

Newline Display Management is a cloud-based management platform for Newline displays. The product is designed to assist those responsible for initial set-up and ongoing management of displays across organizations, wherever they are. Newline Display Management is comprised of two parts, described below.

Software Application

The first of two parts that forms the product is a software application that runs on Android displays (AndroidOS 5.0 and higher), for the purposes of pairing the device to the cloud management web app.

Web Access requires the below ports to be allowed to give access for managing device's and remote support calls:

- **TCP 80, 443, 3478, 5379, 19305 and 19307**
- **UDP 0-65535**

If there is Layer 7 filtering or proxy with protocol filtering on these ports, then the following protocols will need to be allowed: **HTTP; HTTPS; DTLS; XMPP; Bonjour protocols; SRTP; DNS; STUN; TURN; ICE.**

Android Display Management client, the app is going to access:

- Hostname:** samson.displaynote.com Port: 443
- Hostname:** heavy-duck.rmz.cloudamqp.com Port: 5672
- TCP 80, 443, 3478, 5379, 19305 and 19307; UDP 0-65535**

Web App

The cloud management web app for Newline Display Management allows users to access and configure displays. The web app is supported on Google Chrome and Mozilla Firefox (Windows & OSX).

The web app provides an array of features and functionality for the organization and management of displays, which has 2 main areas:

- **Display list:** For the management and organization of all displays paired to the cloud management account
- **Display page:** For the configuration of an individual display.

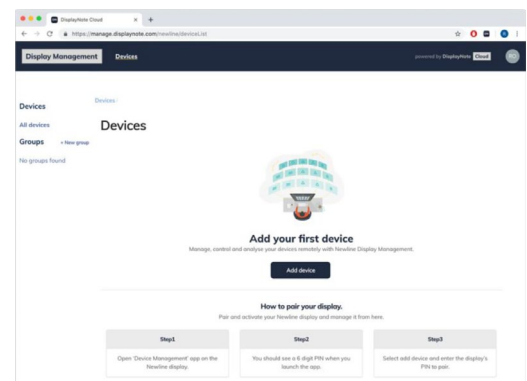
Account Creation

An account is required in order to access the cloud management web app. This can be achieved by accessing the [Newline Display Management's log in and sign up forms.](#)

Adding or Pairing Displays

Also referred to as "adding" a display, pairing a display to the web app is required to use this product, and this can be achieved by:

1. Installing and running the software application on the display will generate a six-digit PIN, to be used on the web app to pair the display.
2. Creating and signing into a Newline Display Management account by accessing the [web app homepage](#), and following on-screen instructions.

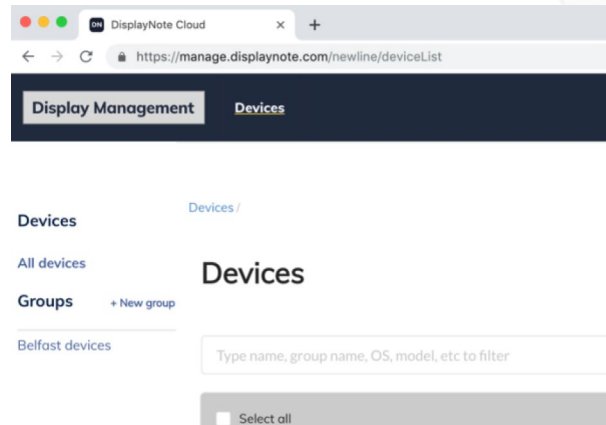


Display List

The display list provides web portal users with a global view of all devices registered with their account. From here, new devices can be added removed, or categorized into groups.

The list of displays is comprised of individual items, each representing a display that can be managed via the web app.

Each display shows the following editable information, on each individual display page: device name, location, group name, power status (on or off), hardware name, operating system version.



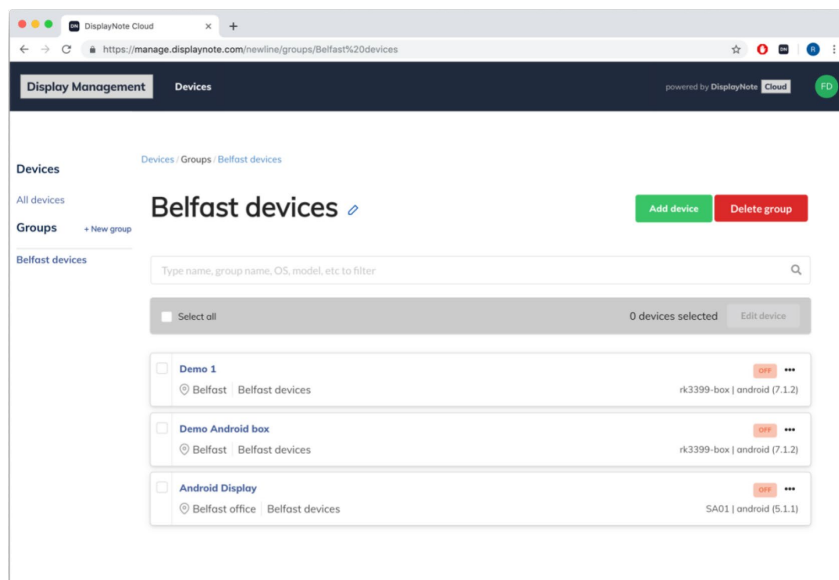
Editing Display Information

When selecting a single display from the list, users will be taken to the display page, where all information about that display can be viewed, and where its settings can be configured. For more information, see “Display page” from the user guide documentation.

When selecting multiple displays from the list, users are offered the possibility to configure all selected displays at the same time

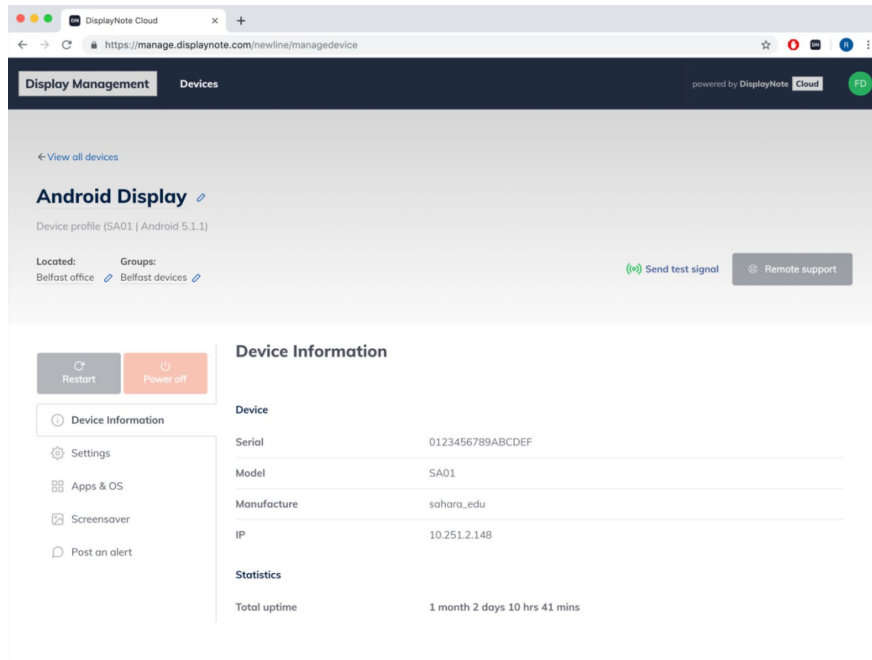
Grouping Displays

Groups are an effective means of categorizing and ordering lists for more streamlined hardware management. These can be created via an option in the sidebar of the display list page, and can be edited or deleted by accessing groups from the sidebar.



Each display registered on the web app provides access to display information and configuration. Individual display pages can be accessed via the device list area. For more information, see “Display List” from the user guide documentation.

The screenshot below shows an individual display page, for a display named “Android Display”. This page can be broken down into the following sections: display overview, support tools, power options, tab navigation and current tab contents.



Display Overview

The display overview contains high level information about the display, such as: display name, profile, location and group.

Send Test Signal

Designed to help with the identification of displays, this tool allows users to send a test signal to the targeted display. The signal – which comes in the form of an on-screen message – will show the name and model of the display.

Remote Support

This tool allows a web app user to make contact with in-room users of the display, by calling them using voice and video on select models. The tool also allows the web app user to take control of the display for a more direct approach to resolving customer support problems.

Note: Web portal users must allow access to microphone and camera in order to make use of the remote support calling tool.

Power Options

Web portal users have the ability to restart and/or power off displays, via options on the display page.

Tab Navigation

The tab navigation provides users access to display information and tools, which are shown in the navigation as: Device information, Settings, Apps & OS, Screensaver, Post an alert.

Device Information: The device information tab provides important details about the display:

1. Serial Number
2. Model
3. Manufacturer
4. IP Address
5. Operating System
6. Language
7. Date/Time
8. Bluetooth
9. Screensaver Status
10. Uptime of device

Settings

The section of the web app allows users to configure the display's general settings, such as:

- Language
- Set the Date and Time,
- Switch Bluetooth On or Off
- Set the device Volume

App & OS

Software can be installed and uninstalled directly onto the targeted display via the web app. Installing software can be achieved by choosing a software APK from the local drive. Apps can be uninstalled via the list of apps installed on the display.

Applications
8 apps installed on this device

| App Name | Version | Action |
|-----------------------|------------|---------------|
| Coalesce | v2.5.0.442 | Uninstall app |
| Display Management | v1.2.3 | Uninstall app |
| Displaynote Broadcast | v1.2.0.9 | Uninstall app |
| Kodi | v17.0 | Uninstall app |
| Montage | v3.2.5.94 | Uninstall app |
| Newline Broadcast | v1.2.0.4 | Uninstall app |
| RestartApp | v1.0 | Uninstall app |
| RestartCoalesceBox | v1.0 | Uninstall app |

Install apps

Updates
Adding a new version of an installed application will update it.

Operating system
OS: Android
OS version: 7.1.2

Screensaver

A multimedia playlist allows users to compile screensavers using a combination of images and videos. Timings between transitions can be managed from the screensaver tab of the web app. The screensaver start time can also be configured using 5 minute increments (i.e. start after the display is idle for 10 minutes) before the screensaver is published

Supported video files include:

- WEBM
- 3GP
- MP4
- MKV
- MOV
- M4V
- MPG

Supported image files include:

- JPG
- PNG
- GIF (will be shown as static)
- WEBP
- BMP

Post an Alert

An information message can be sent to a specific display or a group of displays. The message contains a maximum of 200 characters and can be dismissed by via the targeted display.