CLEVERTOUCH

CLEVERTOUCH NETWORK REQUIREMENTS

The purpose of this document is to quickly assist IT administrators in understanding the basic network requirements (IP's and ports) for each of the Clevertouch services.

Using the information provided below we hope will help with successfully integrating Clevertouch products onto customers networks.

Over-The-Air (OTA) Update Service
- Server IP: 134.213.213.174
- TCP Port: 80 (HTTP)

NTP Server used on all Clevertouch LUX OS for keeping time in synch
- Server hostname: 2.android.pool.ntp.org
- UDP Port: 123 (NTP)

Cleverstore
The Cleverstore app connects to our servers over port 443 (standard https); The NewRelic and Google Analytics analytic packages use 443 (https) and 80 (http) (but these are not critical for Cleverstore to function)

Cleverstore Hosts:
- prod.sahara-admin.appcarousel.com
- sahara-stage-public.s3.amazonaws.com
- Ports: 80 (HTTP) & 443 (HTTPS)

URL's to whitelist if preferred over the hosts above:
https://prod.sahara-admin.appcarousel.com/api/v1/export-products
https://prod.sahara-admin.appcarousel.com/api/v1/export-categories
https://sahara-stage-public.s3.amazonaws.com

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EShare/Clevershare Service and Applications

Important Note: EShare/Clevershare has to be activated first before it will allow clients to connect and use the content sharing features.

Activation server for Eshare/Clevershare service:

- TCP Port：8001
- DNS：h1.ee-share.com
- IP：74.207.254.152

The Clevertouch (running EShare/Clevershare Server/receiver) and the client that is running the EShare/Clevershare app has to be on the same network subnet as each other, below are the network ports that EShare/Clevershare uses to communicate on the LAN.

TCP Ports:
- 51010 - Video URL receive port
- 52020 - Touch signal transfer port
- 51030 - Video stream port
- 51040 - Protocol handshake port
- 8121 - Control information port

UDP Ports:
- 48689 - Device discovery/search port

Clevertouch Airplay/iMirror service

The Airplay service that is bundled with all Series by Clevertouch is a third-party implementation of Airplay not Apple's, it does not operate on a network exactly the same way as Apple TV does, it uses different TCP ports, these are listed above, it does use mDNS for Airplay discovery purposes (port is listed below). Please ensure that mDNS is enabled on the network/access point/wireless controller (where applicable).

UDP Ports:
- 5353 (mDNS to broadcast Airplay)

Important Notes:
1. Our implementation of Airplay does not have the peer-to-peer capability which allows (later) Apple TV's to be discovered using Bluetooth.
2. The wireless Infrastructure needs to have broadcast service turned on too.

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3. Where possible, it is recommended to connect the Clevertouch using Ethernet to try and ensure EShare/Clevershare and Airplay stability.

How to test and confirm that Clevertouch Airplay service is broadcasting ok:
1. Using a iPhone/OS X/Windows client, setup a hotspot.
2. Connect the Clevertouch to the hotspot.
3. On an iOS device e.g. iPhone/iPad, use Control Center and touch Airplay Mirroring.
4. You should see a device prefixed with "EShare" showing.
5. If "EShare" is showing then this proves that the Clevertouch is broadcasting Airplay service.
6. Touch the broadcast EShare device to mirror to the iOS device to Clevertouch

Clevershare 2nd Generation Service and Applications

Important Note: No matter which Clevershare 2nd Generation software or hardware (dongle) being used the Clevershare 2 receiver app on Clevertouch should be activated first.

Network requirement of activation:
1. TCP Port：80 & 443
2. DNS：linkmsg.seewo.com/seewo-link/api/v1/register
3. IP：Access using DNS

Please Note: If activation fails, you can enter the https://linkmsg.seewo.com/seewo-link/api/v1/register via the Clevertouch Browser to check and test whether or not the network connectivity between Clevertouch and the activation server is ok.

Important Note: Software and hardware solution use the same ports. And the software solution need the IFP and client device on the same LAN.

TCP Ports：
- 7385
- 29736
- 2067
- 39458

The above 4 ports are used as protocol handshake and control signal ports one by one when they are available. Video stream, airplay and touch signal are transferred by dynamic ports.

TOP TIP: Above ports can be tested if there open or not using via "telnet" command on PC or other network port testing tool.

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MDM

There are two areas to be considered for network requirements: -

- **Browser Side** = MDM web portal that the Agent Side communicates to.
- **Clevertouch LUX (Android) Agent Side** = The service running on Clevertouch Android Module which communicates to the Browser Side.

Browser Side:

1. **MDM Application Server:** https://clevertouch.glbth.com – If possible we recommend to whitelist https://*.glbth.com (Port: 443 & dynamic IP)
2. **Location resolve by IP service**: https://pro.ip-api.com
3. **Open Street Map**: https://*.tile.openstreetmap.org
4. **Online chat:** https://static-v.tawk.to
5. **Streaming protocol servers:** Webrtc over UDP *.glbth.com (Port: 443 & dynamic IP)

Clevertouch LUX (Android) Agent Side:

1. **MDM Application Server:** https: //clevertouch.glbth.com – If possible we recommend to whitelist https://*.glbth.com (Port: 443 & dynamic IP)
2. **Streaming protocol servers:** https://*.glbth.com (Port: 443 & dynamic IP)
3. **Push notification system:**
   - **Primary:** Port 443 to clevertouch.glbth.com or preferably *.glbth.com
   - **Secondary:** Should the primary fail or be too slow uses Google's Firebase Cloud Messaging (FCM), for completeness of setup please read the following and allow the three ports either to all public IP's are just the Google ASN ranges as listed below.
   - **The ports to open are:** 5228, 5229, and 5230. GCM typically only uses 5228, but it sometimes uses 5229 and 5230.
   - **Google ASN:**
     - 104.132.0.0/23
     - 104.132.11.0/24
     - 104.132.141.0/24
     - 104.132.34.0/24
     - 104.132.5.0/24
     - 104.132.51.0/24
     - 104.132.7.0/24
     - 104.132.8.0/24
     - 104.133.0.0/24
     - 104.133.2.0/23

Lynx

Please ensure the firewall permits access to the following websites:
1. auto.saharasupport.com
2. registration.saharasupport.com

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Montage network requirements for the Clevertouch Pro
Montage Support URL : https://support.displaynote.com/hc/en-us

Montage will need the following ports open to accept inbound TCP connections: 80, 443, 8080, 7000, 7100, 47000
Montage will also need UDP ports open: 3478, 3479, 5349, 5350, 49152-65535