

# Sample Screenshots

## Crestron and AMX

Please find of a collection of sample screenshots from x7 programs designed, developed and commissioned during my employment at AVMI:

Company/Client	Location	System Description	Role
1. AVMI	London	Video wall and digital signage	Management and control
2. Investment Bank	London	Multiroom VoIP	Monitoring and diagnostics
3. Private Bank	London	Private banking rooms	Audio distribution control
4. Global Advisory Firm	London	Auditorium video wall	Temperature monitor
5. Global Bank	Data Centre	Central control room video wall	Management and control
6. Global Bank	UK Branch Rollout	Digital signage and LCD groups	Management and control
7. High St Phone Store	London	Digital signage and asset management	Monitoring and diagnostics

I was responsible for all aspects of GUI design, program design, development, test, commission, demonstration and handover to client.

## Logos

Upon leaving AVMI I was asked to remove all identifying names and logos from the screenshots hence the names above have been anonymized and all logos have been removed from the screenshots in this document.

## Personal UI Principles

Simple	Modern	Satisfying	Familiar	Minimal Effort
Intuitive	Ergonomical	Smooth	Conventional	Easy Mental Map

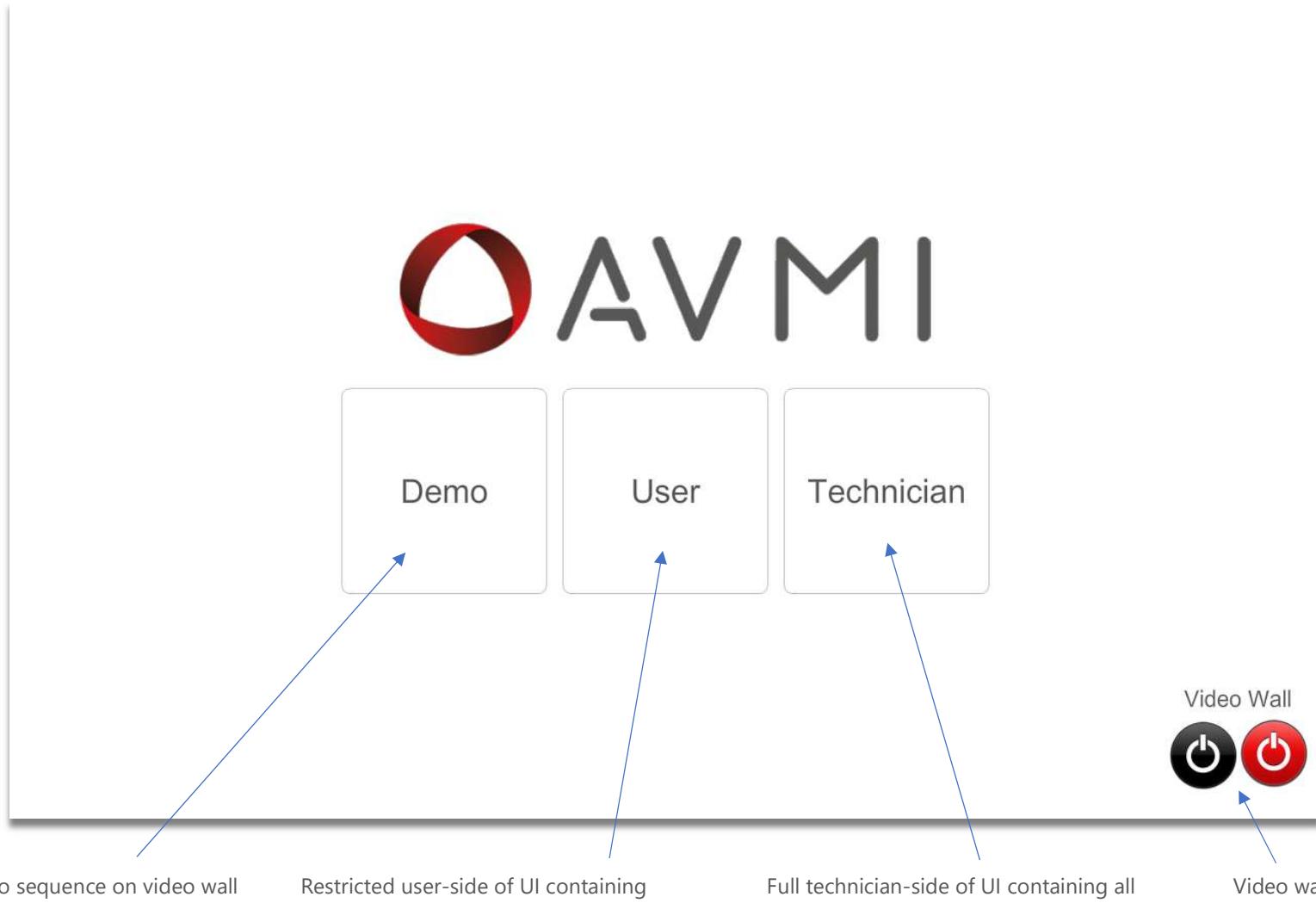
Touchpanel UI should be simple, intuitive and enable the user to quickly mentally map the systems organisation, functionality and flow. The UI is the main/only interface the client will have with the system, it is important that it is of high-quality reflecting well upon the rest of the system.

## 1. AVMI London

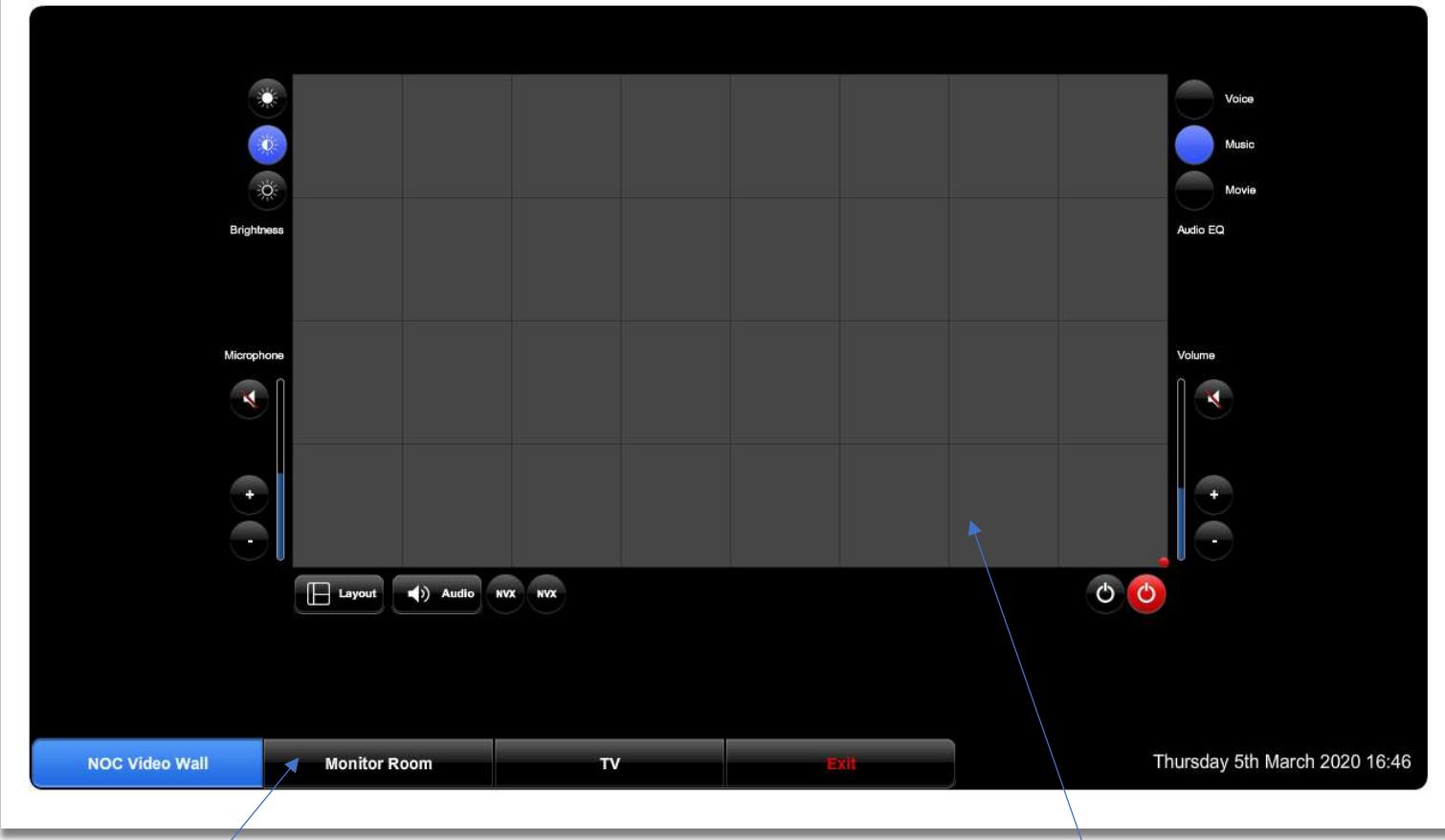
Video Wall and Digital Signage - Management and Control



NOC Video Wall and Digital Signage  
Monitor and Diagnostics



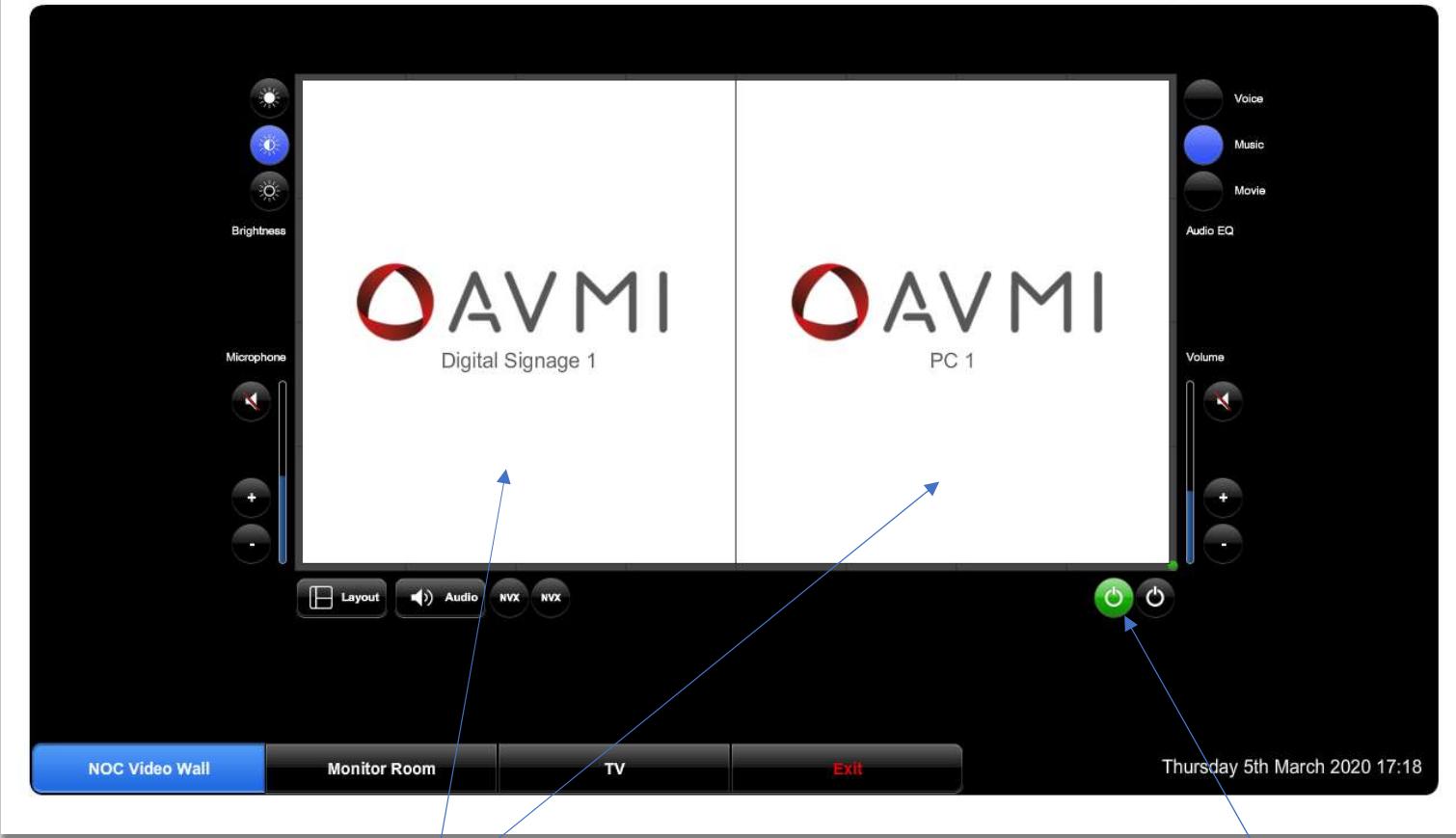
## NOC Video Wall - Digital Signage



User-side of panel contains x3 pages of limited functionality

Video wall power, layout and source select with audio breakaway

## NOC Video Wall - Digital Signage

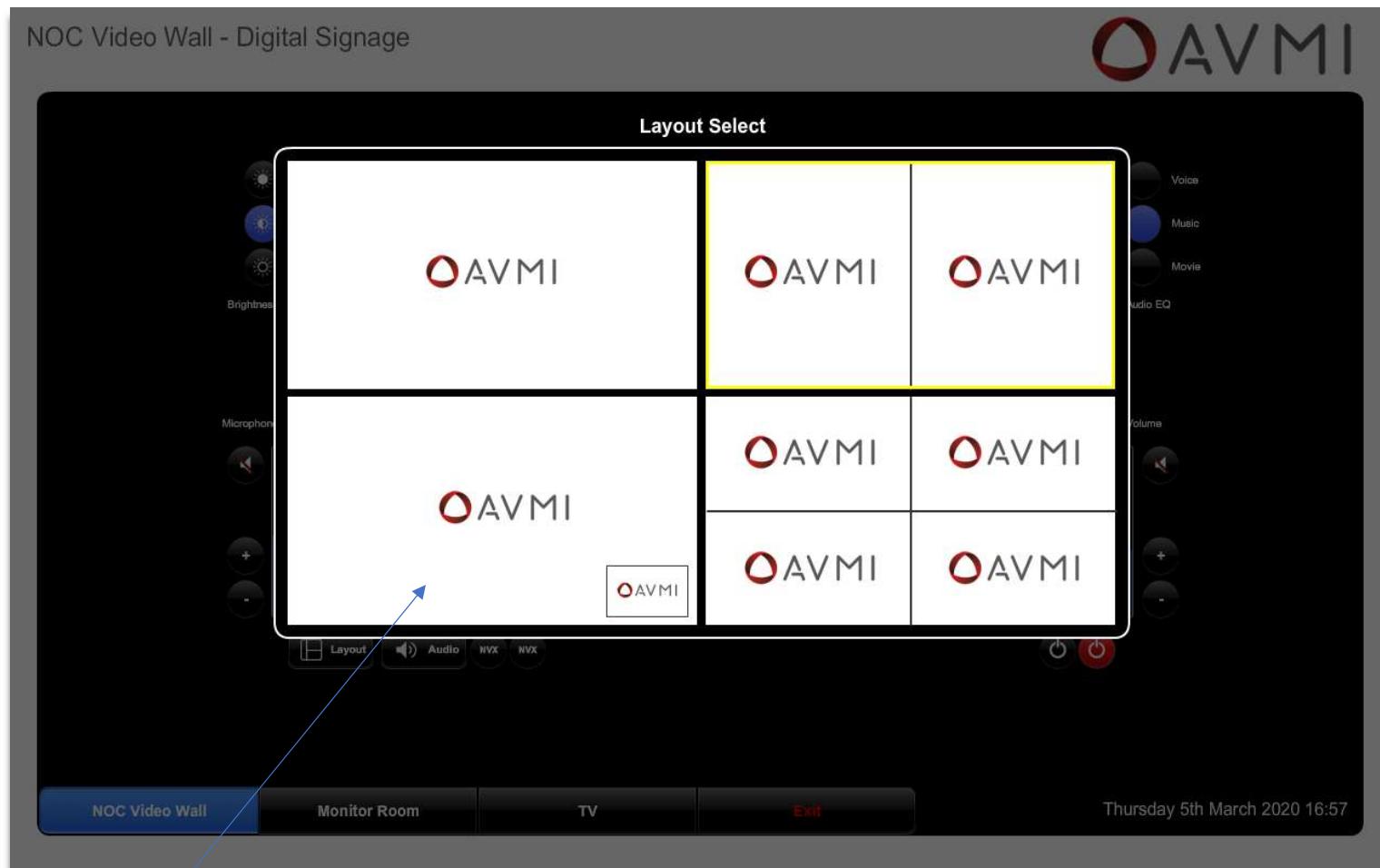


Press on video wall windows to select and send source

Turn on video wall



Scrollable list of available sources to send to individual video wall window(s)



Select video wall layout from x4 preset configurations

**DM-NVX Endpoint Source**

Name	NOC ENCODER 04 Current Signage
IP-ID	14
Card Slot	4
Chassis Serial Number	8BF2963B
Multicast IP Address	239.1.0.8
Multicast IP Address [Sec.]	239.1.0.9
Primary Stream	rtsp://10.0.78.44:554/live.sdp
Ready	[Green LED]
Processing	[Grey LED]
Reboot Required	[Grey LED]
Status	Stream started
RTSP Port	554
TS Port	4570
Horizontal Resolution	1920
Vertical Resolution	1080
Frame Rate	60 Hz
Aspect Ratio	16:9
Audio Format	PCM
Audio Channels	2 Chan
Bit Rate	400 Mbps
Multicast TTL	5
Number of Packets Transmitted	332625
Number of Packets Dropped	0

**DM-NVX Endpoint Destination**

Name	
Location	
IP-ID	71
Card Slot	04.0
Chassis Serial Number	
Receiving Multicast IP Address	239.1.0.8
Receiving Multicast IP Address [Sec.]	239.1.0.9
Receiving Primary Stream	rtsp://10.0.78.44:554/live.sdp
Ready	[Green LED]
Processing	[Grey LED]
Reboot Required	[Grey LED]
Status	Stream started
RTSP Port	554
TS Port	4570
Horizontal Resolution	1920
Vertical Resolution	1080
Frame Rate	60 Hz
Aspect Ratio	16:9
Audio Format	PCM
Audio Channels	2 Chan
Bit Rate	386 Mbps
Number of Packets Received	2020752333
Number of Packets Dropped	10

Each endpoint contains x5 pages of properties and functionality associated with network, video signal and source

Real-time video streaming diagnostics

**DM-NVX Endpoint Source**

Name: NOC ENCODER 04 Current Signage  
IP-ID: 14  
Card Slot: 4  
Chassis Serial Number: 8BF2963B

Auto Switch:

Video Input:

- None:
- Input 1:
- Input 2:

Audio Input:

- Audio Follow Video:
- Input 1:
- Input 2:
- Analog Audio:
- Primary Stream Audio:
- Secondary Stream Audio:
- Dante/AES-67 Audio Input:

Secondary Audio Stream: Off   
Auto (Send audio on IP address x1 higher than Primary Stream)

Number of Packets Transmitted: 1330531  
Number of Packets Dropped: 0

Buttons: Audio Visual, **Input / Output**, Network, Reset Packet Count, Reboot

**DM-NVX Endpoint Destination**

Name: Main Display  
Location: Operations  
IP-ID: 71  
Card Slot: 04  
Chassis Serial Number: 0400000000000000

Auto Switch:

Video Input:

- None:
- Input 1:
- Input 2:
- Stream:

Audio Input:

- Audio Follow Video:
- Input 1:
- Input 2:
- Analog Audio:
- Primary Stream Audio:
- Secondary Stream Audio:
- Dante/AES-67 Audio Input:

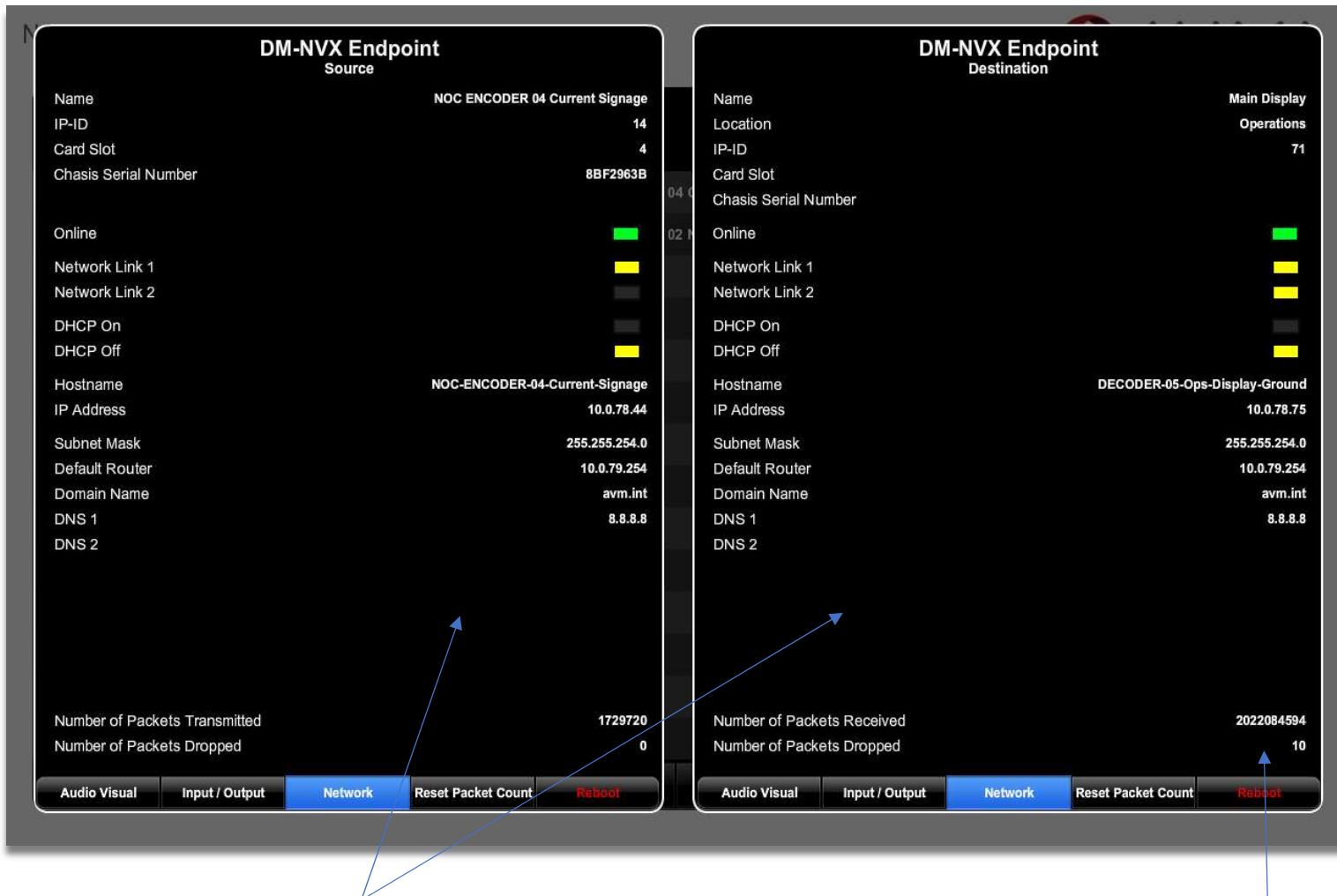
Secondary Audio Stream: Off   
Auto (Receive audio on IP address x1 higher than Primary Stream)

Number of Packets Received: 2021751571  
Number of Packets Dropped: 10

Buttons: Audio Visual, **Input / Output**, Network, Reset Packet Count, Reboot

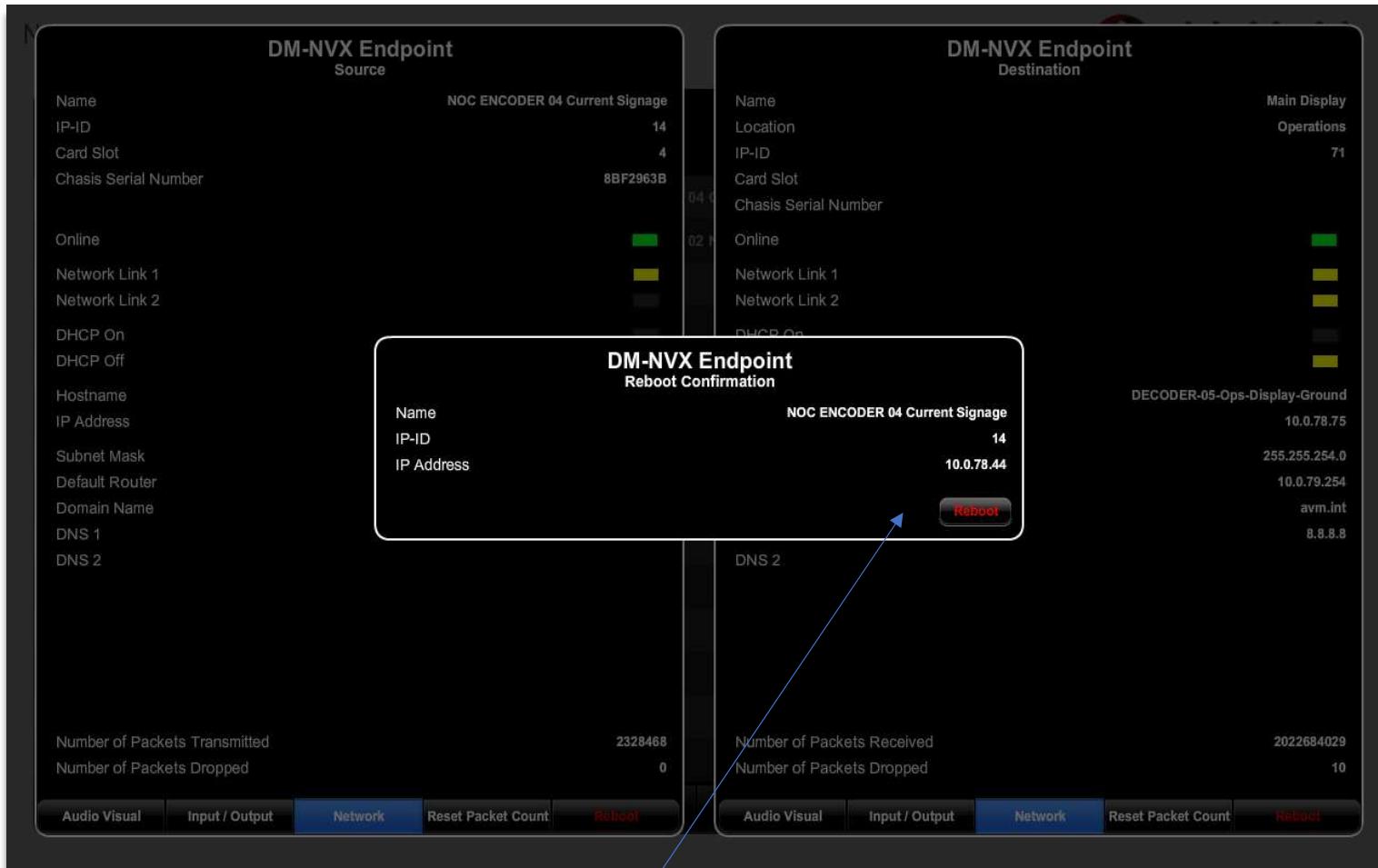
Low level IO settings of each endpoint provide maximum flexibility

Press on checkboxes to set



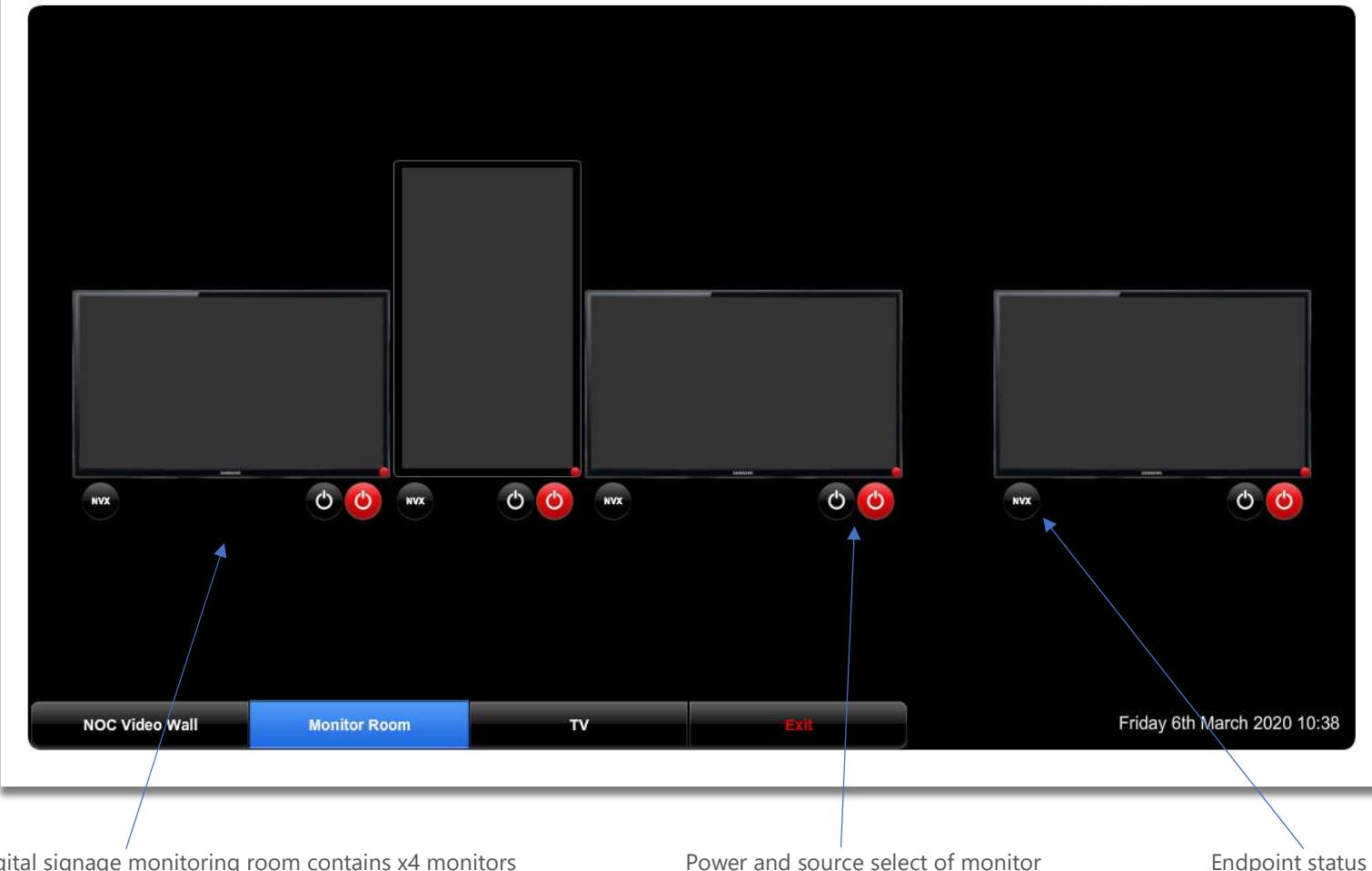
Network status between the source and destination endpoints

Real-time packet loss data



Conveniently and easily reboot any endpoint situated anywhere around the building

## NOC Video Wall - Digital Signage

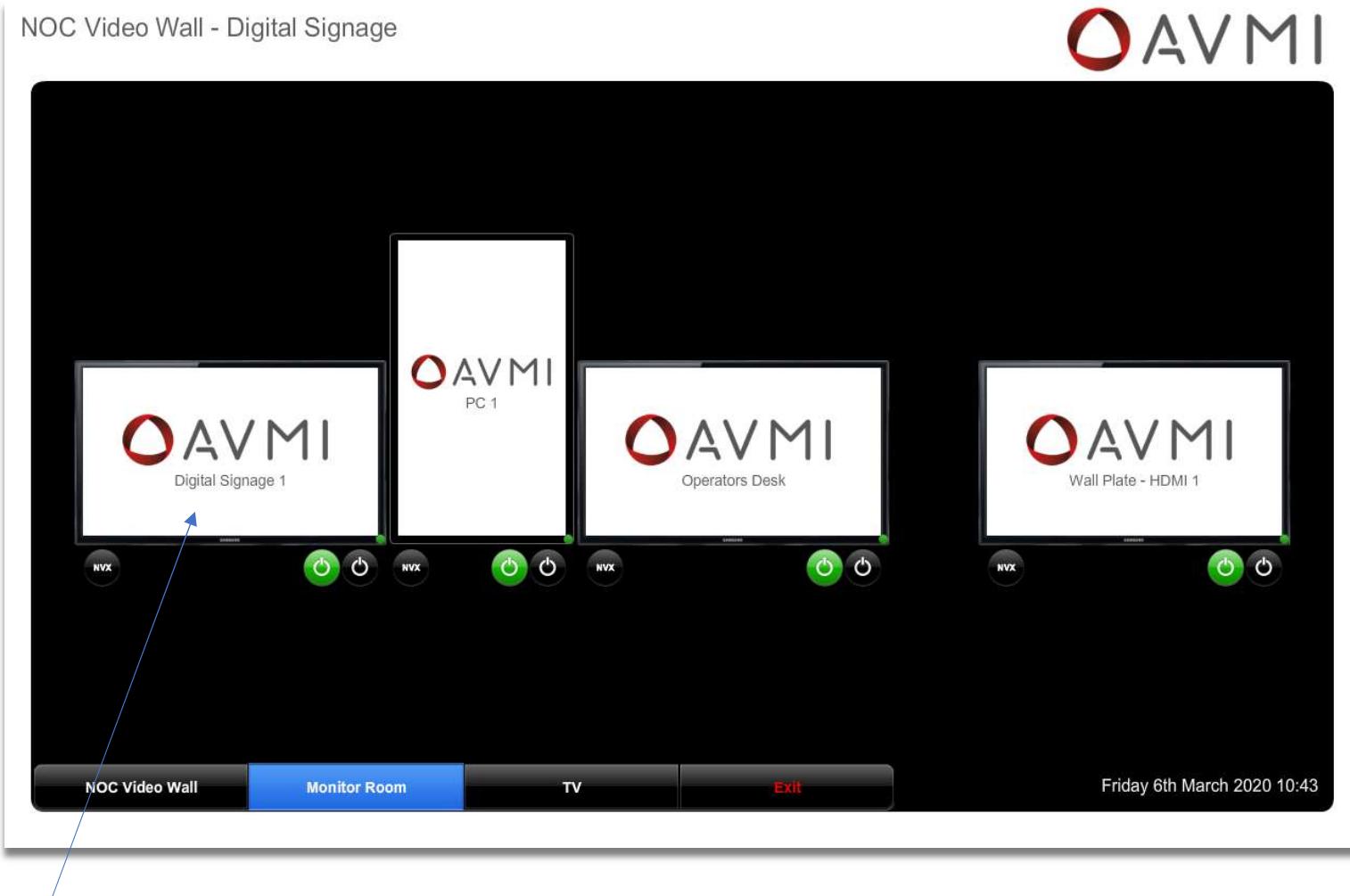


AVMI's digital signage monitoring room contains x4 monitors

Power and source select of monitor

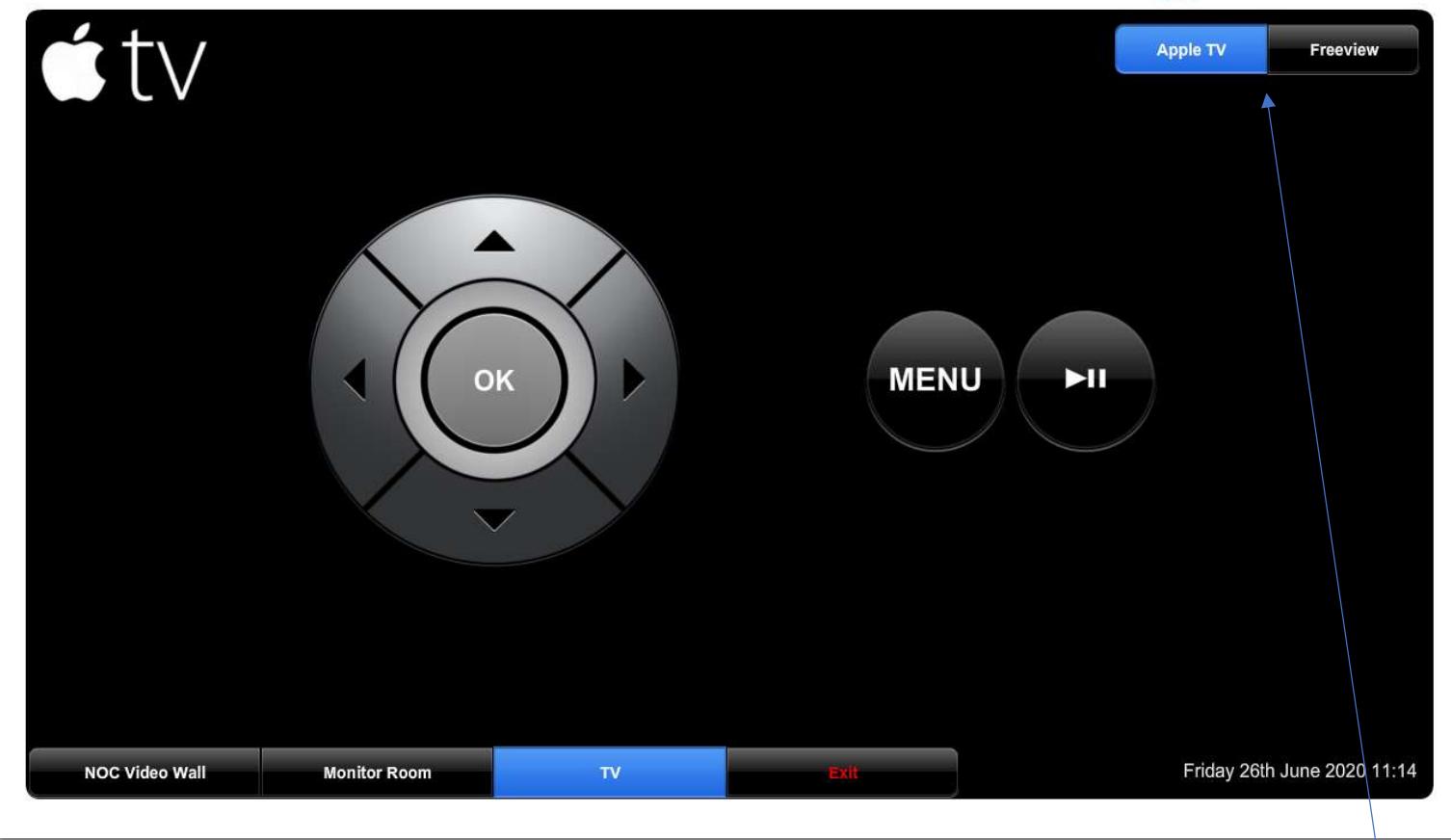
Endpoint status

NOC Video Wall - Digital Signage



Press on monitor to select and send any available source to monitor

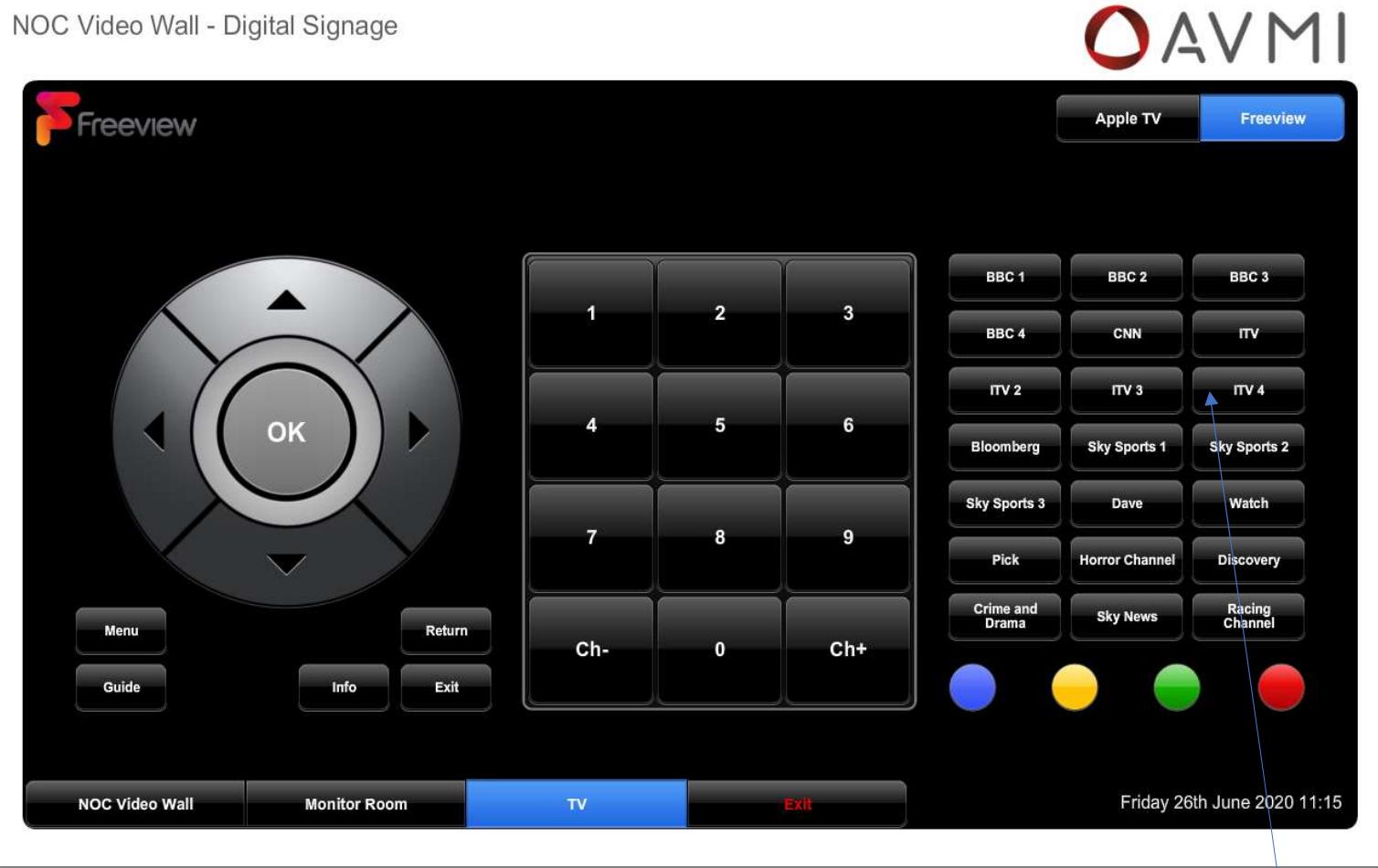
NOC Video Wall - Digital Signage



Select and control the Apple TV source

Switch between Apple TV and Freeview

## NOC Video Wall - Digital Signage



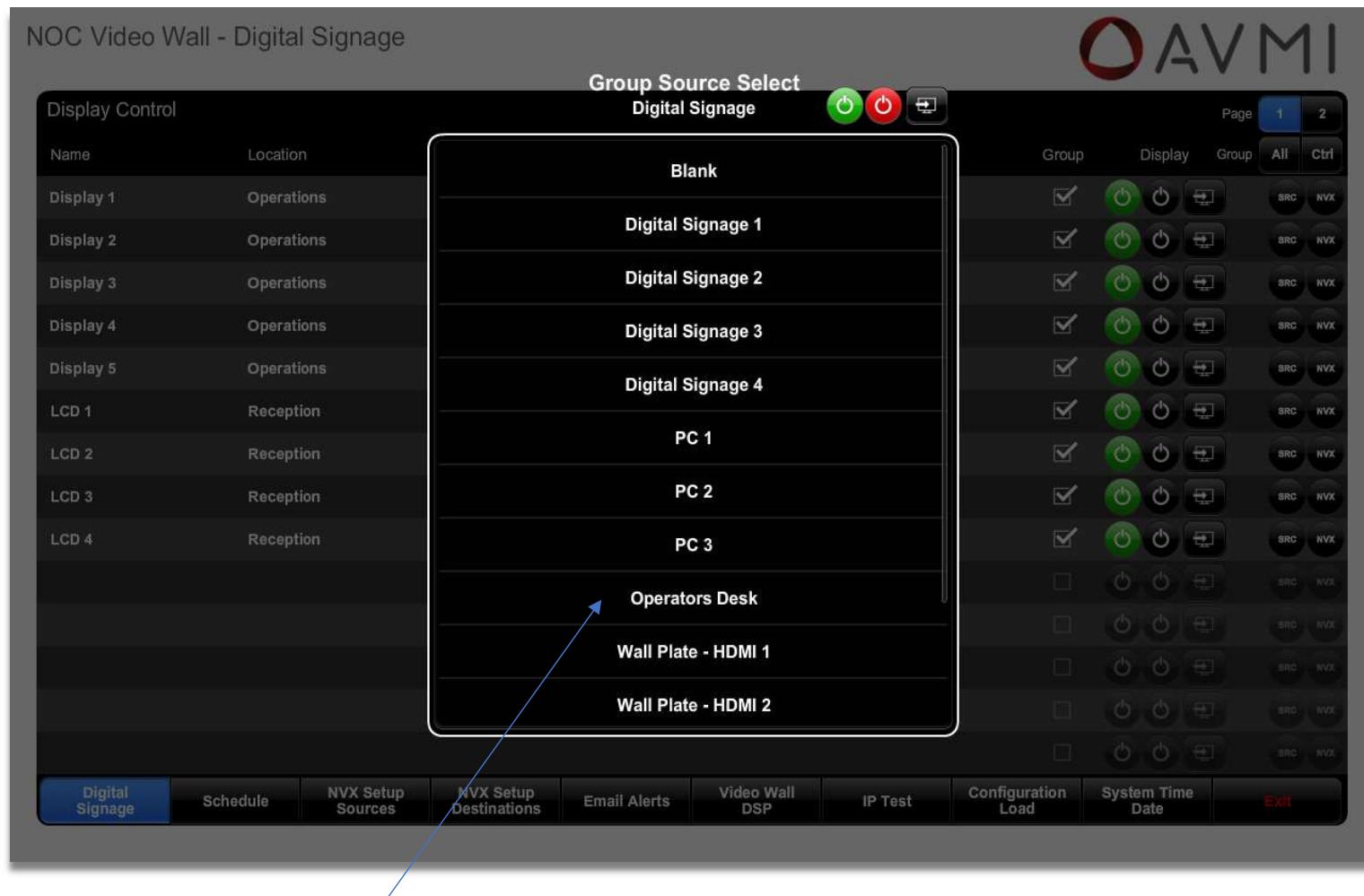
Select and control Freeview TV source

On-screen navigation and channel presets  
emulating an IR remote

## NOC Video Wall - Digital Signage



Display Control								Page	1	2
Name	Location	Source	Status	Group	Display	Group	All	Ctrl	SRC	NVX
Display 1	Operations	PC 1	Stream Started	<input type="checkbox"/>						
Display 2	Operations	Wall Plate - HDMI 1	Stream Started	<input type="checkbox"/>						
Display 3	Operations	Wall Plate - HDMI 1	Stream Started	<input type="checkbox"/>						
Display 4	Operations	Wall Plate - HDMI 1	Stream Stopped	<input type="checkbox"/>						
Display 5	Operations	Blank	Stream Stopped	<input type="checkbox"/>						
LCD 1	Reception	PC 1	Stream Paused	<input type="checkbox"/>						
LCD 2	Reception	PC 2	Stream Started	<input type="checkbox"/>						
LCD 3	Reception	Floor Box 1 - HDMI	Stream Started	<input type="checkbox"/>						
LCD 4	Reception	Floor Box 1 - HDMI	Stream Started	<input type="checkbox"/>						
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				<input type="checkbox"/>	<img alt="Power					



Set LCD power, input or send a source to multiple LCDs around building

## NOC Video Wall - Digital Signage



Schedule

NOC Video Wall  Digital Signage

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Video Wall On	07:00	07:00	07:00	07:00	07:00	Closed	Closed
Video Wall Off	19:30	19:30	19:30	19:30	19:30	Closed	Closed
	<input checked="" type="checkbox"/> Enable	<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable	<input checked="" type="checkbox"/> Enable	<input checked="" type="checkbox"/> Enable	<input type="checkbox"/> Enable	<input type="checkbox"/> Enable

Digital Signage **Schedule** NVX Setup Sources NVX Setup Destinations Email Alerts Video Wall DSP IP Test Configuration Load System Time Date Exit

Schedule the automatic turning on/off of the video wall or LCDs around building

Press on time field to open keypad to set

## NOC Video Wall - Digital Signage



DM-NVX Endpoints - Sources

Page 1 2

Source Name	IP-ID	Card Slot	IP Address	Sending Stream URL	Status	Ready	Proc.	Reboot	NVX
Digital Signage 1	11	1	10.0.78.41	rtsp://10.0.78.41:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Digital Signage 2	12	2	10.0.78.42	rtsp://10.0.78.42:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Digital Signage 3	13	3	10.0.78.43	rtsp://10.0.78.43:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Digital Signage 4	14	4	10.0.78.44	rtsp://10.0.78.44:554/live.sdp	Stream Started	Green	Yellow	Grey	NVX
PC 1	15	5	10.0.78.45	rtsp://10.0.78.45:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
PC 2	16	6	10.0.78.46	rtsp://10.0.78.46:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
PC 3	17		10.0.78.47	rtsp://10.0.78.47:554/live.sdp	Stream Stopped	Red	Grey	Red	NVX
Operators Desk	18		10.0.78.48	rtsp://10.0.78.48:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Wall Plate - HDMI 1	19		10.0.78.49	rtsp://10.0.78.49:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Wall Plate - HDMI 2	1A		10.0.78.50	rtsp://10.0.78.50:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Wall Plate - VGA	1B		10.0.78.51	rtsp://10.0.78.51:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Floor Box 1 - HDMI	1C		10.0.78.52	rtsp://10.0.78.52:554/live.sdp	Stream Started	Green	Grey	Grey	NVX
Source Name	1D					Red	Grey	Grey	NVX
Source Name	1E					Red	Grey	Grey	NVX

Digital Signage   Schedule   NVX Setup Sources   NVX Setup Destinations   Email Alerts   Video Wall DSP   IP Test   Configuration Load   System Time Date   Exit

Manually add/remove source endpoints

Press on text field to open keyboard

Realtime status reporting of all source endpoints around building

## NOC Video Wall - Digital Signage



DM-NVX Endpoints - Destinations - Digital Signage					Fixed	Digital Signage	Digital Signage			
Name	Location	IP-ID	IP Address	Receiving Stream URL	Status	Ready	Proc. Reboot			
Display 1	Operations	71	10.0.78.71	rtsp://10.0.78.45:554/live.sdp	Stream Started					
Display 2	Operations	72	10.0.78.72	rtsp://10.0.78.49:554/live.sdp	Stream Started					
Display 3	Operations	73	10.0.78.73	rtsp://10.0.78.49:554/live.sdp	Stream Started					
Display 4	Operations	74	10.0.78.74	rtsp://10.0.78.49:554/live.sdp	Stream Stopped					
Display 5	Operations	75	10.0.78.75		Stream Stopped					
LCD 1	Reception	76	10.0.78.76	rtsp://10.0.78.45:554/live.sdp	Stream Paused					
LCD 2	Reception	77	10.0.78.77	rtsp://10.0.78.46:554/live.sdp	Stream Started					
LCD 3	Reception	78	10.0.78.78	rtsp://10.0.78.52:554/live.sdp	Stream Started					
LCD 4	Reception	79	10.0.78.79	rtsp://10.0.78.52:554/live.sdp	Stream Started					
Display Name	Display Location	7A								
Display Name	Display Location	7B								
Display Name	Display Location	7C								
Display Name	Display Location	7D								
Display Name	Display Location	7E								

Digital Signage

Schedule

NVX Setup Sources

NVX Setup Destinations

Email Alerts

Video Wall DSP

IP Test

Configuration Load

System Time Date

Exit

Manually add/remove destination endpoints

URL of the source endpoint currently being received by destination endpoint

Realtime status reporting of all destination endpoints around building

## NOC Video Wall - Digital Signage



Server: mail.avmimpact.com

Username: paul.surridge

Password: \*\*\*\*\*

From: videowall@avmi.com

Subject: Notification Alert

Email Recipients

paul.surridge@avmi.com

Test

Alerts

NVX Unit Offline

DSP Offline

Video Wall Offline

Press icon for email status

Debounce 30 sec

Digital Signage   Schedule   NVX Setup Sources   NVX Setup Destinations   Email Alerts   Video Wall DSP   IP Test   Configuration Load   System Time Date   Exit

Press on any text field to open keyboard

Up to x5 email recipients can receive an email alert if any of the selected devices go offline for defined period of time

## NOC Video Wall - Digital Signage



Video Wall / DSP

Samsung SBB-SNOWJAU:	10.0.78.35	Online	<span style="color:red;">■ Waiting for Connection</span>
Polycom Soundstructure:	10.0.78.33	Online	<span style="color:red;">■ Waiting for Connection</span>
<div style="text-align: right;"> <span style="margin-right: 10px;">Tx</span> <span style="margin-right: 10px;">Rx</span> <span>Refresh</span> <span>Disconnect</span> </div> <div style="text-align: right;"> <span style="margin-right: 10px;">Tx</span> <span style="margin-right: 10px;">Rx</span> <span>Refresh</span> <span>Disconnect</span> </div>			
Samsung SBB-SNOWJAU: Brightness (0-100): <div style="text-align: right; margin-top: 10px;"> <span>High</span> <span>100</span>  <span>Mid</span> <span>75</span>  <span>Low</span> <span>50</span> </div>			

Digital Signage   Schedule   NVX Setup Sources   NVX Setup Destinations   Email Alerts   **Video Wall DSP**   IP Test   Configuration Load   System Time Date   Exit

IP setup and connection status to the video wall processor and audio DSP

Realtime status information of connection to device

Indicators flash upon Tx/Rx data from device(s)

## NOC Video Wall - Digital Signage



IP/Hostname: 192.168.1.100

Ping IP Config

Ethernet Adapter [CPSW3G1]:  
 Link Status ..... : OK  
 DHCP ..... : ON  
 MAC Address(es)... : 00:10:7f:44:b5:02  
 IP Address ..... : 192.168.1.102  
 Subnet Mask ..... : 255.255.255.0  
 IPv6 Address..... : fe80::86c:5e68:b477:6309%2  
 Default Gateway ... : 192.168.1.1  
 DNS Servers..... : 194.168.4.100 (DHCP)  
                     194.168.8.100 (DHCP)

Digital Signage    Schedule    NVX Setup Sources    NVX Setup Destinations    Email Alerts    Video Wall DSP    IP Test    Configuration Load    System Time Date    Exit

Test the IP connectivity between local processor and any IP device or endpoint on network

IP Config of local processor

## NOC Video Wall - Digital Signage



FTP Server URL:

FTP Username:

FTP Password:

System Config:  Success ✓

**File Open.**  
**File Reading...**

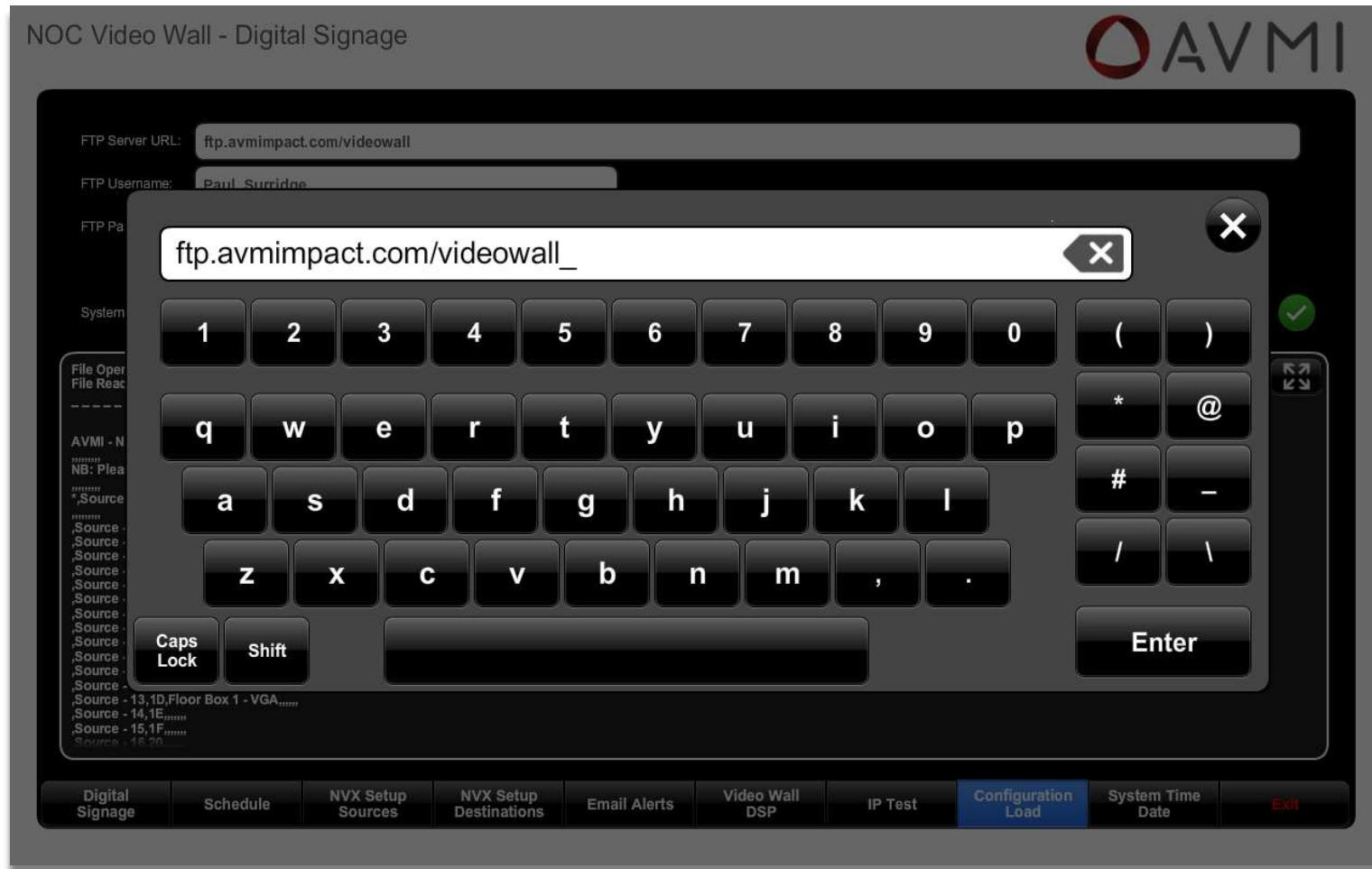
AVMI - NOC Video Wall and Digital Signage - System Config.....  
NB: Please do not use commas in user definable fields .....

\*.Source,IP-ID,Name.....  
.....  
.Source - 1,11,Digital Signage 1.....  
.Source - 2,12,Digital Signage 2.....  
.Source - 3,13,Digital Signage 3.....  
.Source - 4,14,Digital Signage 4.....  
.Source - 5,15,PC 1.....  
.Source - 6,16,PC 2.....  
.Source - 7,17,PC 3.....  
.Source - 8,18,Operators Desk.....  
.Source - 9,19,Wall Plate - HDMI 1.....  
.Source - 10,1A,Wall Plate - HDMI 2.....  
.Source - 11,1B,Wall Plate - VGA.....  
.Source - 12,1C,Floor Box 1 - HDMI.....  
.Source - 13,1D,Floor Box 1 - VGA.....  
.Source - 14,1E.....  
.Source - 15,1F.....  
.Source - 16,20.....

Digital Signage   Schedule   NVX Setup Sources   NVX Setup Destinations   Email Alerts   Video Wall DSP   IP Test   Configuration Load   System Time Date   Exit

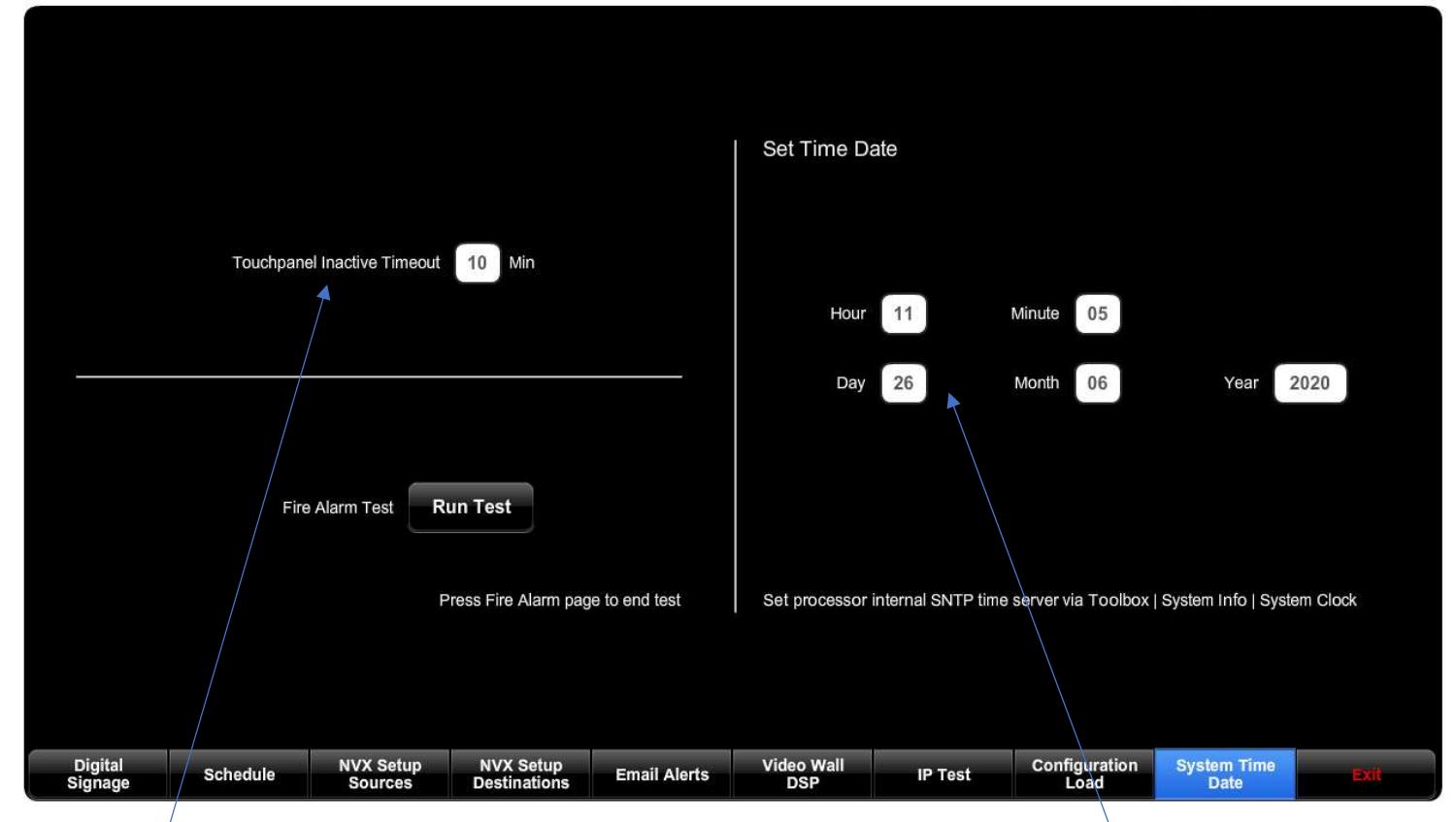
SystemConfig.csv defines all aspects of the entire system, including all endpoints name, location, IP and LCD API commands

Load SystemConfig.csv via USB or download from FTP server



Press on any text field to open keyboard to manually enter text

## NOC Video Wall - Digital Signage



Touch panel go to sleep after period of inactivity

Local processor time/date to ensure accurate operation of scheduling

## 2. Investment Bank London

### Multiroom VoIP - Monitoring and Diagnostics

VoIP Monitor

Room:	LG.02	Device:	Biamp Tesira Server	IP:	172.24.66.83	SVC-2:	Card 1 - Line 2			
Call State: General Fault condition; Network link is down, IP address conflict in place. The SVC-2 card will not be able to dial when this state is displayed.								<input type="button" value="Log"/>	<input type="button" value="Monitor"/>	<input type="button" value="Setup"/>
Prompt: Authentication Username has not been configured in the SVC line properties page.										
Call State	Prompt	Log	Email Alert	Error						
1. LG.01	VOIP_CALL_STATE_IDLE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
2. LG.02	VOIP_CALL_STATE_FAULT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
3. LG.03	VOIP_CALL_STATE_IDLE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
4. LG.04	VOIP_CALL_STATE_FAULT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
5. LG.05	VOIP_CALL_STATE_IDLE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
6. LG.06	VOIP_CALL_STATE_FAULT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
7. LG.07	VOIP_CALL_STATE_IDLE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
8. Spare	VOIP_CALL_STATE_FAULT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
9. Tannoy Solution	VOIP_CALL_STATE_IDLE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						
10. 5.01	VOIP_CALL_STATE_IDLE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
11. 6.02	VOIP_CALL_STATE_IDLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
12. 6.03	VOIP_CALL_STATE_IDLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
13. 8.03	VOIP_CALL_STATE_IDLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
14. -		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
15. -		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
16. -		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
17. -		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

Monitor and log real time status of VoIP lines in multiple rooms

**Log**

Day  Month  Year  All Lines  3  Earliest  Latest

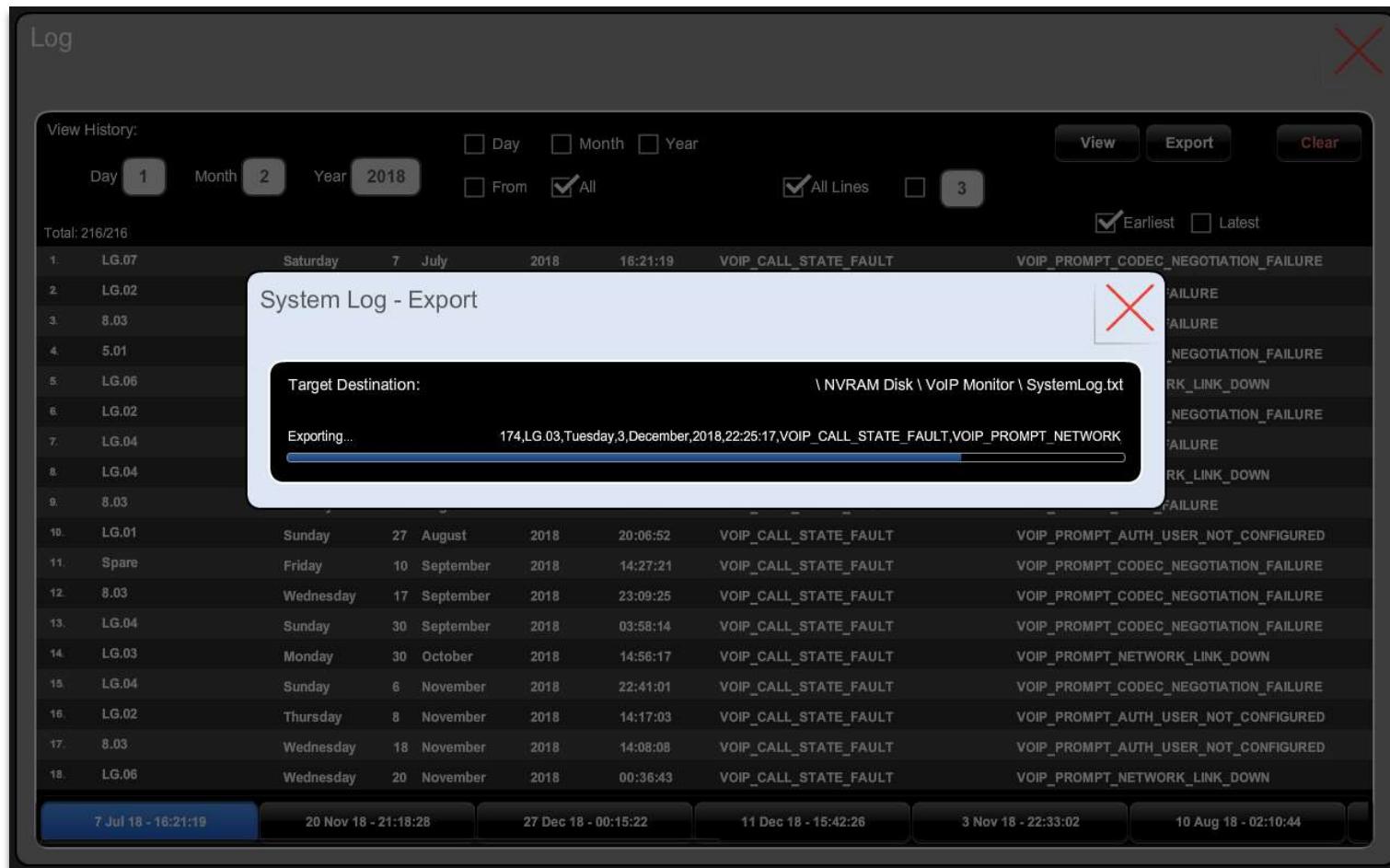
Total: 216/216

Line	User	Date	Day	Month	Year	Time	Error Type	Details
1.	LG.07	Saturday	7	July	2018	16:21:19	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
2.	LG.02	Thursday	8	July	2018	14:12:07	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_FAILURE
3.	8.03	Thursday	14	July	2018	22:59:12	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_FAILURE
4.	5.01	Thursday	16	July	2018	06:17:32	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
5.	LG.06	Thursday	21	July	2018	07:55:52	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_NETWORK_LINK_DOWN
6.	LG.02	Wednesday	27	July	2018	03:27:27	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
7.	LG.04	Tuesday	18	August	2018	12:23:43	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_FAILURE
8.	LG.04	Wednesday	25	August	2018	23:28:36	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_NETWORK_LINK_DOWN
9.	8.03	Monday	27	August	2018	16:54:27	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_FAILURE
10.	LG.01	Sunday	27	August	2018	20:06:52	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_USER_NOT_CONFIGURED
11.	Spare	Friday	10	September	2018	14:27:21	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
12.	8.03	Wednesday	17	September	2018	23:09:25	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
13.	LG.04	Sunday	30	September	2018	03:58:14	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
14.	LG.03	Monday	30	October	2018	14:56:17	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_NETWORK_LINK_DOWN
15.	LG.04	Sunday	6	November	2018	22:41:01	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_CODEC_NEGOTIATION_FAILURE
16.	LG.02	Thursday	8	November	2018	14:17:03	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_USER_NOT_CONFIGURED
17.	8.03	Wednesday	18	November	2018	14:08:08	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_AUTH_USER_NOT_CONFIGURED
18.	LG.06	Wednesday	20	November	2018	00:36:43	VOIP_CALL_STATE_FAULT	VOIP_PROMPT_NETWORK_LINK_DOWN

7 Jul 18 - 16:21:19    20 Nov 18 - 21:18:28    27 Dec 18 - 00:15:22    11 Dec 18 - 15:42:26    3 Nov 18 - 22:33:02    10 Aug 18 - 02:10:44

All errors are logged and available for review

Log can be exported to \*.csv file for review in Excel



Export all/filtered errors to \*.csv file for further review and archiving in Excel



View raw feedback from each VoIP card in real time

Make VoIP call in room and view card feedback in real-time for rapid fault finding



Setup IP/hostname for each VoIP card

Setup email address to receive an email alert after specified period

### 3. Private Bank London

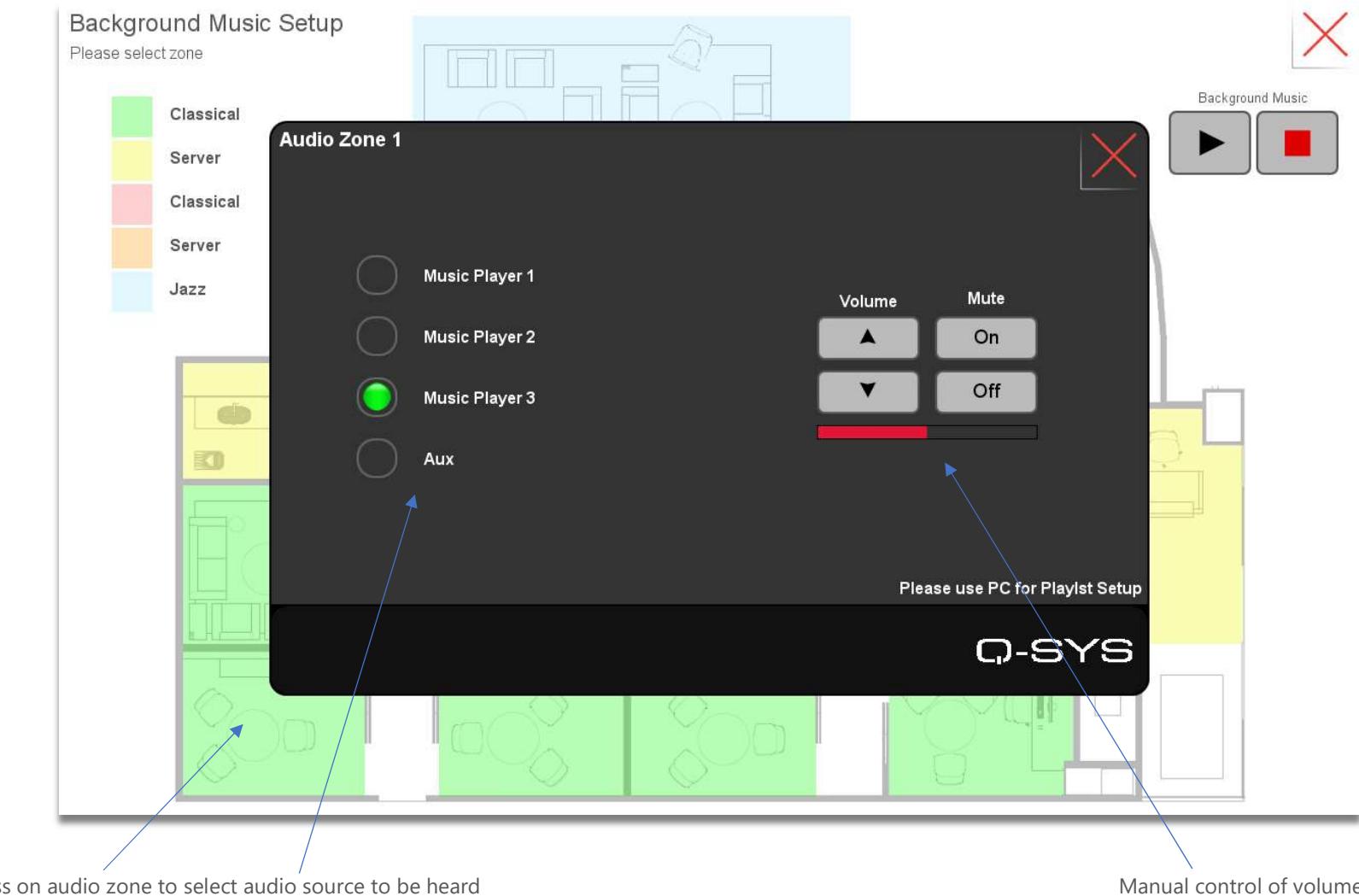
Private Banking Rooms - Audio Distribution Control

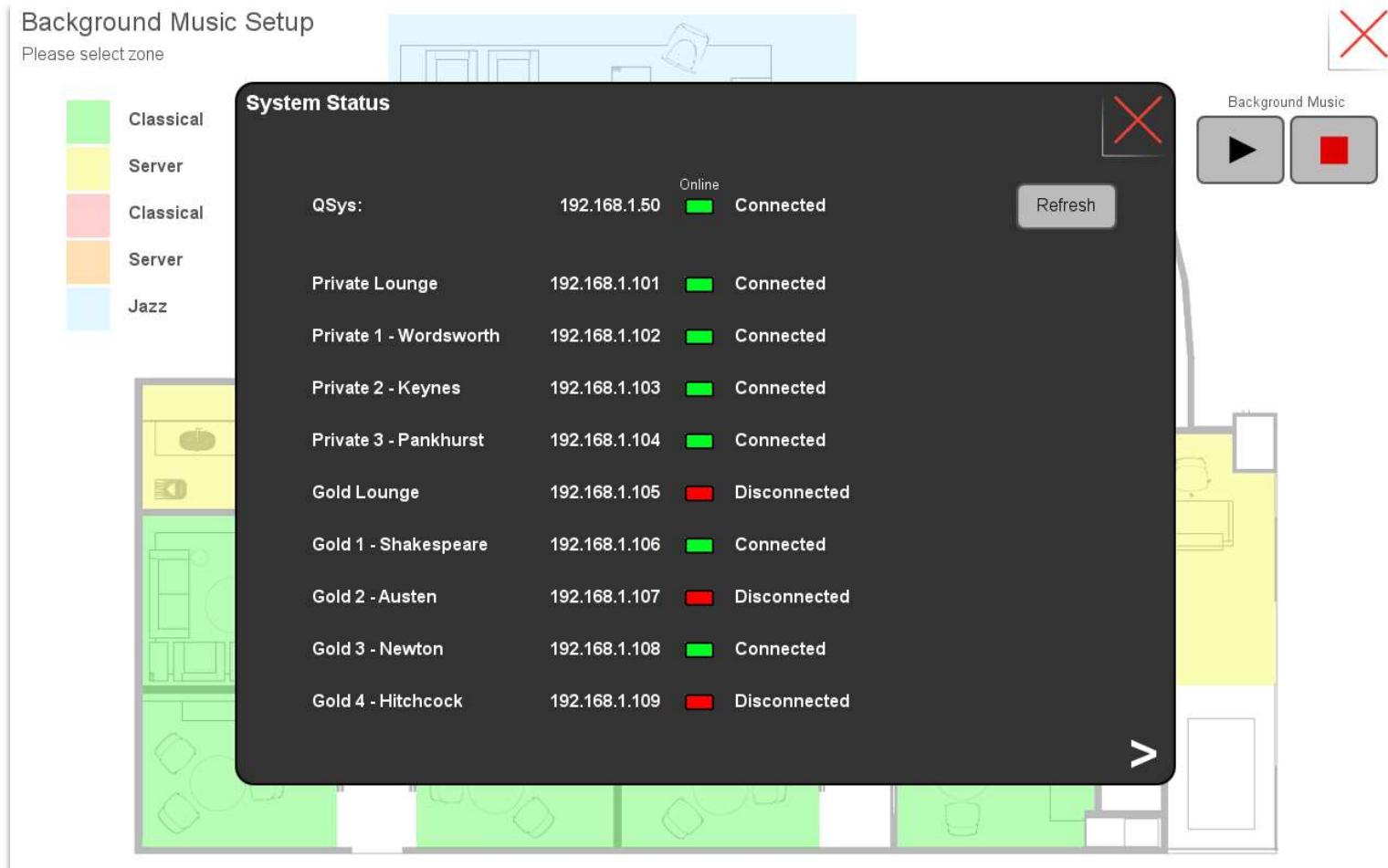


x5 audio zones covering multiple  
private banking rooms and common areas

Set audio source, level and other attributes  
in each audio zone

UI situated and controlled from Reception Desk

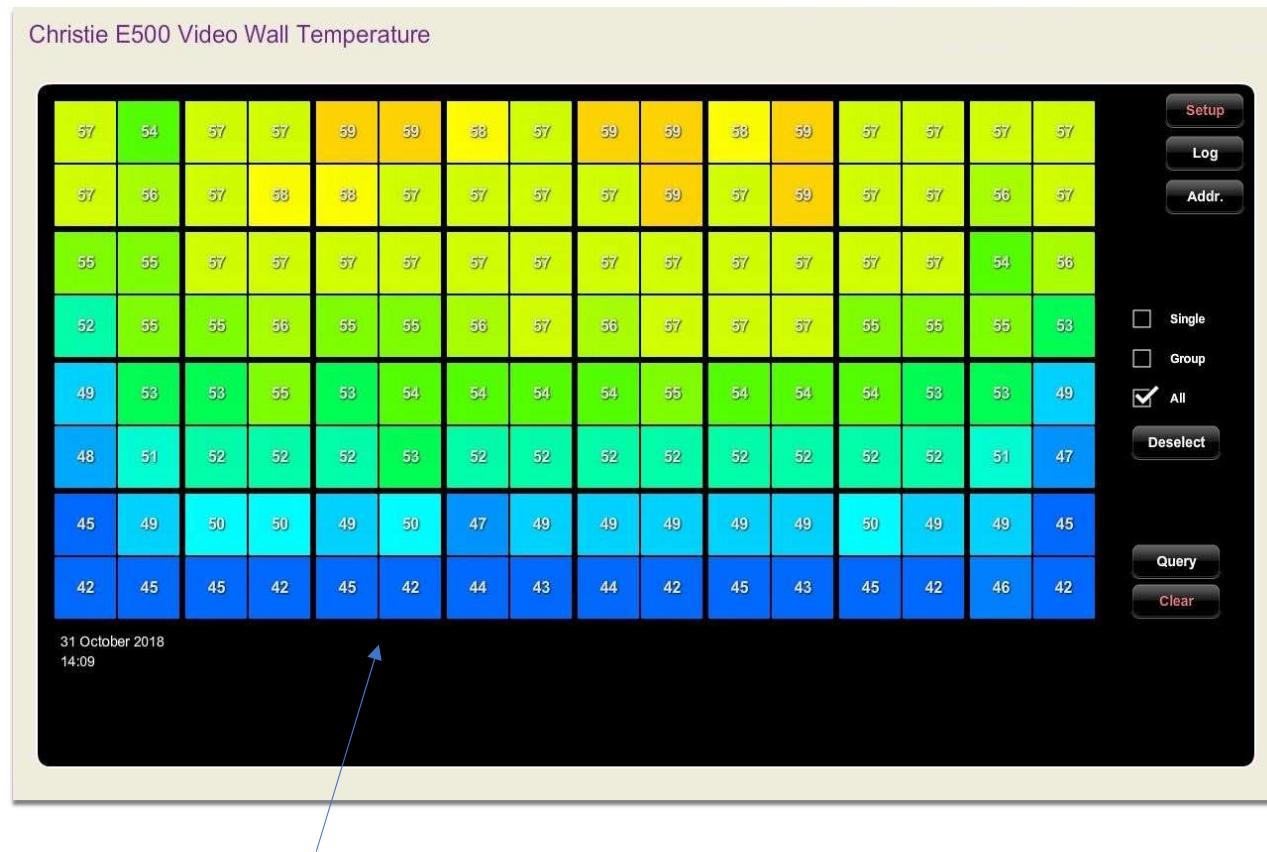




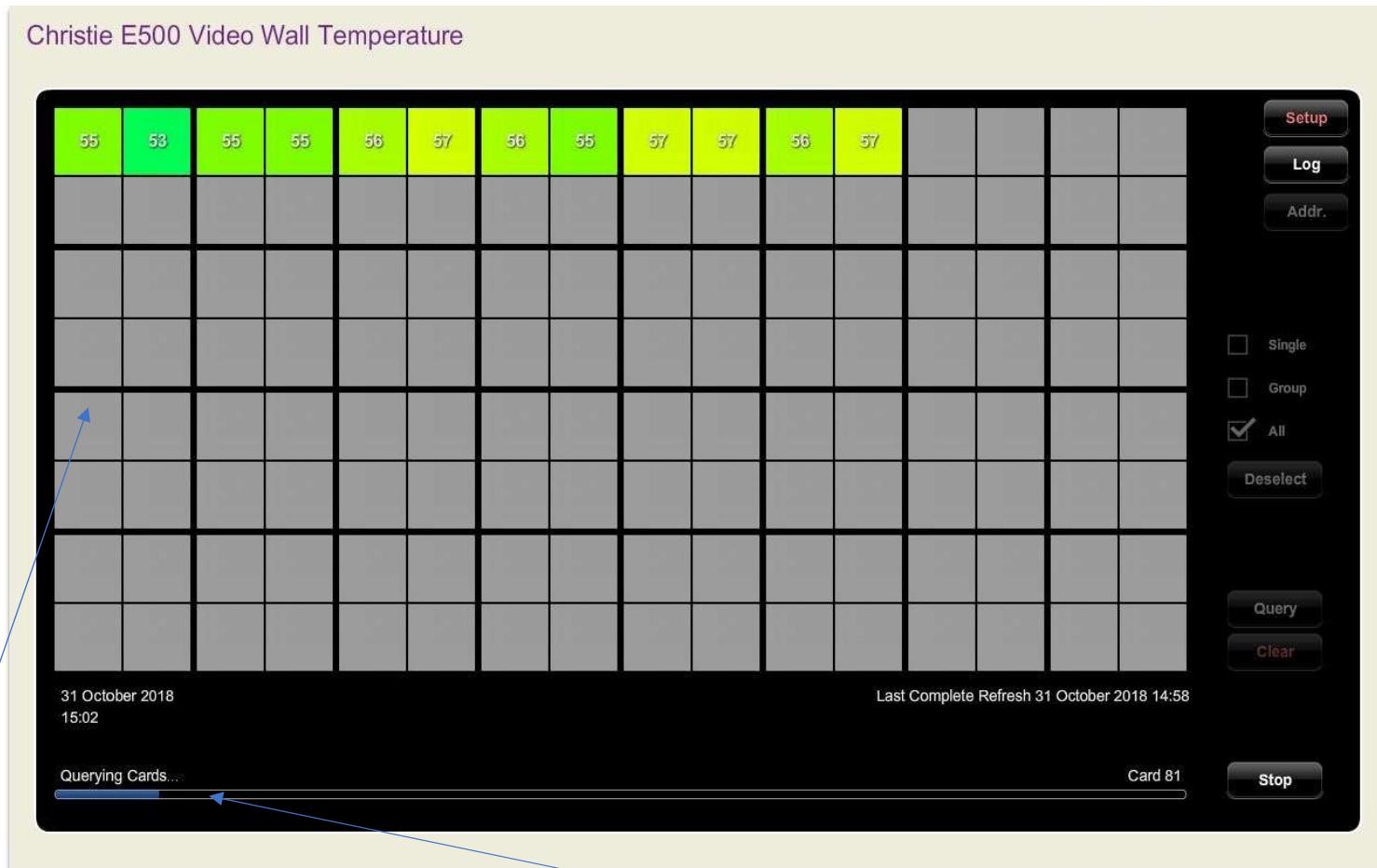
Simple real time status of IP connectivity to all audio endpoints in each private banking room

## 4. Global Advisory Firm London

Auditorium Video Wall - Temperature Monitor



Clean and simple UI to illustrate heat distribution about the video wall



Auditorium with large multi-panel video wall

Query the temperature of each panel

Christie E500 Video Wall Temperature

Temperature Alerts:						<input type="checkbox"/> Day	<input type="checkbox"/> Month	<input type="checkbox"/> Year	<input type="button" value="View"/>	<input type="button" value="Export"/>	<input type="button" value="Clear"/>	<input type="button" value="Close"/>	
Day	1	Month	2	Year	2018	<input type="checkbox"/> From	<input checked="" type="checkbox"/> All		<input checked="" type="checkbox"/> All	<input type="checkbox"/>	3	<input checked="" type="checkbox"/> Earliest	<input type="checkbox"/> Latest
Total: 20/20													
1.	Card Addr: 18	Wednesday	31	October	2018	15:29:30						55	
2.	Card Addr: 17	Wednesday	31	October	2018	15:29:32						55	
3.	Card Addr: 48	Wednesday	31	October	2018	15:29:34						55	
4.	Card Addr: 47	Wednesday	31	October	2018	15:29:36						55	
5.	Card Addr: 50	Wednesday	31	October	2018	15:29:38						55	
6.	Card Addr: 49	Wednesday	31	October	2018	15:29:40						55	
7.	Card Addr: 80	Wednesday	31	October	2018	15:29:42						57	
8.	Card Addr: 79	Wednesday	31	October	2018	15:29:44						57	
9.	Card Addr: 82	Wednesday	31	October	2018	15:29:46						55	
10.	Card Addr: 81	Wednesday	31	October	2018	15:29:48						56	
11.	Card Addr: 112	Wednesday	31	October	2018	15:29:50						55	
12.	Card Addr: 111	Wednesday	31	October	2018	15:29:52						55	
13.	Card Addr: 114	Wednesday	31	October	2018	15:29:54						55	
14.	Card Addr: 113	Wednesday	31	October	2018	15:29:56						55	
15.	Card Addr: 19	Wednesday	31	October	2018	15:30:04						55	
16.	Card Addr: 51	Wednesday	31	October	2018	15:30:12						55	
17.	Card Addr: 78	Wednesday	31	October	2018	15:30:14						55	
18.	Card Addr: 77	Wednesday	31	October	2018	15:30:16						55	

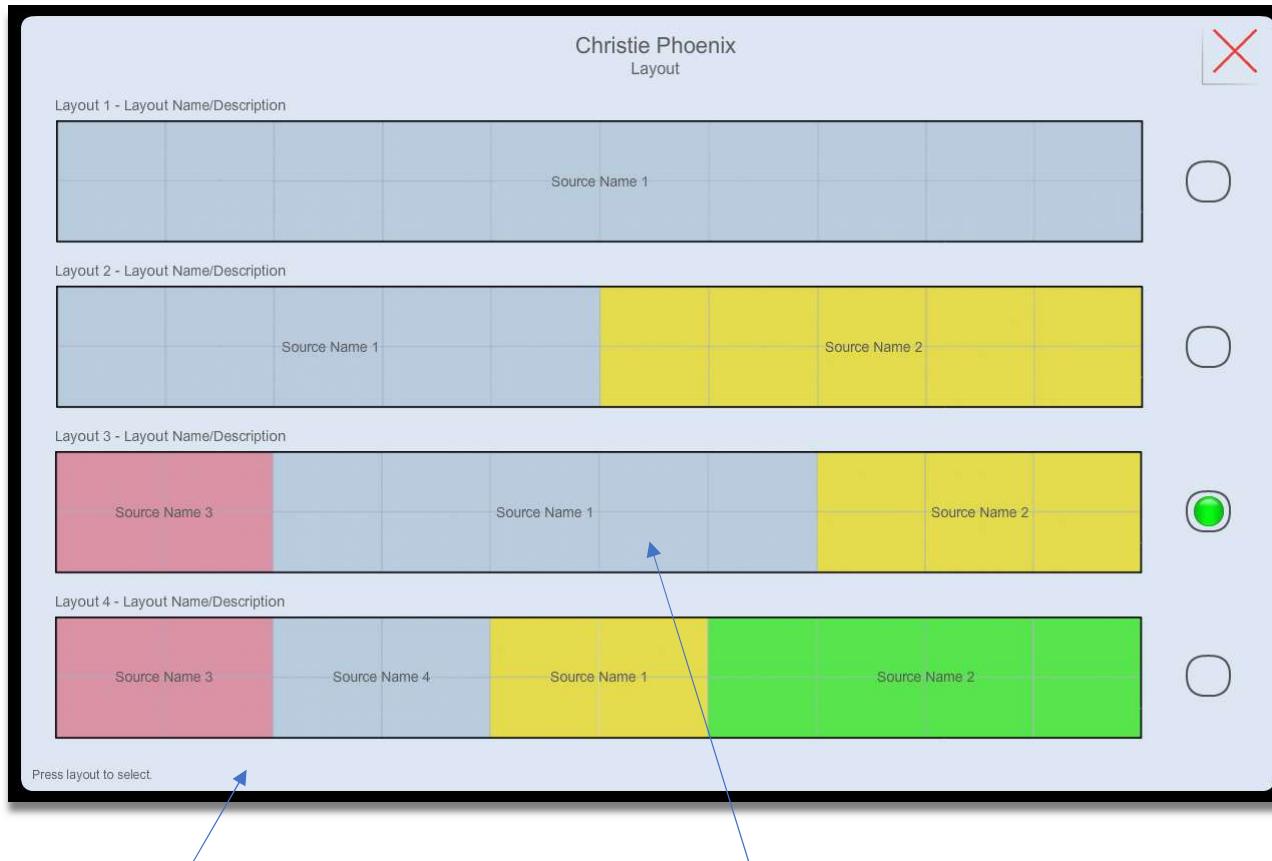
31 Oct 18 - 15:29:30      31 Oct 18 - 15:30:20

Log all panels which exceed temperature threshold using circular memory (FIFO x500) with optional email alert

Filter and export log to \*.csv file for review in Excel

## 5. Global Bank Wakefield Data Centre

Central Control Room Video Wall - Management and Control



Control large videowall within control room of data centre

Select layout or press/hold to set layout/source names via popup keyboard

**Video Wall**  
IP Communication Setup

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Phoenix Controller Node - IP/Hostname (Port: 11135)

SYGDC-CONTROL-ROOM-VWALL-PHOENIX

Online Performing DNS Lookup

Tx Rx Refresh

Phoenix Entero Cube - IP/Hostname (Port: 3002)

1 SYGDC-CONTROL-ROOM-VWALL-CUBE-1	Online <span style="color: green;">Connected</span>	Tx Rx Refresh
2 SYGDC-CONTROL-ROOM-VWALL-CUBE-2	Online <span style="color: green;">Connected</span>	Tx Rx Refresh
3 SYGDC-CONTROL-ROOM-VWALL-CUBE-3	Online <span style="color: green;">Connected</span>	Tx Rx Refresh
4 SYGDC-CONTROL-ROOM-VWALL-CUBE-4	Online <span style="color: red;">Performing DNS Lookup</span>	Tx Rx Refresh
5 SYGDC-CONTROL-ROOM-VWALL-CUBE-5	Online <span style="color: green;">Connected</span>	Tx Rx Refresh
6 SYGDC-CONTROL-ROOM-VWALL-CUBE-6	Online <span style="color: red;">Performing DNS Lookup</span>	Tx Rx Refresh
7 SYGDC-CONTROL-ROOM-VWALL-CUBE-7	Online <span style="color: green;">Connected</span>	Tx Rx Refresh
8 SYGDC-CONTROL-ROOM-VWALL-CUBE-8	Online <span style="color: green;">Connected</span>	Tx Rx Refresh

Press field to set.

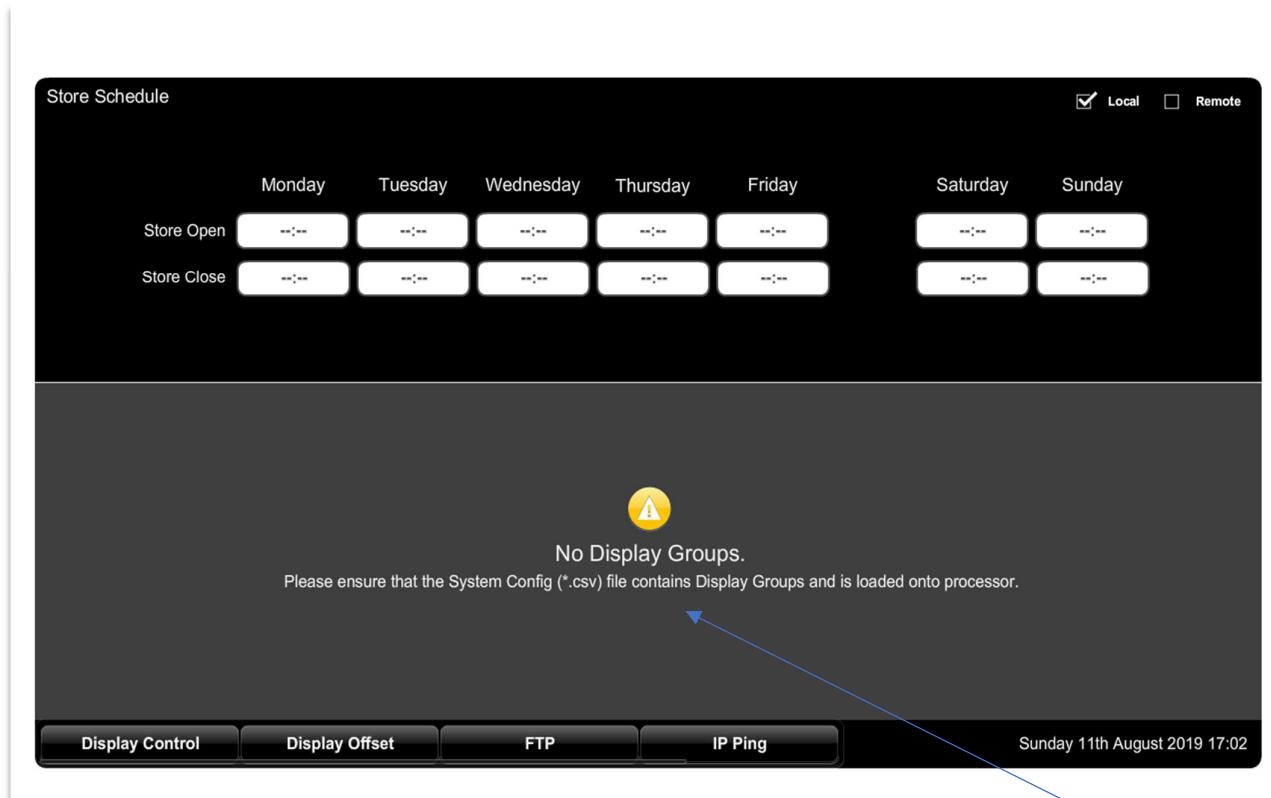
Page 1 >

Realtime status of video wall cubes/panels, IP/hostname setup, connectivity and activity

Press on field to set via popup keyboard

## 6. Global Bank UK Branch Rollout

Digital Signage LCD Groups – Management and Control



Control up to x4 LCD groups each containing up to x15 LCDs via LAN within a bank branch

Branch specific SystemConfig.csv is loaded into system, containing all LCD names, grouping, IP, scheduling and API information



Manual power control of the x2 LCD groups called 'Internal' and 'External'

Use either a locally defined schedule or a remote schedule stored on banks FTP server to set the on/off times of the LCD groups

Internal					X
	IP/Hostname	Location	Refresh	Model	
LCD 1:	192.168.1.11	Front Door	Refresh	Panasonic TH Series	  
LCD 2:	192.168.1.12	Entrance	Refresh	Dynascan	  
LCD 3:	192.168.1.13	Back Door	Refresh	Panasonic TH Series	  
LCD 4:	192.168.1.14	Landscape	Refresh	Panasonic TH Series	  
LCD 5:	192.168.1.15	Foyer	Refresh	Panasonic TH Series	  
LCD 6:	192.168.1.16	Office	Refresh	Panasonic TH Series	  
LCD 7:	192.168.1.17	Main Room	Refresh	Panasonic TH Series	  
LCD 8:	192.168.1.18	Meeting Room 11	Refresh	Panasonic TH Series	  
LCD 9:	192.168.1.19	Meeting Room 12	Refresh	Panasonic TH Series	  
LCD 10:	192.168.1.20	Meeting Room 13	Refresh	NEC V553	  
LCD 11:	192.168.1.21	Meeting Room 14	Refresh	Samsung QM Series	  
LCD 12:	192.168.1.22	Meeting Room 15	Refresh	NEC V553 - (Input 2)	  
LCD 13:	192.168.1.23	Meeting Room 16	Refresh	Dynascan	  
LCD 14:	192.168.1.24	Meeting Room 17	Refresh	Panasonic TH Series	  
LCD 15:	192.168.1.25	Meeting Room 18	Refresh	Panasonic TH Series	  

LCD group contains up to x15 LCDs controlled via LAN

Remotely change make/model or API of LCD without needing to update program or disrupt branch

Internal			
	IP/Hostname	Location	
LCD 1:	192.168.1.11	Front Door	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 2:	192.168.1.12	Entrance	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 3:	192.168.1.13	Back Door	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 4:	192.168.1.14	Landscape	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 5:	192.168.1.15	Foyer	<span style="color:red;">●</span> Refresh Connection Failed
LCD 6:	192.168.1.16	Office	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 7:	192.168.1.17	Main Room	<span style="color:red;">●</span> Refresh Connection Broken Locally
LCD 8:	192.168.1.18	Meeting Room 11	<span style="color:red;">●</span> Refresh Waiting for Connection
LCD 9:	192.168.1.19	Meeting Room 12	<span style="color:red;">●</span> Refresh Waiting for Connection
LCD 10:	192.168.1.20	Meeting Room 13	<span style="color:red;">●</span> Refresh Waiting for Connection
LCD 11:	192.168.1.21	Meeting Room 14	<span style="color:red;">●</span> Refresh Waiting for Connection
LCD 12:	192.168.1.22	Meeting Room 15	<span style="color:red;">●</span> Refresh Connection Failed
LCD 13:	192.168.1.23	Meeting Room 16	<span style="color:red;">●</span> Refresh Connection Failed
LCD 14:	192.168.1.24	Meeting Room 17	<span style="color:red;">●</span> Refresh Connection Failed
LCD 15:	192.168.1.25	Meeting Room 18	<span style="color:red;">●</span> Refresh Connection Failed

**Display Control**      **Display IP Status**

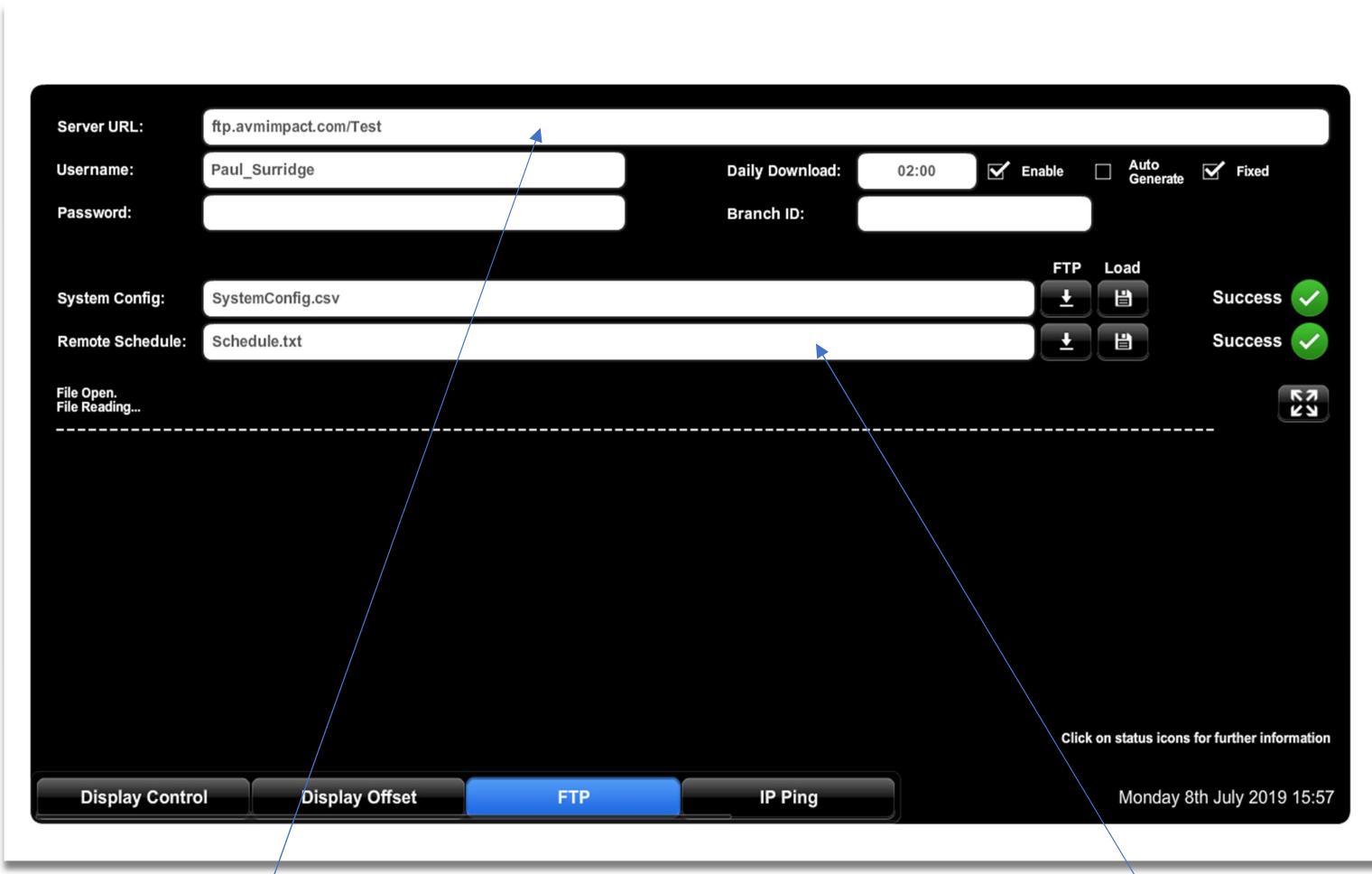
Real time status of IP connections to LCDs within branch

All LCD IP connections auto refresh with additional ability to manually clear, flush and refresh the connection



LCD group offset provides the ability to apply an offset to when the LCD group turns on/off relative to the branch open/close times

Press any text field to open keypad to set time/value



Automate daily download of remote schedule from the banks own FTP server to enable centralised remote management, rapid deployment and commission

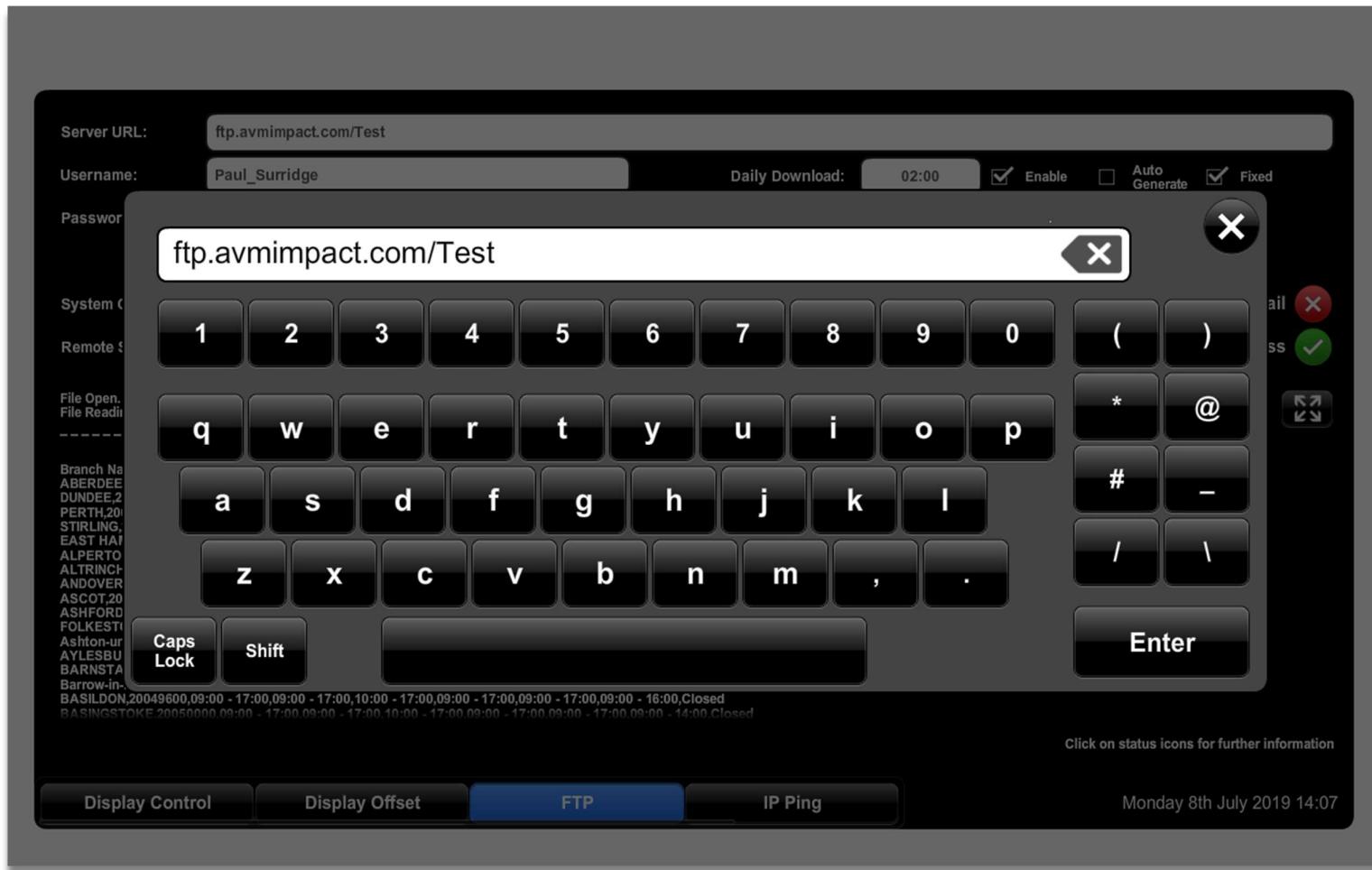
Press on text fields to open keyboard

The screenshot shows the AVM Impact software interface. At the top, there are fields for Server URL (ftp.avmimpact.com/Test), Username (Paul\_Surridge), Password, Daily Download (02:00, checked for Enable, unchecked for Auto Generate, checked for Fixed), and Branch ID. Below this, a large central window displays a success message: "System Config Success". It includes a green checkmark icon and a summary of updated configurations:

- Success: System Config loaded.
- Updated: Local Schedule.
- Updated: Display Types.
- Updated: Display Group 1 Name, IP/Hostnames, Locations and Types: Internal
- Updated: Display Group 2 Name, IP/Hostnames, Locations and Types: External
- Updated: Display Group 3 Name, IP/Hostnames, Locations and Types: [Not In Use]
- Updated: Display Group 4 Name, IP/Hostnames, Locations and Types: [Not In Use]
- Updated: Display Groups Store Open Offset.
- Updated: Display Groups Store Close Offset.
- Updated: Display Groups Days Enable.

Below this, it shows "Total Active Display Groups: 2" and "Last Attempt: Monday 8th July 2019 14:30" and "Last Success: Monday 8th July 2019 14:30". On the right side of the main window, there are two green circular icons labeled "Success" with checkmarks, and a small circular arrow icon. At the bottom of the main window, there is a link: "Click on status icons for further information". At the very bottom, there is a navigation bar with tabs: "Display Control", "Display Offset", "FTP" (which is highlighted in blue), and "IP Ping". To the right of the navigation bar, the date and time are displayed as "Monday 8th July 2019 15:57".

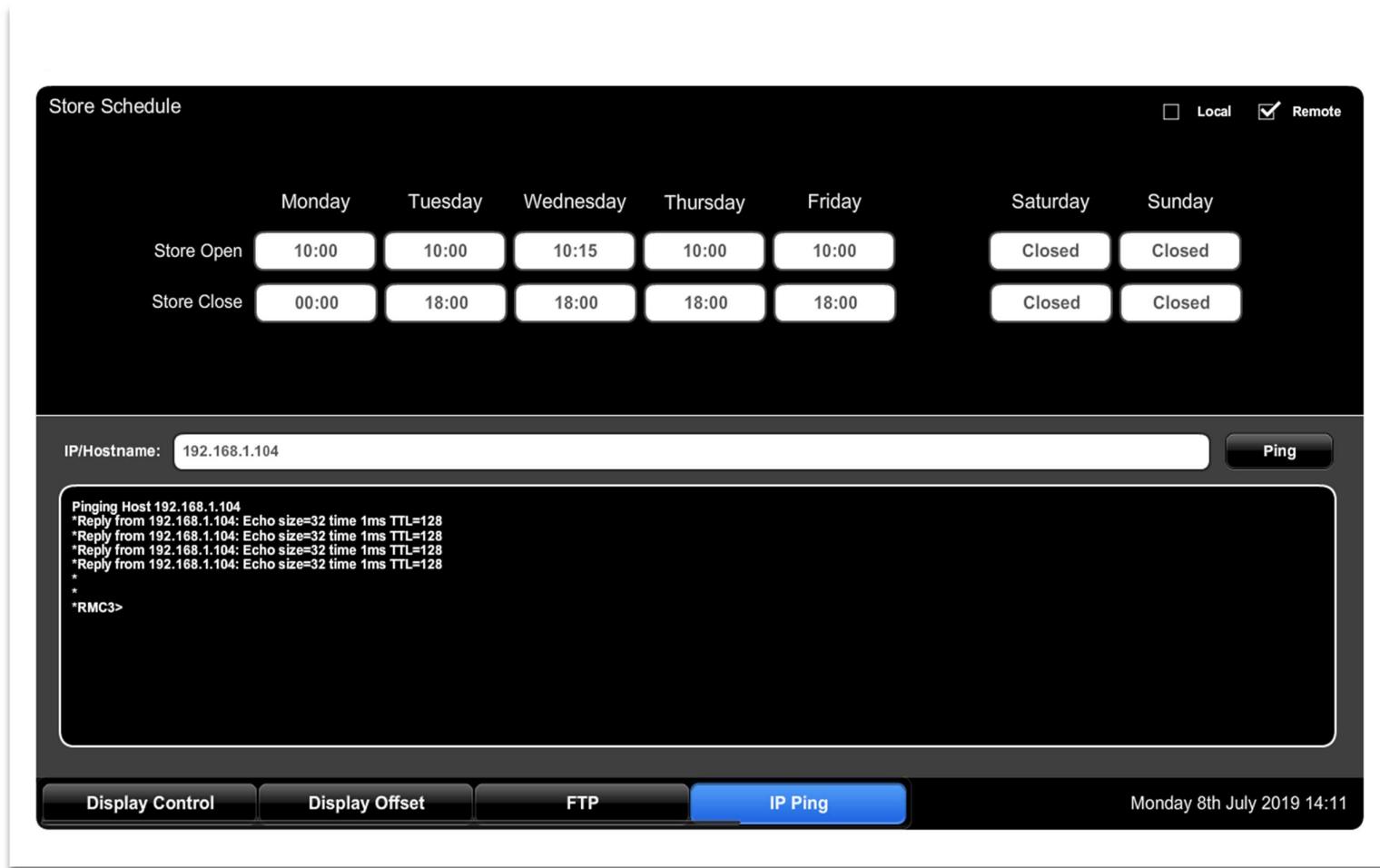
SystemConfig.csv download and install status report



Multipurpose keyboard for entering text into any relevant field



Multipurpose keypad for entering numerical value into any relevant field



Diagnosis tool for testing IP connectivity to any LCD or IP device on banks LAN

Store Schedule

Local  Remote

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Store Open	10:00	10:00	10:15	10:00	10:00	Closed	Closed
Store Close	00:00	18:00	18:00	18:00	18:00	Closed	Closed

Hour  Minute

Day  Month  Year

NB: Set internal SNTP time server of processor via [Toolbox](#) | [System Info](#) | [System Clock](#)

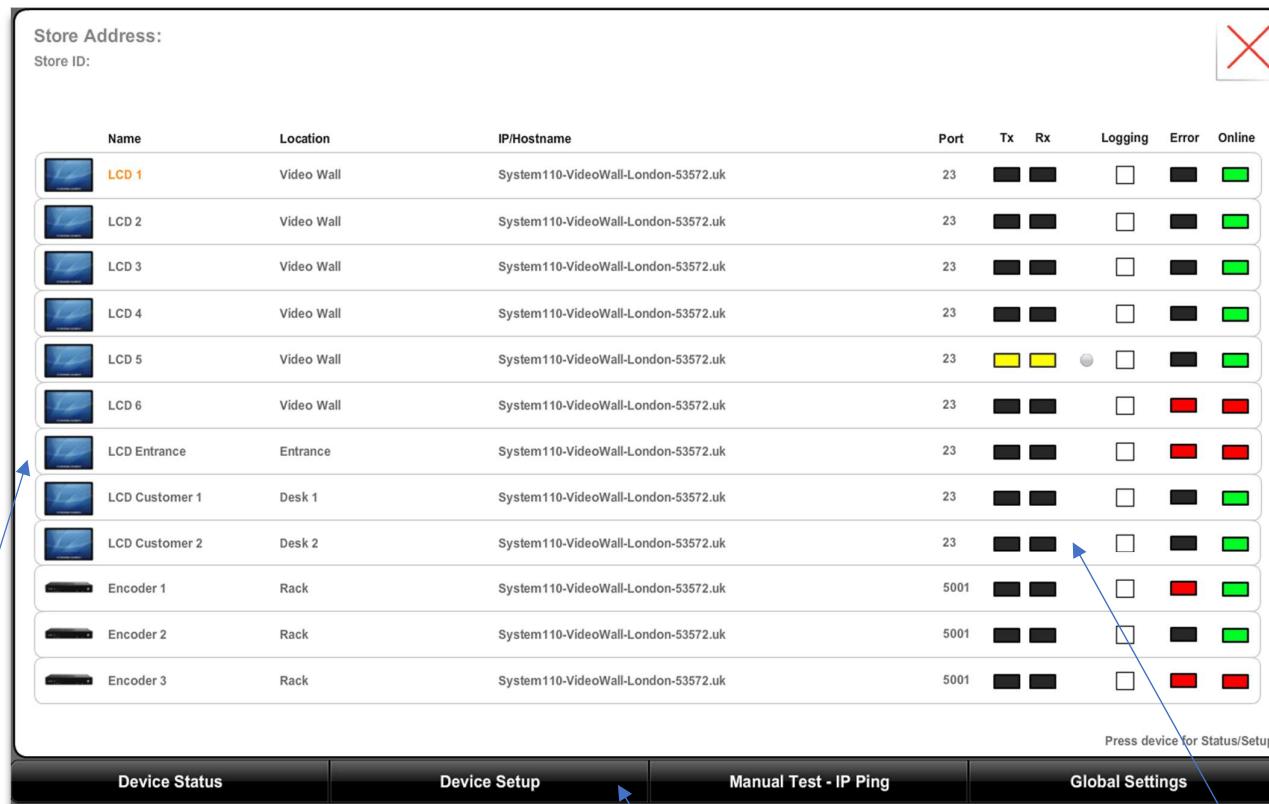
[Display Offset](#) [FTP](#) [IP Ping](#) [System Time Date](#)

Monday 8th July 2019 14:13

Set internal time date of processor

## 7. High St Phone Store London (Pilot Only)

### Digital Signage - Monitoring and Diagnostics



The screenshot shows a monitoring interface for a digital signage system. At the top, there are fields for 'Store Address:' and 'Store ID:', followed by a red 'X' button. Below is a table of devices with columns for Name, Location, IP/Hostname, Port, Tx/Rx activity, Logging, Error, and Online status. A note at the bottom says 'Press device for Status/Setup'. The footer has tabs for Device Status, Device Setup, Manual Test - IP Ping, and Global Settings.

Name	Location	IP/Hostname	Port	Tx	Rx	Logging	Error	Online
LCD 1	Video Wall	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
LCD 2	Video Wall	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
LCD 3	Video Wall	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
LCD 4	Video Wall	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
LCD 5	Video Wall	System110-VideoWall-London-53572.uk	23	[yellow]	[yellow]	<input checked="" type="radio"/>	<input type="checkbox"/>	[green]
LCD 6	Video Wall	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[red]	[red]
LCD Entrance	Entrance	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[red]	[red]
LCD Customer 1	Desk 1	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
LCD Customer 2	Desk 2	System110-VideoWall-London-53572.uk	23	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
Encoder 1	Rack	System110-VideoWall-London-53572.uk	5001	[solid]	[solid]	<input type="checkbox"/>	[red]	[green]
Encoder 2	Rack	System110-VideoWall-London-53572.uk	5001	[solid]	[solid]	<input type="checkbox"/>	[solid]	[green]
Encoder 3	Rack	System110-VideoWall-London-53572.uk	5001	[solid]	[solid]	<input type="checkbox"/>	[red]	[red]

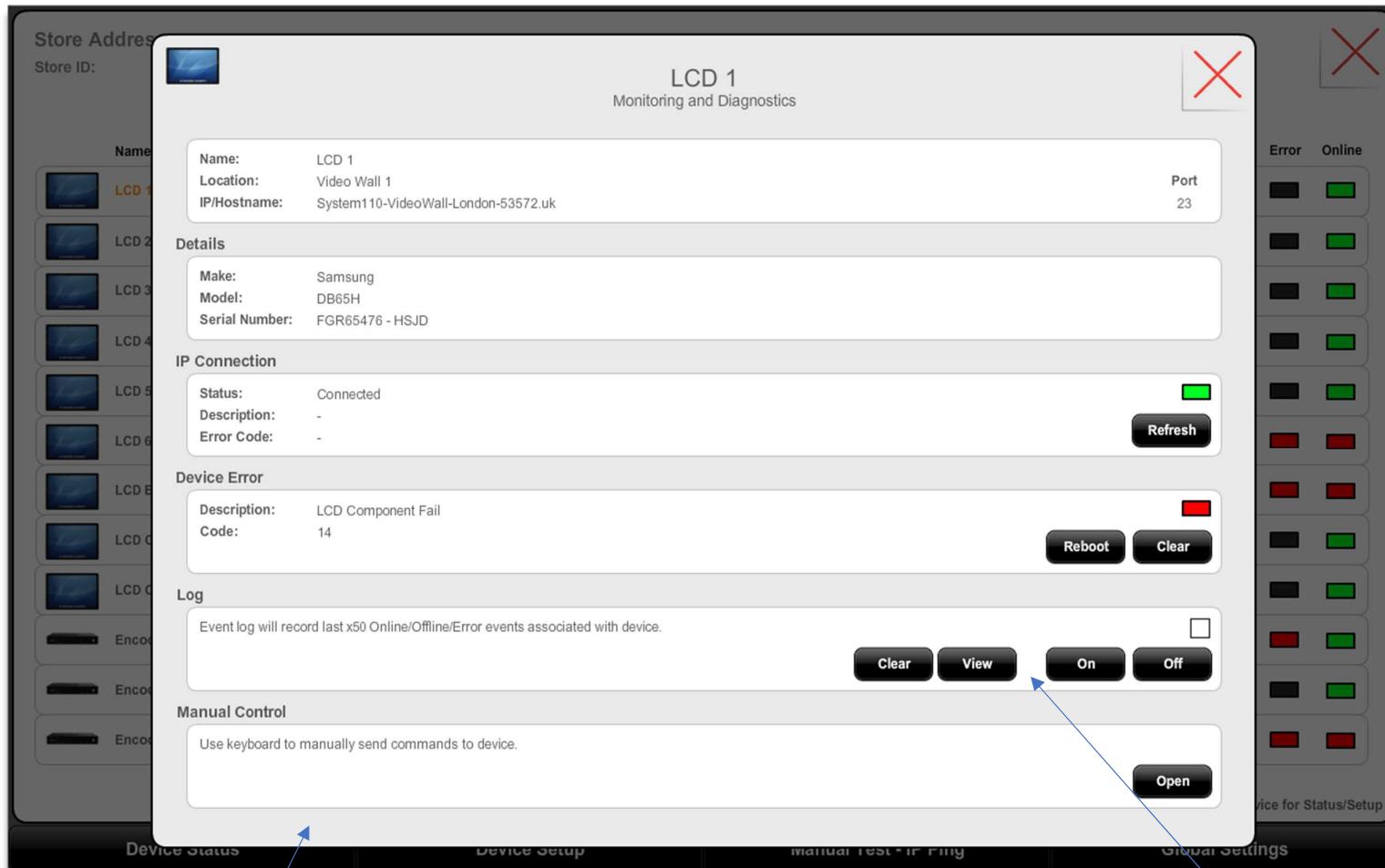
Press device for Status/Setup

Device Status    Device Setup    Manual Test - IP Ping    Global Settings

Dashboard provides an overview and status of the branches digital signage components on LAN

Real time Tx/Rx activity, online/error

Footer to browse pages of dashboard



Select device to view all associated fields, controls and attributes

Each device has its own log recording the last x50 online/offline/error events

Device Log to view all online/offline/error events associated with device

**Store Address:**

Store ID:

**Setup**  
Configure Device Entry

**Device Type**: LCD

Name	Error	Online
LCD 1		
LCD 2		
LCD 3		
LCD 4		
LCD 5		
LCD 6		
LCD E		
LCD C		
LCD O		
Encoder 1		
Encoder 2		
Encoder 3		

**Name**: LCD 1

**Location**: Video Wall

**IP/Hostname**: System110-VideoWall-London-53572.uk      **Port**: 23

**IP Connection Test**

Status: Connected	
Description: -	
Error Code: -	

**Test**

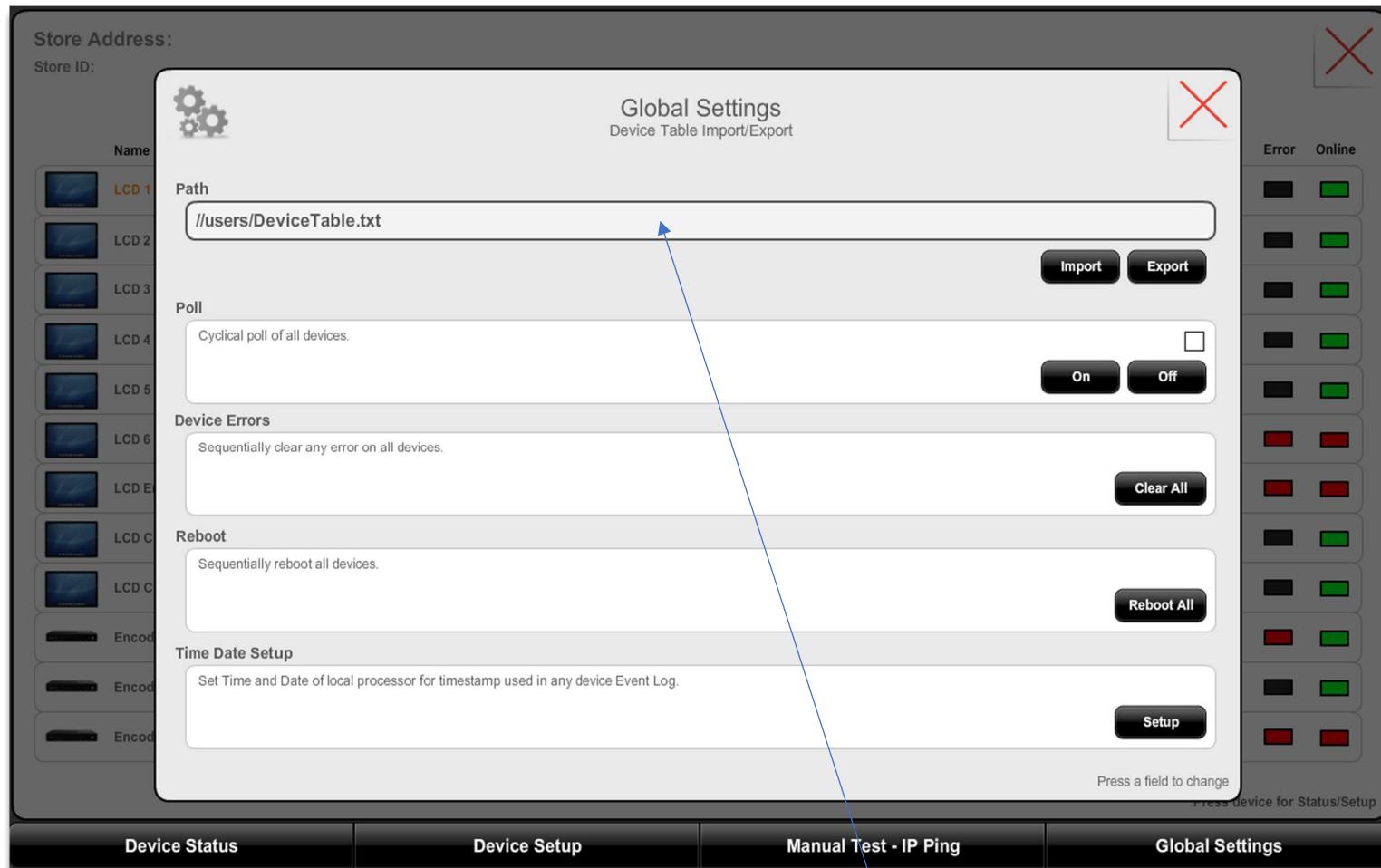
Press a field to change

**Add** **Remove** **Update**

**Device Status** | **Device Setup** | **Manual Test - IP Ping** | **Global Settings**

Add/remove device, press on field to open keyboard to enter attribute details

Test IP connectivity to device



Global setup of parameters and behaviors of the dashboard

Save/load all device definitions for rapid deployment and backup