



Vestel VSign Digital Signage Platform

SERVER & CLIENT SPECIFICATIONS

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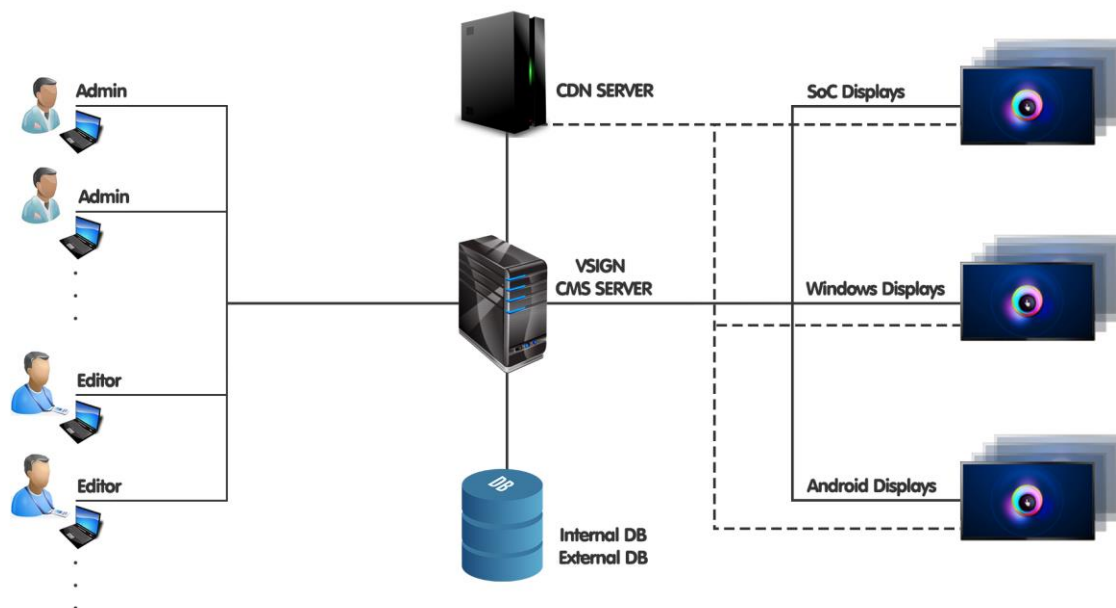
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## 1 VSIGN SYSTEM REQUIREMENTS

Number of displays	0 - 100	100 - 1000	1000 - 10000
OS	Ubuntu 16.04 lts or Windows Server 2008 or higher		Ubuntu 16.04 lts or Windows Server 2008 64 bit or higher
CPU	Intel Xeon E3-1280 or better	Intel Xeon E5-2400 or better	Intel Xeon E5-4620 or better
RAM	4 GB or more	8 GB or more	16 GB or more
HDD	At lease 120 GB of disc space is recommended Should be increased depending on the size of content uploaded to the server		

## 2 VSIGN SYSTEM ARCHITECTURE



Vsign system architecture basically consists of 3 main parts as described below:

- Users: Users connect to the server to manage CMS server and displays. Different kind of users with various access levels can be created by system admins.
- CMS Server: Vsign application runs on Vsign CMS Server. It contains CDN server and internal or external databases.
- Displays: Displays are the devices that connects to CMS and CDN Server to download and display contents assigned by CMS users.

## 3 VSIGN CLIENT SPECIFICATIONS

Vsign client specifications for current Vsign release are listed in following sub-sections. Some specifications that are seen as not supported will be supported for next Vsign releases.

### 3.1 SPECIFICATIONS FOR SCHEDULING

In the following table, there is seen a list of scheduling features provided Vsign CMS and also there is check list for each display client if the feature is supported or not.

SCHEDULE PROPERTIES	Windows	Android	SIGNAGE MONITOR
Priority Scheduling	YES	YES	YES
Recurring Events	YES	YES	YES
Concurrent Events	YES	YES	YES
Display Order of Events	YES	YES	YES
Display Group Scheduling	YES	YES	YES
Default Layout Scheduling	YES	YES	YES
Campaign Scheduling	YES	YES	YES

Table 1: VSign Display Clients – Common Scheduling Features

### 3.2 SPECIFICATIONS FOR LAYOUT

In the following table, there is seen a list of layout related features provided Vsign CMS and also there is check list for each display client if the feature is supported or not.

LAYOUT PROPERTIES	Windows	Android	SIGNAGE MONITOR
Image Module	YES	YES	YES
Video Module	YES	YES	YES
Text Module	YES	YES	YES
RSS/Ticker	YES	NO	YES
Web Page	YES	NO	YES
Flash	YES	NO	NO
Widgets (Clock, Weather)	YES	YES	YES
External Video (UDP Live Stream)	NO	NO	NO
Image File Formats (jpg, jpeg, png, bmp, gif)	YES	YES (Jpg, jpeg, png, bmp)	YES
Image Scale (Center, Stretch)	YES	YES (Center only)	YES
Image Horizontal Align (Left, Center, Right)	YES	YES (Center only)	YES
Image Vertical Align (Top, Middle, Bottom)	YES	NO	YES
Video File Formats (wmv, avi, mpg, mpeg, mp4)	YES	YES (Mp4 only)	MPG, MPEG, VOB, MKV, MP4, MOV, AVI
Video Align (Center-Middle)	YES	YES (Center only)	YES
Video Loop	YES	YES	YES
Video Mute	YES	NO	YES
Layout Background Image	YES	YES	YES
Region Loop	YES	YES	YES
Overlapping Regions (Layer)	NO	YES	YES
Web Page Transparency (Eg. For Text over Image)	NO	YES	YES
Multiple Videos Playing Concurrently in one Layout***	YES	YES	NO
Offline Mode Layouts in USB**	NO	YES	YES
Layout Preview	YES	YES	YES

*Table 2: VSign Display Clients – Common Layout Features*

**Note:** For SIGNAGE MONITOR clients, it is recommended to select image resolution compatible with the selected layout region resolution in order to keep image rendering performance high. For example, if the resolution of the layout region is 1280 x 720 and if an image content is desired to add in this region, select image size smaller or equal to 1280 x 720.

**Note\*\*:** All Vsign clients will also support offline mode in further Vsign releases. In offline mode, there is no need to have Vsign Content Management System. Vsign clients will play layouts saved in USB. The layouts can be generated by Vsign Content Creation Tool or by Vsign Content Management System.

**Note\*\*\*:** The resolution of the layout and each display connected to PC can be required to modify for Vsign Windows Client in order not to have performance problems such as when multiple videos are playing concurrently in the layout and multiple displays are connected to PC. Choosing the ideal resolution depends on system specifications such as display card specifications, number of displays connected to PC.

### 3.3 SPECIFICATIONS FOR DISPLAY PROFILE

In the following table, a list of display related features are shown, common for each Vsign client, provided Vsign CMS and also there is check list for each display client if the feature is supported or not.

DISPLAY PROFILE SETTINGS	Windows	Android	SIGNAGE MONITOR
Data Collect Interval	YES	YES	YES
Screen Shot	YES	YES	YES
Media Inventory	YES	YES	YES
Screen Dimensions and Location (left, top, width, height)	YES	YES	YES

*Table 3: VSign Display Clients – Common Display Profile Features*

In the following table, a list of display related features specific to Windows Client is shown and also there is a check list for whether the feature is supported or not.

DISPLAY PROFILE SETTINGS FOR WINDOWS	SUPPORTED?
Log Level (Audit, Information, Error, Off)	YES
Enable Mouse	YES
Duration for Empty Layout	YES
Expire Modified Layouts	YES
Notify Current Layout	YES
#Maximum Concurrent Downloads	YES
Use CEF as the Web Browser	YES
Screen Shot Interval	YES
Download Window Start Time	NO
Download Window End Time	NO
Enable PowerPoint	NO
Enable Stats Reporting	NO
Client Information Screen	YES
Enable Shell Commands	NO
Shell Command Allow List	NO
Show icon in task bar	YES
Enable Double Buffering	YES
Cursor Start Position	YES
#Concurrent File Upload Limit	YES

*Table 4: VSign Windows Client – Display Profile Features*

In the following table, there is seen a list of display related features specific to Android Client and also there is check list if the feature is supported or not.

DISPLAY PROFILE SETTINGS FOR ANDROID	SUPPORTED?
Screen Orientation (Landscape, Portrait, Reverse Landscape, Reverse Portrait)	YES
Blacklist Videos	NO
Use a SurfaceView for Video Rendering	NO
Start during device start up	YES
Automatic Restart	NO
Start Delay for Device Start up	YES
Action Bar Mode (Timed, Hide)	NO
Action Bar Display Duration	NO
Notify Current Layout	NO
Expire Modified Layouts	NO
Screen Shot Interval	NO
Use CMS time	YES
Enable Caching of Web Resources	NO
Store HTML resources on the Internal Storage	NO
Download Window Start Time	NO
Download Window End Time	NO
Update Window Start Time	NO
Update Window End Time	NO
Action for Screen Shot Intent	NO
WebView Plugin State	NO

*Table 5: VSign Android Client – Display Profile Features*

In the following table, there is seen a list of display related features specific to SIGNAGE MONITOR Client and also there is check list if the feature is supported or not.

DISPLAY PROFILE SETTINGS FOR SIGNAGE MONITOR	SUPPORTED?
Log Level (Audit, Information, Error, Off)	Error and Off
Screen Orientation (Landscape, Portrait, Reverse Landscape, Reverse Portrait)	Landscape only
Start during device start up	YES
#Concurrent File Upload Limit	YES

*Table 6: VSign TV Client – Display Profile Features*