

Proxy Support in Reflect

All components of Reflect use HTTP/1.1 or HTTP/2 to reach external web resources such as the Cloud Sync Service, and the Authentication Service.

While HTTP/1.1 communication, like browser navigation, should automatically be rerouted to the proxy, HTTP/2 requires Reflect to detect and configure its running processes explicitly.

In this document, we will outline how Reflect detects and uses a proxy on Windows (other platforms do not currently support manual proxy configuration).

Proxy Detection

All components will first look at the following system environment variables for proxy values, in this order:

- HTTP_PROXY
- HTTPS_PROXY
- GRPC_PROXY

These are specified as `host:port`, where `host` can be a DNS entry or an IP, for example `http://0.0.0.0:80` (the `http://` prefix is required).

If none of these are found, Reflect will look into the HKCU registry hive for the Internet Settings entries. Those entries are:

- HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings\ProxyEnable
- HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings\ProxyServer

When a Reflect process is running at machine level and cannot access the HKCU registry hive, for example the Windows Sync Service, it will try to read a file from disk in the following location:

- %PROGRAMDATA%\Unity\Reflect\.proxyInfo.json

This file is written when the Reflect Systray Dashboard is launched.

Proxy Status

The Reflect Systray Dashboard will display the detected Proxy Address in the “Local Settings” page. If it does not detect any then “None” will be displayed.

Troubleshooting

- If using HTTP_PROXY environment variables, make sure they are set at the System level, not User, using System Properties -> Environment Variables and adding them to "System Variables". Reboot after changing this list.
- Short living processes do not require special care. As soon as they are launched, they will be configured to use or not use a proxy. But the two long living processes, the Reflect Dashboard and the Windows Sync Service, will require a specific restart sequence in order to pick up a fresh new proxy configuration:
 1. Exit the Reflect Dashboard by right-clicking on its Tray Icon and selecting the “Exit” option in the menu.
 2. Open the Services tab of Task Manager, look for “Unity Reflect” entry, and right-click to select “Stop”, to stop the Windows Sync Service from running.
 3. Launch the Reflect Dashboard again, either from the Start Menu or desktop shortcuts.
 4. In the Task Manager, restart the “Unity Reflect” service by right-clicking and selecting “Start”.