5 Ways to Perform Mobile Network Scanning

An article by Dynamsoft, a TWAIN Working Group Member Company

In a mobile first world, It's self-explanatory to utilize the built-in camera as the capturing device to take pictures of the document. What if you want to access the traditional scanners such as your Brother or Epson scanner as you would the same on a desktop browser? This article summarizes 5 different methods of how you can perform network scanning and a comparison between each method.

- Saned

On Linux, we can share USB-connected image acquisition devices available through an Intranet using Saned. After going through the proper [setup process](#) of server and client configuration,we can scan on any device with SANE(Scanner Access Now Easy) installed like mobile scanning on Android devices using SANEDroid.

- eSCL scanner

Many scanners now support a protocol called eSCL which is a simple XML and HTTP based protocol. It is a vendor-neutral network protocol that allows driverless scanning via ethernet, wireless and USB connected devices. It uses Bonjour for auto-discovery. eSCL is also known as Apple AirScan which is promoted by Apple. Learn more about the eSCL specification by downloading the full documentation on [Mopria.org](#).

- WSD

Another vendor-neutral network protocol similar to eSCL is based on Microsoft's Web Services for Devices framework. It allows network-connected IP-based devices to advertise their functionality and offer these services to clients by using the Web Services protocol.

WSD provides a network plug-and-play experience for Printers, Scanners and File Shares that is similar to installing a USB device.

TWAIN Direct
TWAIN Direct is a vendor agnostic solution that is derived from the TWAIN specification. It supports direct network communication between mobile and desktop applications and scanning devices, including cloud platforms.

- Dynamsoft's Remote scan

Dynamic Web TWAIN runs a local service called Dynamsoft Service to interact with scanners and web clients. The service can run on Windows, Linux and macOS and supports scanner APIs like TWAIN, ICA and SANE.

When the remote scan feature is enabled, other devices on the Intranet can contact the service to scan documents. Dynamic Web TWAIN provides an easy-to-use web SDK to implement a web document scanner.

Comparison Summary

	Platform Support	Remarks
Saned	- Android - Linux	- Supports USB-connected scanners. - It requires running SANE on Android. - It does not support auto-discovery. Users have to input the IP of the server manually.
eSCL scanner	- macOS Air Scan - Linux with the sane-airscan backend	Not possible to directly use eSCL in JavaScript.
WSD	- Windows - Linux with the sane-airscan backend	Uses WS-Discovery
TWAIN Direct	- Windows - Android, and iOS - Linux - macOS	150+ scanning device capabilities - Supports modern, human readable programming languages
Dynamsoft's Remote Scan	- Windows - Linux - macOS - Android (wireless connection only) - iOS	- A driverless scanning solution which runs on end-users' web browsers on any device with no extra software required. - Supports USB-connected scanners as well as network scanners.

[Dynamic Web TWAIN SDK](#) v18.0 is planning to be released in October of 2022 with more supports for mobile network scanning protocals. It adds support for eSCL scanners, proxy service, Bonjour/mDNS Service and Bonjour/mDNS Query Service.