address specified for your server instance. Note that the inability to wildcard the cc-scorecard.com and/or cc-repo.com domains may require future IT requests to support external Brand programs under their scorecard server address.

Customer-Specific Service Addresses

PantoneLIVE Server	ws.pantonelive.com
Scorecard Server	*.cc-scorecard.com
Scorecard Asset Server	*.cloudfront.net
Repository Server	*.cc-repo.com
Repository Asset Server	*.cloudfront.net

    *Note: * = Brand Name*

    Example: Acme.cc-Scorecard.com or Acme.cc-repo.com

- If there is a Proxy Server, it should be disengaged for these domains. If this is not allowed, then the proper configuration and credentials for proxy authentication need to be established and configured within the ColorCert Client. It is strongly recommended to avoid these custom configurations and globally allow access if possible (i.e. no proxy authentication configuration required).

- If the Proxy Server, or any other solution, implements SSL inspection/re-encryption, the connection to these domains need to be set to 'Pass-Thru'. This is typical of Zscaler, Websense, etc. Due to the nature of our own encryption and security, these re-encryption options frequently cause problems when connecting to a Scorecard Server or Repository Server. In some cases, the firewall/proxy configuration will also block HTTP Redirection. The Repository Server uses this mechanism to deliver digital assets from AWS. Capturing the URL of a downloaded asset will reveal the unique asset delivery server used for your repository or contact X-Rite support for assistance.

- If you are using PantoneLIVE and have difficulty authenticating, activating, or accessing libraries it is a common sign that there is a firewall/proxy server involved that is performing SSL Packet Inspection. This process varies by vendor. Zscaler is one such proxy product that is known to cause issues. The PantoneLIVE server address must be added to the exception list.
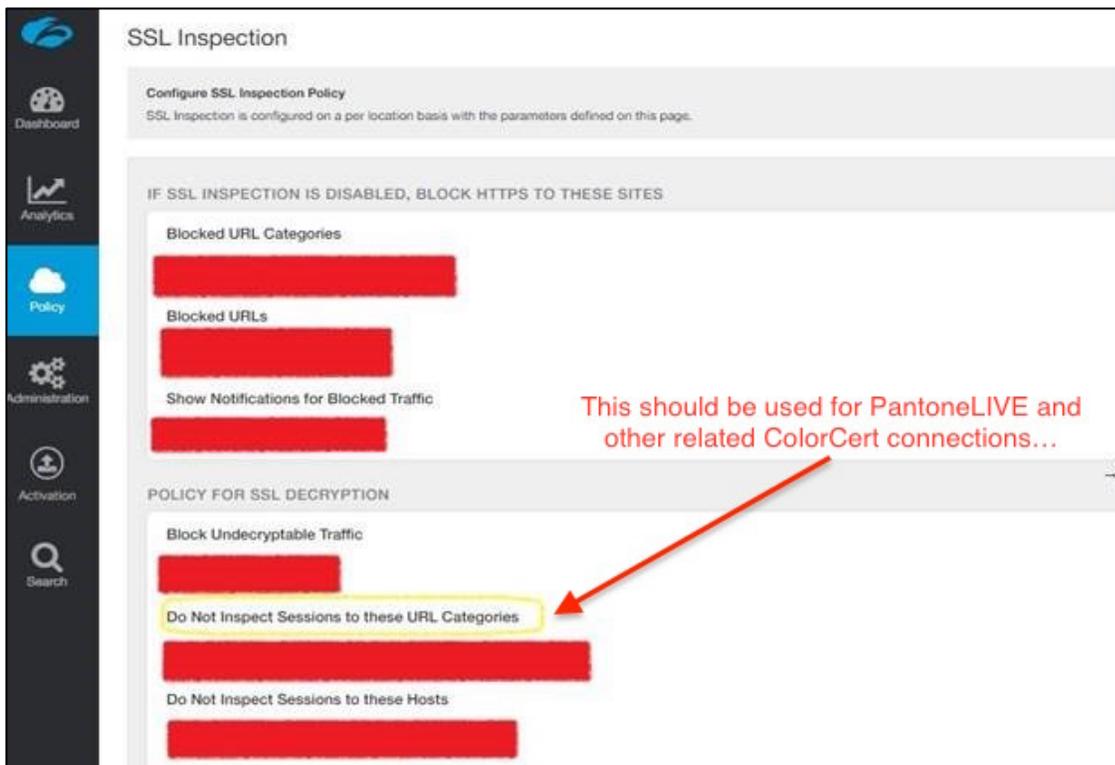
Installation and Licensing

Installing ColorCert is a generally straightforward process. As it is typically installed along with an eXact measurement instrument, this documentation includes steps that address this as well.

eXact Installation

If an eXact is being newly installed on the workstation, it is recommended that you install eXact Manager.

If the eXact or eXact Manager has already been installed, you should bring the software/firmware up-to-date or install it if missing!

This is for two reasons:
1) It installs the device drivers for the eXact USB/Bluetooth connection.
2) It is used to perform firmware updates and diagnostics, which aids in support and troubleshooting.

The current version of eXact Manager can be found at:
http://www.xrite.com/service-support/product-support/portable-spectrophotometers/exact

You will need to download the installer, run it as an Administrator (as required to install drivers, common desktop icons, etc), and complete the guided installation. Once completed, connect the instrument via USB (eXact Manager requires a USB connection). This is a good time to verify whether the firmware needs to be updated; it is recommended to bring the unit up to date if needed.

If the installation requires the eXact to use the Bluetooth connection option, configure that at this time. This document does not cover the specific steps for Mac OS X or Windows to perform this activity. However, it is a worthwhile reminder to those familiar with the process that the connection password for the eXact is 'default' (not '0000' or 'automatic')!

This completes the general process for bringing the eXact online for a given workstation…

ColorCert Installation

The current version of ColorCert can be found at:

http://www.xrite.com/service-support/product-support/formulation-and-qc-software/colorcert-desktop-tools

You will need to download the installer, run it as an Administrator (as required to install drivers, common desktop icons, etc), and complete the guided installation.

For detailed steps, refer to the video guides at the following link:

https://www.youtube.com/playlist?list=PLINrEFMouJNyV_msjEUS8XnS86UyQNhpG

If ColorCert was already installed, only the related applications, libraries, and support files will be affected. Any existing ColorCert Preferences or ColorCert Data folders will remain intact.

ColorCert Licensing

As of August 2019, ColorCert 3.6.3 and newer, has moved to dongleless licenses and is now the default for all new and renewal licenses. **If you are using a legacy dongle-based license, please contact cclic@xrite.com for assistance in updating to the newer dongleless licenses for your ColorCert workstations.**

1. Launch ColorCert.
2. It will then prompt for a "License Activation Code" which is found in the license email sent to the contact provided at time of purchase (e.g. "HR6Z-7JK3-CA3A-G2A1-B5C3-RZXD"). If you cannot locate this information or having trouble with activation, please contact cclic@xrite.com that is included with the license file.
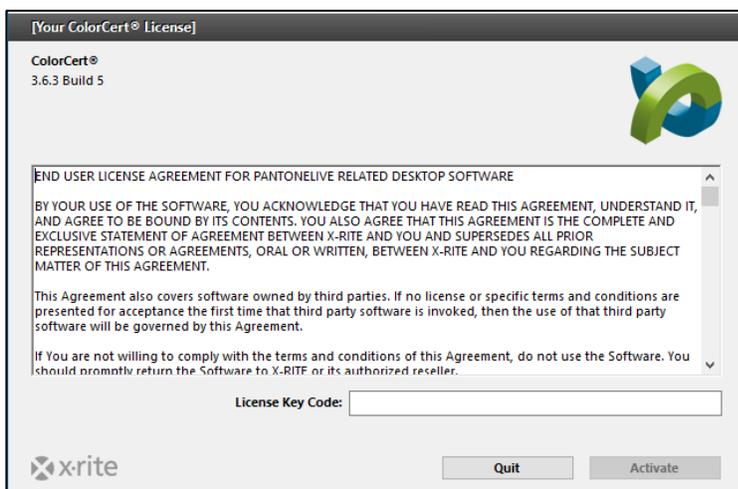
Common Problems

- Cannot activate license is most typically a firewall or proxy blocking access to the wyday.com domain. This should be accessible for best user experience in license management, especially with respect to renewals. However, if this is not permitted, then use the offline activation method.

- If you receive an error: "Cannot write to preferences folder" tends to be group policy permissions that are too restrictive. ColorCert requires full access to the ColorCert Preferences folder.
    - Mac: /Library/Preferences/ColorCert Preferences
    - Windows: C:\ProgramData\ColorCert Preferences

- If you are using a Repo Server and cannot download assets is a common sign that the associated asset server address is being blocked. The specific symptom will show as the ability to authenticate to the Repo Server and see a file listing within ColorCert Desktop, however any attempt to download an asset will result in no result. You will need to request the information regarding the specific asset server tied to the respective Repo Server being used and allow it through the firewall/proxy. Also note that this process involves HTTP redirection, so if IT has any restriction on that process, it can interfere with this functionality as well.