

# Connectivity Brief - CL4 HTTPS Only

## Overview of Media Player

A digital media player (“player”) is located behind the screen. The player periodically downloads content and playlists from the Internet. The player is connected to the Internet via a data connection on your existing network. The player “calls out” to a central server via secure Internet connection and downloads content. The player loads the content obtained from the connection before displaying the content. The player does not stream content via the Internet. This allows the Information Center to display content even in the event of a network failure by continually playing the most-recent content it has obtained.

## Network Connections

The connection to the player is provided by a CAT5 or CAT6 network drop. This can be installed by our technicians if required. For the player to have access to our servers, it requires an active Internet gateway, with access to the following IP addresses and ports

### Initial Connection

cl4-app.comqionline.com	35.209.94.182	Port 443
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### Discovery

cl4-app01.comqionline.com	35.188.148.156	Port 443
cl4-app02.comqionline.com	173.255.112.30	

### Connection

cl4-app01.comqionline.com	35.188.148.156	Port 443
cl4-app02.comqionline.com	173.255.112.30	

### Content Download Alternative (HTTP and HTTPS)

cl4-con.comqionline.com	34.135.187.102	Port 80 or 443
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### NTP Time Synchronization

pool.ntp.org (One Time)	Location specific	Port UDP 123
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Gradual Slew	Location specific	Port UDP 123
0.ubuntu.pool.ntp.org		
1.ubuntu.pool.ntp.org		
2.ubuntu.pool.ntp.org		
3.ubuntu.pool.ntp.org		

For most facilities, this is not an issue; but for those with tight firewalls, it’s necessary that these ports and IP addresses are open for the system to operate. Note, for NTP gradual slew updates whitelisting 0.ubuntu.pool.ntp.org is mandatory.

## If Your site Does Not Support DHCP:

Although the simplest IP connection is via DHCP, the player can connect via static IP networks. If you facility does not support DHCP, please provide the following information and provide to us or your technician working on the installation for you.

The player does NOT require a public IP and can work using Network Address Translation (NAT). However, you can use a public IP with the player if desired.

- IP Address \_\_\_\_\_
- Subnet \_\_\_\_\_
- Default Gateway \_\_\_\_\_
- DNS Server 1 \_\_\_\_\_
- DNS Server 2 \_\_\_\_\_

## Wireless

The following information is required for 802.11a/b/g/n wireless networks:

## Security

- Wireless Name (SSID): \_\_\_\_\_
- Wireless Key: \_\_\_\_\_

When the player is turned on, it “calls out” to the server via the Internet connection. Over this connection, the media player sends it’s status and inquires about any new content it should download. The media player will stay connected to the server as long as it can. If the connection is lost, the player will wait 30 seconds and attempt to reconnect to the server. The player always “pulls” information from the external server. No external communication will “push” or instigate communication. This ensures that the system and your network are never put at risk.

## Bandwidth

The minimum external Internet bandwidth recommended is 512K (download). Since the player is always connected to the server, it periodically sends status information about its health. At most this information requires about 5kb/sec. However, downloads of the content are much larger depending on the size of the files. Through content management, content is generally downloaded to the player at night but if the bandwidth is small and there’s a lot of content this may take a long time. The player can be set to only use a certain amount of bandwidth if required.

## Connectivity Brief - CL4

Q: Does the server connect to the player or the player connect to the server?	A: <b>The player always connects to the server. No inbound connections are ever made to the player.</b>
Q: What ports do I need to open up?	A: <b>Port 1100 for the initial connection, port 1101 for discovery connection, port 8093 for the main communication connection and port 21(FTP/FTPS), 80(HTTP) or 443 (HTTPS) for content downloads. These are all outbound TCP connections.</b>
Q: Are there any open ports on the player?	A: <b>By default there are no open ports. However, if needed we can enable SSH which opens port 22 on the player.</b>
Q: Can we initiate downloads at a certain times of the day?	A: <b>Yes. A download window can be set for anytime of the day or night.</b>
Q: Can the player limit download speeds?	A: <b>Yes. EnGage will allow you to limit the download speed of any player.</b>
Q: Can the media player work with MAC filtering?	A: <b>Yes.</b>
Q: Do you work with proxy servers?	A: <b>No we do not work with proxy servers.</b>
Q: Which ports and IP addresses does the player connect to?	A: <b>The EnGage player will only connect to the listed IP addresses and ports. The only exception is when a flash application is developed and played that creates it's own specific external connections not controlled by the EnGage player.</b>

EnGage consists of a central database and application servers, fronted by a secure web portal providing access to the administration/IT console. EnGage Players connect to the server cluster over a TCP/IP connection using a proprietary protocol.

