Player 11.05

Welcome to the Player Documentation homepage for release 11.05. The sections below are grouped to help you find the areas most likely to assist you:

- **Where to Begin** points you towards the right player for your needs, or offers an overview of the changes to the Players since the last major release, depending on your history with the product.
- **Player Manuals** takes you to a copy of the documentation for the particular Player you want to use.
- **Related Areas** takes you to the other products of Enterprise, the prior Player version, or to other versions, depending on your interests.

Keeping your Scala Maintenance Subscription up to date will give you access to the latest updates and upgrades from Scala. These are the dates specific to this release:

- **Scala Maintenance Start Date**: March 1, 2018
- **End of Support Date:** not yet defined.

For more information about maintenance and renewal, see Updating Your Network.

Where to Begin

New Users

- Choosing the right Scala Software License and Media Player Hardware

Experienced Users

- What's New
- Release and Update Notes
- Advanced Configuration Options for Windows Player
- Advanced Configuration Options for Android Player

Player Manuals

- Player Software
- Player Hardware

Related Areas

For online documentation related to our other products in this same release version:

- Designer 11.05
- Content Manager 11.05

To access the prior version of Player:

- Player 11.04

For Further Information:
Documentation for the day-to-day operational management of your players can be found in Managing Network Devices.

Other Resources

The following resources are also available:

- Support provides technical support numbers, FAQs, and a User Forum.
- Scala Maintenance has more information about maintenance expiration and staying up-to-date.
- Professional Services and Training are available to help you get the most out of your digital signage network.
- Customer Assets provides valuable links and inspiration, such as the Software Download Center and example templates.

Release and Update Notes

Scala is constantly working to improve the customer experience by providing updates on a regular basis. These updates reflect current security trends and resolutions to issues that have been reported by our customer base.

These updates are only available to customers under Scala Maintenance. If your Scala Maintenance date has lapsed, you can renew your Scala Maintenance Subscription by contacting your Scala Certified Partner. If you are need further assistance, our Scala sales team will be happy to help.

The list of releases can be found below, with the most recent version always being at the top of the list. Click the release version label to review the summary of changes you are interested in.

Versions Within This Page

- Release 11.05 – March _____, 2018

Related Areas

- Scala Enterprise Homepage
- Scala Enterprise Release Notes
- Designer 11.05 Release and Update Notes
- Content Manager 11.05 Release and Update Notes

Release 11.05 – March _____, 2018

New Features

- PC Players can now use Install Windows Update maintenance task to remotely install a Microsoft update on a player. See Performing Remote Updates for more information.

What's New in 11.05

Note:
To view what is new in our other Scala Enterprise products, see What's New in Content Manager and What's New in Designer.

Install Windows Update Maintenance Task

Player 11.05 now accepts the installation of comprehensive Windows updates on a PC Player network with the Install Windows Update maintenance task—just download the update and create the maintenance job. See Performing Remote Maintenance on the Player Network for more information.

For Further Information...
- Read the full update notes for complete details on changes made to this release in hotfixes.
- Start at the Player 11.05 homepage for complete details on Player.

Choosing the right Scala Software License and Media Player Hardware

Introduction

The simplest way to pick the optimal combination of Player software and Media Player hardware that is best for you is to first figure out what you want to do.
As you can see in this illustration, this retail store generates a lot of data, and also offers a lot of opportunities to present that data. While all industries may not have this much data floating around in the ether of their location, they have similar metrics than can be gathered and presented electronically.

Other Things to Consider When Choosing a Player

- **Mission Critical vs Non-Mission Critical**: What is the importance of the content? (For example, is it something your company needs to display by law, or is it information about the Employee Picnic?
- **Location, Location, Location:** Where are the screen going to be located? In an area with high traiffc or in an area that very few people will see them?
- **Size, Resolution and Screen Configuration:** What are the specs of the screen
- **Number of Channels?**
- **Number of Zones/Frames?**
- **Local Integration:** How will it interact with other parts of your business?
- **Interactive or Passive**
- **Content, Content, Content**

Scala Enterprise Player Software

Versions of Scala Player software are available to run on Windows, Android, and coming 2018, Linux operating systems.

Licensing and capabilities of those are compared on the License Functionality Matrix.

Scala Media Players

Scala offers a range of in-house Media Players that are optimally paired with Scala Software Licenses. See specs on Scala Digital Signage Hardware, or view setup guides and other documents on Scala Media Players.

License Functionality Matrix

The following table shows the capabilities of the licenses available for Scala Player software. It is important that the Media player chosen as the playback device is compatible with each license's feature set.

Release Notes 2018 - Matrix.pdf

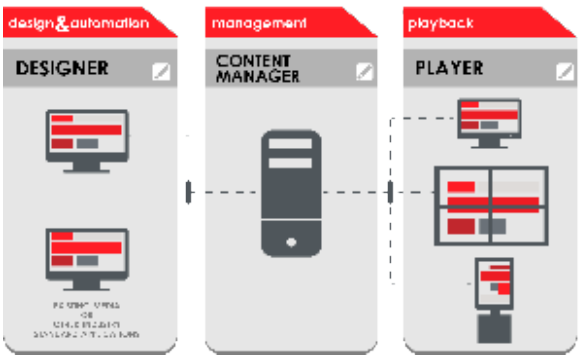
Player Software

Introduction

Scala Player is part of the Scala software system that allows users to play content scheduled in Content Manager.

- Player provides stable, reliable multimedia playback for virtually any environment including entertainment, retail, government, finance, and education.
- Player downloads updates while playing, and new messages show up according to schedule.
- Players also report their status back to Content Manager so you can monitor network status remotely.

The Player software is designed to run on a dedicated PC. The system should be set up to automatically log in and run Player at startup. In a Scala Enterprise network, Player receives and displays content that has been created in Designer or uploaded to Content Manager.



- Creative designers use **Designer** to create Scripts and Templates. Media can also be uploaded directly to Content Manager.
- Message editors use **Content Manager** to create and edit Messages using Templates.
- A schedule manager works in **Content Manager** to set up Playlists consisting of media, Scripts and Messages, and schedules when the Playlists will appear.
- A network administrator uses **Content Manager** to manage and monitor Players, ensuring content is playing properly

Software Guides

Player Software for Windows

Player Software for Android

Related Links

For instructions on how to set up your Player within Content Manager, see Creating a Player.

Player Software for Windows

Jump Directly To:

System Requirements

Before installing Player, make sure you have a system that meets Scala's recommended specifications. See the Player Hardware section for further details.

Installation Checklist

Setting up a Player in Content manager
Since the Player relies on a pre-existing player entry in Content Manager, it is important to define the player first in Content Manager **BEFORE** installing and configuring the player.

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your PC player.

See Creating a Player in the Content Manager for more information

Information you'll need to complete the Player Configuration:

- **Content Manager URL:** This typically looks like: http://hostname:8080/ContentManager or http://1.2.3.4:8080/ContentManager (where 1.2.3.4 is the Content Manager IP address).
- **Player user name and password:** Can be found in Content Manager under **Network/ Network Settings/Player Authentication**. The user name defaults to player_[name of your network] and the password is '**ChangeThePassword**'. It is recommended that these credentials be changed.
- **Proxy server:** If the Player is behind a proxy server, you will need to know its URL and, if required, user name and password for the proxy.
- **Screen settings:** Number of displays & channels the Player will have, and the screen resolution for the display.
- **Audio settings:** How audio will be connected (if required), particularly for two-channel players. If the sound card has surround sound, one channel can use front left/right and the other can use back left/right.
- **Scala Modules:** Which modules the player is going to use, and how they should be configured. For example, the Serial (RS-232) Module or TV Tuner EX Module.

Note:
Scala ("EX") modules are **EX**tension modules for the Player and may need additional license(s) which are controlled from Content Manager.

Installing Player Software

If you have a Scala pre-installed on your Media Player then this step can be skipped over and go to Configuring Player

Installing Scala Player is a simple process when followed closely. The install wizard will allow the user to quickly install the product. Here's what will be installed:

- Scala Player
- Windows Media Player
- DirectX
- Python (special Scala version)

Suggested components you may wish to install:

- **Flash**: Allow Player to show SWF files.
- **Acrobat**: Read Scala documentation.

Installation Steps

1. Insert the Disc

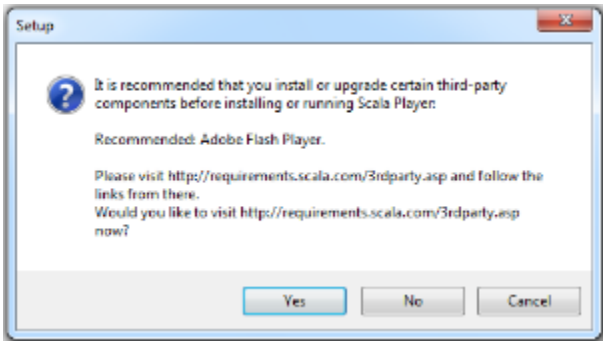
Insert the Player or Content Manager disc into your computer. The installer should run automatically.

Another option is to right click on Start and select Explore. Open the drive for the disc. Then run **setup.exe** by double clicking on the icon. Then choose to install Scala Player

2. Welcome

The Welcome dialog box offers the option of opening the Getting Started Guide in PDF format. Click **Next** to continue.

3. Third Party Components

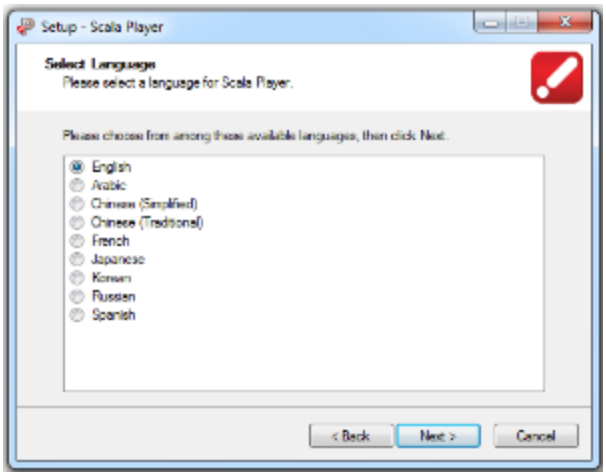


Here you can choose to install additional components which are recommended but not installed automatically. Click **Yes** or **No** to continue.

4. End User License Agreement

Select the **"I accept the agreement"** button. The full EULA can be read here. Click Next to continue.

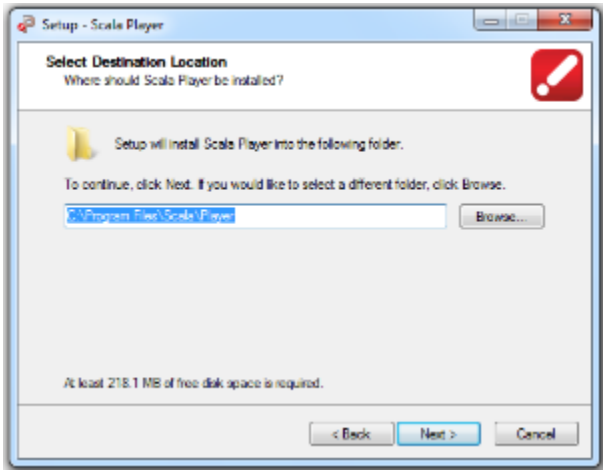
5. Select Language



Choose the appropriate language and click **Next**.

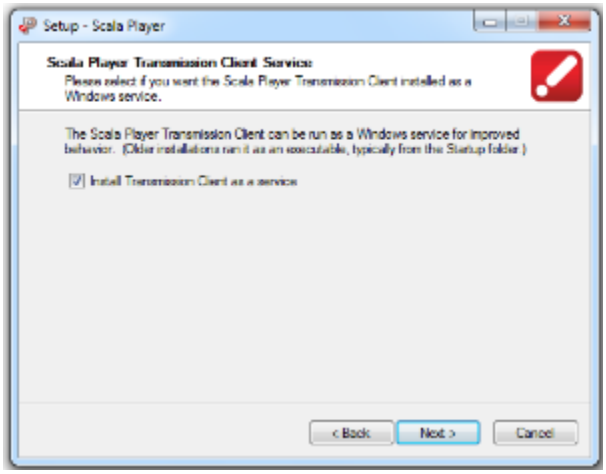
> **Note:**
> The language setting is for the Player Configuration program and does not impact content displayed by Player.

6. Select Destination Location



The installation path will default to the Program Files folder. If you want to change that location click the **Browse** button and select another location. Click **Next** to continue.

7. Transmission Client Service

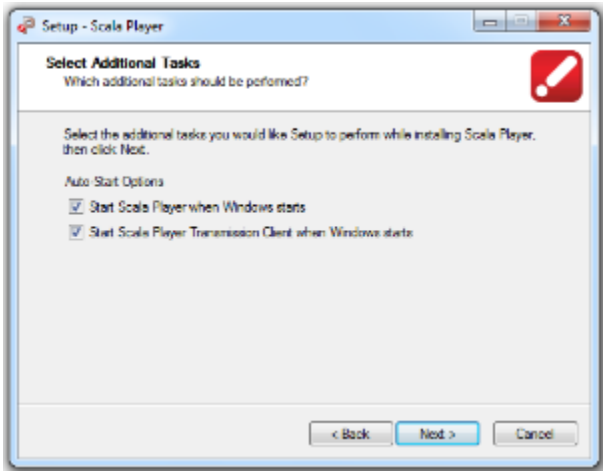


The Player Transmission Client can be installed as a Windows service instead of an application. This has the advantage of being remotely administered by most IT management applications.

> **Note:**
> When installed as an application, an icon appears in the Windows Task Bar. This does not appear when it is installed as a service.

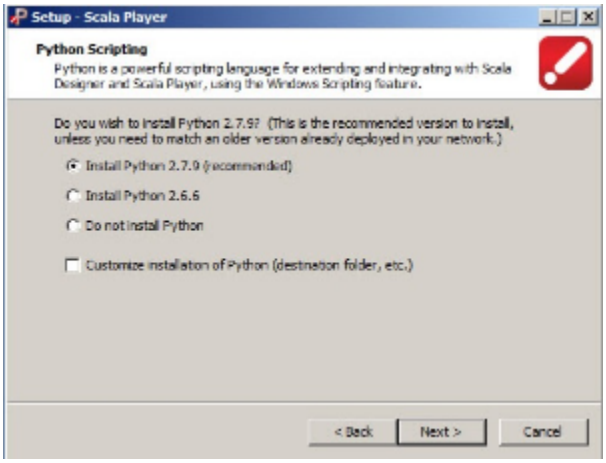
Make your selection, then click **Next** to continue.

8. Additional Tasks



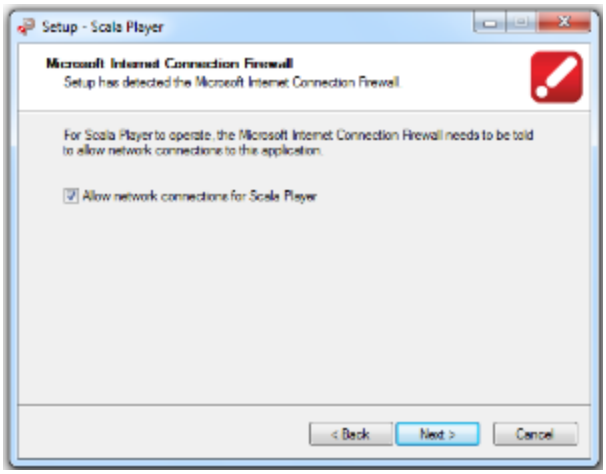
Normally you'd want the Player and Transmission Client to run at startup. If you are installing on a work system for testing and development, you may want to un-check these options. Click **Next** to continue.

9. Python Scripting Installation



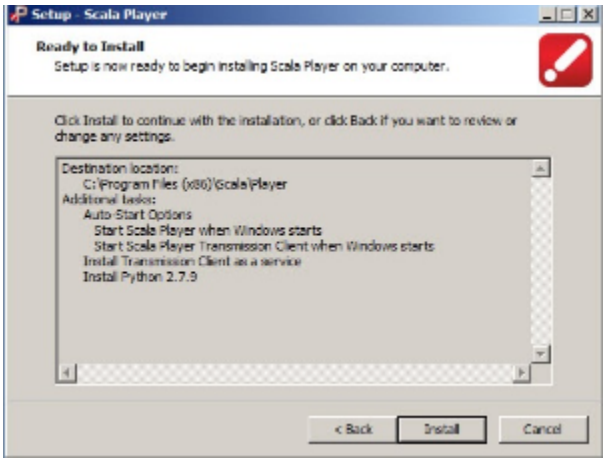
Player provides installation of the Python scripting language. An older version can be installed if you have scripts that rely on it. Click **Next** to continue.

10. Allow Network Connections for Player



The Microsoft Internet Connection Firewall must allow Player to access network connections. Click **Next** to continue.

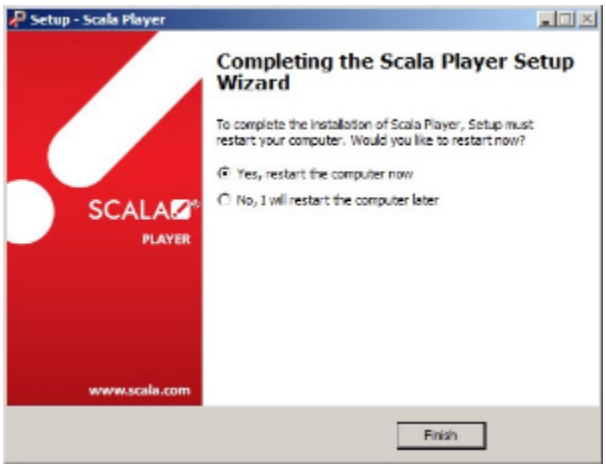
11. Ready to Install



You are now ready to install Player. Click **Install** to continue.

Player will be installed on your system. The file extraction process can be monitored with the progress bar. This may take several minutes. Additional 3rd Party installations may take place depending on what you selected earlier.

12. Installation Complete



Once the file extraction is complete, you will have the option of viewing the Release Notes and starting the Player Configuration program. Click **Finish**.

Configuring Player

The Scala Player Configuration program is the tool you use to set up the Player software on a Player machine. Every player in a network must be

individually configured using this utility. Configuration of player machines should be done after the definition of the players in Content Manager.

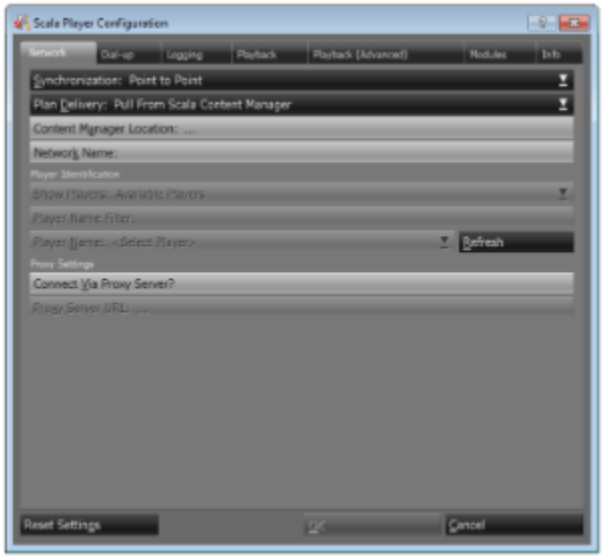
The key steps in configuration are:

1. **Network:** How the Player receives its plan updates from Content Manager.
2. **Playback:** Video and audio related options.
3. **Modules:** Any necessary module options.

If you did not run it from the Installer, open the Windows Start Menu and choose **All Programs > Scala Player > Scala Player Configuration**.

> **Tip:**
> If there's a button you are not familiar with, hover the mouse pointer over it to see the Tool Tip label. For even more detailed information, press the **F1** key, and then click on the button to learn more

Network

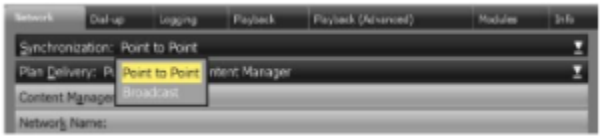


The Network panel contains options related to how the Player receives its "plan" (i.e.: its schedule and inventory of content) from Content Manager. Once that is set up, the player can be associated with a player entry in Content Manager.

The plan only contains the schedule and inventory of files. Each player compares its existing files with the inventory and downloads any new or updated files. File download is almost always via HTTP, and is configured in Content Manager, not Player.

> **Caution:**
> These settings must match the Plan Delivery of the corresponding player entry in Content Manager.

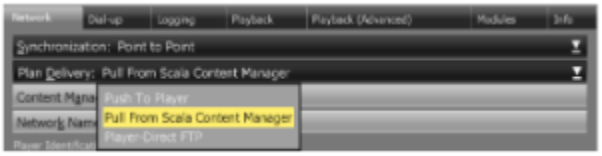
Synchronization



1. Click the **Synchronization** button to specify how player synchronizes its plan and media with Content Manager.
2. The choices are:
    a. **Point to Point:** Player synchronizes by individually communicating with Content Manager over HTTP or HTTPS.
    b. **Broadcast:** Player synchronizes by IP Multicast, HughesNet, or file transmissions.

The most common choice is **Point to Point**.

Plan Delivery

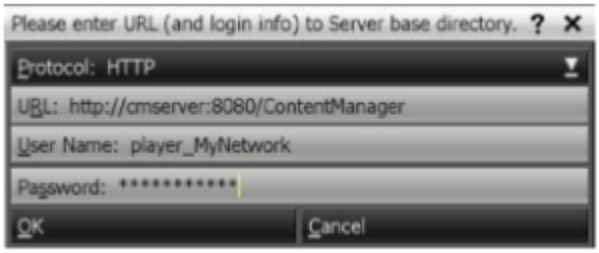


1. Click the **Plan Delivery** button to specify how the player retrieves its plan.

2. The choices are:
    a. **Push to Player:** With this option, Content Manager will save the player's plan in a shared folder. The player will retrieve content from Content Manager via HTTP.
    b. **Pull from Content Manager:** The player will get the plan directly from Content Manager via HTTP and download content via HTTP as well.
    c. **Player-Direct FTP:** This option enables an FTP server built into the player, which Content Manager will use to send the plan. The player will retrieve content from Content Manager via HTTP.

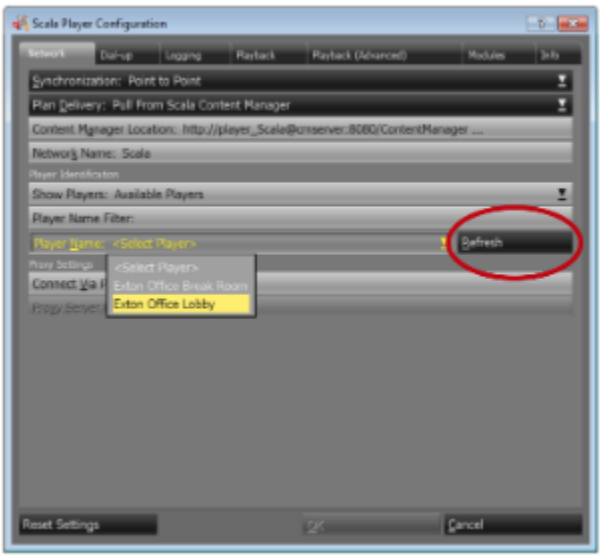
The most common choice is **Pull from Content Manager**.

Content Manager Location



1. Click the **Content Manager Location** button to specify the address and authentication to connect to Content Manager.
2. Choose the **protocol** in which to connect to Content Manager. The default is HTTP. If Content Manager PC was configured to support HTTPS, you can select HTTPS for the protocol choice.
3. Enter the **URL** to the Content Manager. The URL that you enter is case sensitive.
4. Enter the **Player Authentication** username used to connect to Content Manager.
5. Enter the password that is associated with the chosen username.
6. Click **OK**.

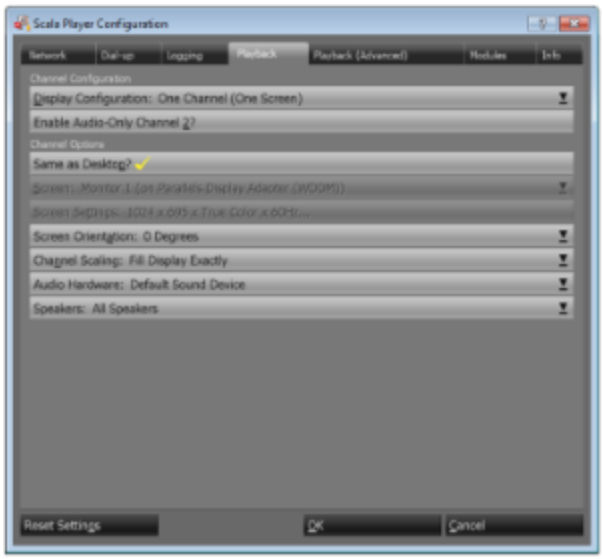
Network Name and Player Name



1. Click the **Refresh** button. This will search for any available Networks and players which you can use.
2. If you have entered the correct connection information for Content Manager, the Network Name will be automatically filled in, and the player Name button will become enabled.
3. If you see an error message, you may have entered an incorrect URL, user name or password. Or the server is not accessible from your computer.
4. If you have defined players in Content Manager, you can select the player that you want to use from the **Player Name** button.

> **Note:**
> The player is not fully associated with its entry in Content Manager until the first time it receives a plan. After that point, you cannot use the same player entry for another player unless you reset it in Content Manager.

Playback



The Playback panel contains options related to how content is displayed on the screen.

Settings include:

- Number channels
- Number of displays
- Screen resolution
- Screen rotation
- Audio settings

Note:
Certain options are only available when a dual-head graphics card is installed and may also depend on the monitor.

Note:
These settings must match the Display Setup of the corresponding player entry in Content Manager.

Display Configuration

A player can display up to two channels. Channels are defined in Content Manager. Many PCs have two video outputs, and the Player Configuration allows up to two displays. More displays are possible using advanced settings and techniques not covered in this guide.

To specify the number of channels and displays:

1. Click the **Display Configuration** button to determine how many channels the player will play and how many displays it is connected to.
2. The choices are:
    a. **One Channel (Window):** Player will run in a window on the desktop. Useful for testing on development PCs, and in special configurations where the player needs to coexist with other applications on the display.
    b. **One Channel (One Screen):** Player will run full-screen on a single display.
    c. **One Channel (Extended Across Two Screens):** Player will show a single channel spanning two displays. The channel created in Content Manager should have an appropriate size (eg: If each display is 1280x720, then the channel should be 2560x720).
    d. **One Channel (Cloned on Two Screens):** Player will show the same channel on both displays.
    e. **Two Channels (Two Screens):** Player will show two channels, one on each display. Additional audio settings will allow you to separate the sound from each channel between stereo front and stereo back.
    f. **None (Audio Only):** Display will be blank, and the player will only allow audio content. The most common selection is One Channel (One Screen).

    The most common selection is **One Channel (One Screen).**

Channel Options

If you selected **One Channel (One Screen):**

1. Choose whether to use the same resolution as the Windows Desktop, or specify a custom mode. Typically you would select **Same as Desktop**. A scenario where it would be beneficial to specify the mode would be if the playback resolution would make using Windows more difficult when doing troubleshooting on the player. In that case, you can set Windows to a more useable resolution and the player can be different.
2. Select a **Screen Orientation** (in 90 degree increments).
3. Select a **Channel Scaling** option to control how the channel will fill the screen. The choices are:
    a. **Fit Inside Display** (Preserves Aspect Ratio)
    b. **Fill and Trim to Display** (Preserves Aspect Ratio)
    c. **Fill Display Exactly** (stretches the script to the edges of the display boundaries).
    d. The most common selection is **Fill Display Exactly.**
4. **Click the Audio Hardware** button to customize how audio is handled. The choices are:
    a. **Default Sound Device**
    b. **No Sound**
    c. **<Name of your audio device>**

    The most common choice is to leave it selected on **Default Sound Device.**
5. Click the **Speakers** button to choose how audio is separated. The choices are:
    a. **All**
    b. **Stereo, Front Speakers**
    c. **Stereo, Back Speakers**
    d. **Mono, Front Left Speaker**
    e. **Mono, Front Right Speaker**
    f. **Mono, Back Left Speaker**
    g. **Mono, Back Right Speaker**

    The most common choice is **All**. The other options are more useful for two-channel players.

> **Note:**
> Some audio devices do not work in a multiple audio device environment. You may need to modify the audio settings in the Windows Control panel.

Some hardware vendors have a custom control panel applet to select the number of speakers. This custom applet typically overrides the setting used Sounds and Audio Devices.

Other **Display Configuration** settings have different sub-options:

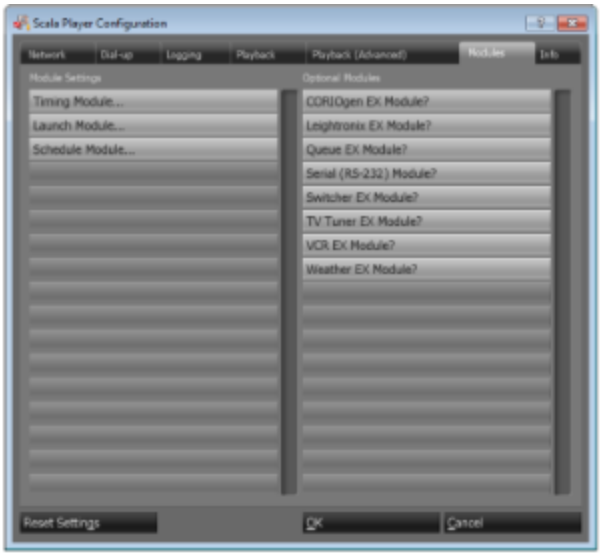
- **One Channel (Extended Across Two Screens):** Specify which screen is connected to which display, the screen resolution and the physical realtionship between the displays.
- **One Channel (Cloned on Two Screens):** Specify the relationship between the screens.
- **Two Channels (Two Screens):** Separate groups of settings for both channels.

Audio Only Channels

Players can be used for audio-only playback, with no visuals. You can either add a second audio-only channel to an existing visual channel, or disable visuals entirely and have one or two audio-only channels.

- To add an audio-only channel to an existing channel, click the **Enable Audio-Only Channel 2** button.
- To disable visuals, select the option **None (audio only)** under the **Display Configuration** drop down.
- Then use the **Audio Hardware** settings to determine which speakers to direct the audio.

Modules



Modules are components of Scala that have their own specific settings. Some are already enabled by default such as Timing, Launch and Schedule. Some are optional and must be enabled before using. Modules with “EX” in their name require enabling at the Content Manager and may require a separate license per player.

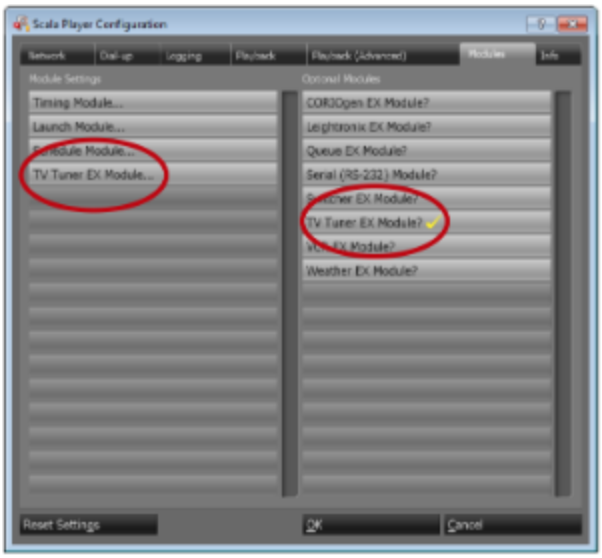
To set module options:

1. Click on the **Modules** panel to configure standard and optional modules. Settings for various Modules are in the left column. Optional modules are listed on the right.
2. A key module to look at is the **Timing Module**. This defines the format of the Time, Date and Weekday variables on the screen.

3. The **Launch Module** determines whether scripts using the Launch EX (which can run external programs from a Scala script) is allowed.
4. The **Schedule Module** lets you adjust the first day of the week used for weekly scheduling.

To enable and configure optional modules:

1. Click the button for a module in the right column.



2. The options for that module will become available on the left.

> **Note:**
> If you plan on using an optional module, you should license (if necessary) and enable it for Designer as well.

Saving Settings

When you have finished configuring this player, click **OK** to save the changes and exit the utility.

> **Note:**
> The changes you make do not actually take effect until the next time the Player Transmission Engine is restarted.

You can reset the settings back to default by clicking **Reset Settings**.

Running Player

The Player software is actually two programs that work together. The **Transmission Client** communicates with Content Manager and manages files that are downloaded, during in. The **Player** itself follows the schedule and plays the actual content.

> **Note:**
> During installation you had the choice of setting up the Transmission Client as a Service or a Program - unless noted the following text assumes that it was installed as a Program

On a typical player PC, these programs would be launched at startup; Or you can run Player and Transmission Client from the Windows Start Menu.

- If the Player is running but not the Transmission Client, it will continue to play whatever was scheduled until either all scheduled content has passed, or 30 days have elapsed from the last time the player communicated with Content Manager.
- If the Transmission Client is left running, but not the Player, new schedules and content will still be downloaded and ready for the next time Player is started.
- To exit Player, press the **ESC** key. To exit the Transmission Client, right click on its icon in the Windows Task Bar and select **Exit**. If the Transmission Client was installed as a service, use the Window Services console to stop it.
- The player initially displays a “Ready” script, indicating it is ready to receive its first plan from Content Manager. As soon as the plan is downloaded, the screen will go blank while the content for the channel is retrieved. As soon as the content is ready it will start playing.

Useful Configuration Tips

Virus Scanning on Players

Although the use of virus scanning software is strongly recommended for security maintenance in a Network installation, Scala does not recommend that such software be installed on players. Testing by Scala has shown that even virus scanning products by the most reputable companies are a stability hazard on computers for which 24-hour, 7-day-a-week reliability is crucial. The first line of defense in preventing virus infection of players is simply not allowing them to become compromised:

- Players should remain dedicated systems, never used for email, Web surfing, or other high-risk activities.
- Software other than Windows and Player should be installed on a player only if absolutely necessary, and should be scanned before installation.
- Content Manager should be frequently virus-scanned, so that all files transmitted to players are verified as clean.
- Player machines can be scanned for viruses periodically from a virus scanner running on a remote machine with a network connection to the player. Or virus checking software can be temporarily installed on the player.

Windows Services

For operation as a player, many standard services are not necessary. The following services, at a minimum, should be disabled on dedicated player machines:

- Alerter service
- Indexing service
- Messenger service

Windows Event Log

It is possible for a PC to freeze if its Windows event logs fill up and no further events can be recorded. To prevent this from happening, the Windows System, Application, and Security logs on all players should be set so that the oldest events are overwritten when the log becomes full:

1. Open the **Event Viewer**.
2. Right-click on the **System** log and choose **Properties**.
3. In the **Properties** sheet, make sure that **Overwrite events as needed** are enabled.
4. Click **OK.**
5. Repeat steps 2–4 for the **Application** and **Security** logs.
6. Close **Event Viewer.**

File Name Character Limit

The PC Player sets a limit on the number of characters that can be in a path name, which is the file name plus the path to the file. This limit is made of a combination of these parts:

1. The file name of the media, which is known by the affiliated Content Manager,
2. The path to the file when it has been downloaded to the Player, which the affiliated Content Manager will not know.

When the files are downloaded from the Content Manager, they are put into the Player content directories. Those directories are Player configuration options, and so the Player determines a portion of the media file's path.

The limit is around 250 or so characters. Cala recommends that you keep the number of characters in the filename below 50.

Specialized Options

Playback (Advanced)

The **Playback Advanced** panel allows the user to decide on options to conserve video memory. These options allow the user to set limiting texture size, rounding texture size, reducing colors, texture compression and conserving buffers as choices to conserve memory. This is only necessary on PCs with limited processor and/or graphics capabilities.

Logging

The Logging panel has options related to the amount of detail the Player logs contain and how often the Player reports its activity back to Content Manager.

- **Logging Detail Level** has two choices, Normal and Diagnostic. Only enable Diagnostic when you are troubleshooting a problem.
- **Number of Days to Keep Logs**: You can choose the number of days the software should keep the Player event/error logs. This will not impact the Player billing logs, as they are deleted once sent to Content Manager, if the Playback Audit Module is properly activated and configured. Otherwise billing logs will always be kept on the Player.
- **Alert Content Manager if the Player Is Not Running** option is on by default. The Player will notice if its playback window has been closed and automatically send an alert to Content Manager if this happens. You can turn it off to avoid unnecessary alerts if a Player machine needs to be used for some purpose other than Scala playback.
- **Minutes to Wait Before Sending Alert** – If Alert Content Manager if the Player is Not Running? option is enabled, this value allows you to specify the amount of time the Player waits before sending an alert to Content Manager. The default value is one (1) minute.

Info

You can view version information on the various software modules that make up the Player software by selecting the Info panel.

Player-Direct FTP

This option is used for networks that have Content Manager deliver the plan file directly to the player using the player's built-in FTP server. When

you choose Player-Direct FTP, you do not need to enter a site name or username—those are established automatically. All that is required is a password/confirm password. Enter a password of at least eight characters. (Only asterisks appear.). This must match the password that you used for Player-Direct FTP in the Content Manager Player Properties form.

Broadcast Distribution

In a typical network, the communication between Players and the Content Manager server is “Point-to- Point”, meaning that each player individually downloads its plans and media from the server. This uses standard internet HTTP(S) technology which is easy to deploy and there are tools that can be used to ensure that such a network can scale well.

However, there is a different way to distribute data, which is to broadcast it. When broadcasting, a signal goes out simultaneously to a group of Players, all of whom listen to the data being broadcast at the same time, in parallel. From the broadcast, each Player picks out the data it needs and processes it accordingly. In the Network tab, when you set Synchronization to Broadcast, the following options appear:

Driver Type

Choose from:

- IP Multicast
- File Delivery
- HughesNet

Click the **Configure** button to configure the driver type you have selected.

Dial-up

Communications in a Network can use modems rather than Ethernet cards, by taking advantage of the dial-up networking capabilities in the Windows operating system. The steps required to configure dial-up are a matter of creating connections in Windows Dial-up Networking and using that entry in the Player configuration.

Troubleshooting

If your player is not receiving new plans or is not playing what it should be playing, below are some settings you can check. If the issues appear to be network-wide, start by checking Content Manager. If they are isolated to one or more players, check the players first (see steps below).

Content Manager

- Check in **Content Manager > System > Administration > License Status** to see if the License file has been downloaded and is current.
- Check to see if the Content Manager and Player are using the current Release. In Content Manager, navigate to **System > Administration > Server Settings** and select the **System Information** tab. In the Player Configuration, select the **Info** tab.
- On the Content Manager server, go to **Start > Settings > Control Panel**. Double-click on **Administrative Tools**, then **Services**. Make sure the following services are running:
- - Apache Tomcat
  - PostgreSQL Database Server
  - Scala Transmission Server
- Check the Content Manager and Transmission Server Service IC.log file for errors. Shortcuts to the log folders are in the Start Menu.
- Try rebooting the Content Manager system.

Player

On the Player system, check to see if the Player Transmission Client is running. This is indicated by an icon in the Windows task bar.

> **Note:**
> If the Player was installed with the option to make the Transmission Client as a service, the icon will not be there and you will need to check the Windows Services console.

In the Player Configuration tool, check to see if you are able to connect to Content Manager, by Selecting the “Refresh” button. If so, the Player should load the Network name and no error message will appear.

You can also diagnose the network connection to Content Manager outside of Player:

- Open a web browser and see if you can connect to: http://servername:8080/ContentManager
- Open a Command Prompt and try to Ping the Content Manager server.
- In a Command Prompt, try to Telnet to the server using port 8080.

Check the Player’s IC.log for errors. (The shortcut to the log folder is in the start menu).

> **Note:**
> This is one of the most significant locations to identify issues with your system. The most recent error is at the bottom of the log file.

Players upload their log files to Content Manager, which you can access by going to Player Properties and clicking on the Logs tab. But if you have access to the player directly, you can see the log immediately, instead of waiting for it to be uploaded.

Touch Screen Issues

The Scala PC Player does not provide multitouch support for Webclips. We do not support touch input coupled with display rotation performed by Scala, or webclips rotated in Scala Script.

If you have additional questions, please contact your Scala Sales and Support Partner or visit us on the web at www.scala.com.

Player Codes

The problem codes are to help sort out what is going on. The entire error text, or in many cases the entire log, is needed to understand the root cause.

Not every problem can occur in typical configurations. Certain problem codes are documented here, but may never occur in the field, or may never occur in your particular configuration.

List of Scala Problem Codes

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
0	Unknown problem	Unknown problem	No specific problem code was available.	Yes	Alert
1	Internal problem	Internal problem. Software is not functioning properly. Rebooting is suggested. Please contact Scala Technical Support.	Indicates there is an internal problem in the software.	Yes	Alert
2	Rebooted due to problem	Software was rebooted due to an unhandled failure. Please contact Scala Technical Support.	An internal problem in the software led to a reboot.	Yes	Alert
3	Abnormal termination	<ProductName> ter minated abnormally. This may indicate that the software failed to start, or encountered a driver error or other condition that caused it to fail. The Windows application logs, or Dr. Watson logs may contain more details.	The watchdog detected that the application terminated unexpectedly and restarted.	Yes	Alert
4	Player not running	This <ProductName> is not displaying, because the Playback Module is not running. It may have failed to start or someone may have manually closed it. Playback will not resume automatically, and some intervention, like a Reboot command, is needed to resume playback.	Player graphical engine fails to start up.	Yes	Alert

5	Transmission Client not running	This <ProductName> cannot be contacted by Scala Content Manager, because the Transmission Client Module is not running. It may have failed to start or be misconfigured.	Player network engine fails to start up.	Yes	Alert
6	Script played incorrectly	Script "<ScriptName>" played incorrectly.	Indicates a general error playing back a script, including the failure to find Linked Content. (Where warranted, certain specific errors will have their own problem codes.)	Yes	Alert
7	Transmission Client not Admin	Some features, including Install System File and Install Software Update, may not work because Administrator-level account privileges are required.	Player transmission client detects some features may not work because administrative privileges are required.	Yes	Alert
8	Anonymous FTP allowed	There is a security hazard: the FTP server is configured to allow anonymous login.	An FTP server is detected that allows anonymous log in.		
9	Broadcast receive mis-configured	Broadcast transmissions cannot be received because of a configuration problem.	Receive Book reports an error with the configuration that will prevent the receive book from getting broadcast transmissions.	Yes	Alert
10	Broadcast receive failed	A broadcast job was not received because of insufficient resources. Note that it is possible, although unlikely, that the broadcast job will be received on a future attempt.	Receive Book reports an error getting a broadcast transmission due to lack of resources, most likely lack of disk space	Yes	Alert
11	No Transmission Client tray icon yet	The Transmission Client Module does not yet have a tray icon, because it is having trouble creating one. This problem is only a delay and will be reported again if it persists.	Player transmission client is having trouble creating its tray icon.		

12	No Transmission Client tray icon	The Transmission Client Module does not have a tray icon, because it failed to create one after repeated attempts.	Player transmission client gives up on creating its tray icon.		
13	Failed to delete unused content	Some disk space could not be re-used, because the <ProductName> failed to delete some files associated with old content that previously was discarded.	Player health reporting subsystem has given up sending heartbeat information.		
14	JPEG possibly corrupt	The image "<FileName>" may not display correctly because it is corrupt or invalid.	The JPEG library encounters a file that seems to be corrupt or malformed.		
15	Module failed to start	Scripts may play incorrectly because the <ModuleName> Module cannot be started. If applicable, please verify any hardware for the <ModuleName> Module, or verify the <ModuleName>> Module settings in the <ProductName> Configuration.	A Module has a problem starting. This will most likely occur when the Module cannot obtain the necessary resources (i.e. the serial port).	Yes	Alert
16	FTP port 21 in use	The <ProductName> cannot receive jobs, because the internal FTP server could not be started. The most likely cause of this problem is that a third-party FTP server is already running on this system. Recommend disabling the third-party FTP server or reconfiguring the <ProductName> to receive jobs via the third-party FTP server.	Player transmission client cannot start the integrated FTP server because the port is already in use, and the FTP server is started on the default port. Note there is a different problem (and problem wording) if the an attempt is made to start the integrated FTP server on a non-standard port.		

17	FTP port in use	The <ProductName> cannot receive jobs, because the internal FTP server could not be started. The most likely cause of this problem is that another server product is already using port <PortNumber>. Recommend reconfiguring the <ProductName> to use a different port.	Player transmission client cannot start the integrated FTP server because the port is already in use, and the FTP server is started on the default port. Note there is a different problem (and problem wording) if the an attempt is made to start the integrated FTP server on a non-standard port. Note that the only way to configure the Player transmission client to use a different port is via MMOS.ini variables, so only advanced users should ever see this problem.		
18	FTP server failed to start	The <ProductName> cannot receive jobs, because the internal FTP server could not be started.	Player transmission client cannot start the integrated FTP server.		
19	FTP server rejected command	The FTP server received an unexpected command. This could be a result of a coding error in the Scala Transmission Server Module, but possibly indicates that someone has discovered the <ProductName>s password, has connected to it with an FTP client, and is attempting to gain access to files and folders on the system.	Player transmission client receives an invalid FTP command. The consequence could be that an internal coding problem has resulted in an invalid command being sent, or it could indicate a security breach, the consequence of which the administrator must interpret.		
20	FTP server rejected password	An FTP client has been temporarily blocked, because the password was not accepted. This problem might occur if the FTP server's password has been changed recently, or if someone has manually entered the password incorrectly. It also might occur if the computer is not behind a firewall and an attempt is being made to break into a Scala Network.	The integrated FTP server blocks a client because the client has tried to connect multiple times using a password that was not accepted. This means someone or some software is trying to connect using a known Scala Network login name.		

21	FTP server rejected password again	An FTP client has been temporarily blocked, because the password was not accepted. This problem might occur if the FTP server's password has been changed recently, or if someone has manually entered the password incorrectly. It also might occur if the computer is not behind a firewall and an attempt is being made to break into a Scala Network.	The integrated FTP server blocks a client because the client has tried to connect multiple times using a password that was not accepted. This means someone or some software is trying to connect using a known Scala Network login name.		
22	FTP server rejected username	An FTP client has been temporarily blocked, because the username was not accepted. This problem might occur if someone has manually entered the username incorrectly, but in most cases it occurs if the computer is not behind a firewall and an attempt is being made to break into FTP servers on the network.	The integrated FTP server blocks a client because the client has tried to connect multiple times using a username that was not accepted. This means someone or some software is trying to connect using an unknown Scala Network login name (e.g., anonymous)		
23	FTP server rejected username again	An FTP client has been temporarily blocked, because the username was not accepted. This problem might occur if someone has manually entered the username incorrectly, but in most cases it occurs if the computer is not behind a firewall and an attempt is being made to break into FTP servers on the network.	the integrated FTP server blocks a client because the client has tried to connect multiple times using a username that was not accepted. This means someone or some software is trying to connect using an unknown Scala Network login name (e.g., anonymous)		

24	Too many errors	Some of the errors logged by this <ProductName> in the last 24 hours will not be viewable in the Scala Content Manager Health Monitoring view because a very large number of unique errors have been reported. This is unusual, and may indicate that an unexpected error condition has occurred. This should be reported to Scala Technical Support. 0etrieving the <ProductName> logs to view the remaining errors.	Player health subsystem has detected that more than N unique errors have occurred in a 24 hour period, and therefore some error messages were not reported.	Yes	Alert
25	Text not displayed	Some text elements in the script will not be displayed.	Fonts subsystem fails to install an embedded font.	Yes	Alert
26	Script failed to publish	Script "<ScriptName>" was not published.	Publish Automation EX Module logs that a specific script could not be published. The publish operation may continue with the next script on the list, if any.		
27	Scripts failed to publish	Scripts could not be published, because the publish operation encountered a fatal error.	Publish Automation EX Module reports if a fatal error prevents publishing of more than one script. This may include problems with the common target for a list of scripts.		
28	Script published with errors	Published script "<ScriptName>" will contain errors such as missing files. A user override switch instructs us to publish such scripts.	The Publish Automation EX Module logs that a specific script was published containing errors such as missing files.		

29	Publish Automation failed to start	Content-producing servers may not be able to publish to the Scala Network, because the Scala Publish Automation EX Module is not running. It may have failed to start or someone may have manually closed it. The process will not resume automatically, and some intervention, like a Reboot of the host computer, is needed to resume functionality.	Publish Automation EX Module logs it failed to start up.		
30	No Publish Automation tray icon yet	The Scala Publish Automation EX Module does not yet have a tray icon, because it is having trouble creating one. This problem is only a delay and will be reported again if it persists.	Publish Automation EX Module logs it is having trouble creating the tray icon.		
31	No Publish Automation tray icon	The Scala Publish Automation EX Module does not have a tray icon, because it failed to create one after repeated attempts.	Publish Automation EX Module application logs that it has given up creating the tray icon.		
32	Failed to resume download	An attempt to resume download of a file over <HTTP/FTP> has failed. This is not necessarily a critical problem as in many cases another attempt will be made to download the file. If this error occurs repeatedly it may indicate a problem that requires attention. For example, it may indicate unreliable network connectivity, which can result in files taking longer than expected to download.	The script file-transfer subsystem attempts to resume a file download, and fails. This subsystem does not know the purpose of the file being downloaded so this problem cannot describe all possible consequences, and the file may be downloaded again on a later attempt.		

33	Resume download succeeded	Resume download of a file over <HTTP/FTP> has succeeded. The original error is included in this problem report. The presence of this error is not necessarily a critical problem, however if this error occurs repeatedly it may indicate a problem that requires attention. For example, it may indicate unreliable network connectivity, which can result in files taking longer than expected to download.	The script file-transfer subsystem attempts to resume a file download, and succeeds. In this case the original error is logged for tracking, but generally is not a cause for concern.		
34	Failed to resume upload	An attempt to resume upload of a file over <HTTP/FTP> has failed. This is not necessarily a critical problem as in many cases another attempt will be made to download the file. If this error occurs repeatedly it may indicate a problem that requires attention. For example, it may indicate unreliable network connectivity, which can result in files taking longer than expected to upload.	The script file-transfer subsystem attempts to resume a file upload, and fails. This subsystem does not know the purpose of the file being uploaded so this problem cannot describe all possible consequences, and the file may be uploaded again on a later attempt.		
35	Resume upload succeeded	Resume upload of a file over <HTTP/FTP> has succeeded. The original error is included in this problem report. The presence of this error is not necessarily a critical problem, however if this error occurs repeatedly it may indicate a problem that requires attention. For example, it may indicate unreliable network connectivity, which can result in files taking longer than expected to upload.	The script file-transfer subsystem attempts to resume a file upload, and succeeds. In this case the original error is logged for tracking, but generally is not a cause for concern.		

36	Font not installed	The script will play incorrectly because a font required by the script is not installed.	The text drawing engine cannot open a font.	Yes	Alert
37	Dialing limits exceeded	Networking connectivity costs may be higher then expected because of excess dialup activity.	User configurable dialing limits have been exceeded.	Yes	Alert
38	Hardware problem	A significant hardware problem was detected.	A Hardware problem is detected.	Yes	Alert
39	Thumbnail not generated	A thumbnail was not generated.	Thumbnail generator feature of the Server Support module fails to make a thumbnail.		
40	Thumbnail has missing elements	A thumbnail was generated, but with some elements missing.	Thumbnail generator feature of the Server Support module makes a thumbnail, but some elements could not be drawn.		
41	Contents File format unknown	When downloading a script, an existing Contents File with an unknown or unsupported format was encountered. The existing file has been replaced. No action is required.	The script transfer subsystem finds an unknown format file where there should be an existing "contents file" (an XML file that describes the script layout and contents.)		
42	Playback report not uploaded (retrying)	A billing file for this <ProductName> was not properly prepared for transmission. Another attempt will be made at a later date. No action is required.	A single billing log is not properly prepared for upload (copied to temp directory and compressed), and that single file will not be uploaded. Processing of the rest of the files will continue.		
43	Playback reports not yet uploaded (retrying)	One or more billing file(s) for this <ProductName> will not be available because an error occurred while uploading the file(s). Another attempt will be made again later.	A recoverable error uploading the billing logs happens and we will retry the upload.		
44	Cleanup problem	When uploading billing files, an error occurred cleaning up old files. The cleanup will be completed at a later time. No action is required.	There is a problem cleaning up old temp files, but the upload of the billing logs will not be impacted (processing will continue.)		

45	Playback reports cannot be uploaded	One or more billing file(s) for this <ProductName> will not be available because an error occurred while uploading the file(s).	A non-recoverable error happened while uploading the billing logs, and as a result, processing will stop.	Yes	Alert
46	IP Multicast receive error	IP Multicast data cannot be received because an error occurred while initializing the network stack. The driver will retry again automatically but if this problem persists rebooting the player may correct the problem.	IP multicast pipe cannot receive broadcasts.		
47	Placeholder problem	No description provided, place holder text.	Internal use during Scala software development, and normally does not occur in the actual product.		
48	No Transmission Server tray icon yet	The Transmission Server does not yet have a tray icon, because it is having trouble creating one. This problem is only a delay and will be reported again if it persists	Transmission server is having trouble creating the tray icon.		
49	No Transmission Server tray icon	The Transmission Server does not have a tray icon, because it failed to create one after repeated attempts.	Transmission server gives up creating the tray icon.		
50	Player not currently running	Information only: The <ProductName> was not playing at the time of processing a new plan, as the Playback Module could not be contacted. There are windows of time during startup and shutdown when this can happen normally, in which case playback will resume shortly, and no action is required. This alone is therefore not considered alarming. Expect a separate alarmable problem around this time if the problem requires manual action.	Player graphical engine fails to start up.		

51	Cannot receive plans	The Scala Player Transmission Client cannot receive new plans, because the folder does not exist.	Player network engine cannot receive plans because the folder does not exist		
52	Cannot download plans	The Scala Player Transmission Client may not have the latest plan, because it is having trouble downloading it. This problem is only a delay and will be reported again if it persists.	Player network engine cannot receive plans because the folder does not exist.		
53	Plan unreadable	The Scala Player Transmission Client may not have the latest plan, because the plan file is corrupt or incomplete. This problem is not necessarily serious, and may resolve itself on a future retry.	Player network engine cannot receive plans because the folder does not exist.	Yes	Alert
54	Cannot upload plan status	The player network cannot return plan status, because it is having trouble uploading it. This problem is not necessarily serious, and may resolve itself on a future retry, however it can result in incorrect or out dated status information on the server.	Player network engine cannot return plan status.		
55	Failed to remove preloaded content	The player network cannot remove unneeded preloaded content, because it is having trouble deleting it. This problem is not necessarily serious, however it can result in wasted CPU time in the future as the unneeded content may be checked again.	Player network engine cannot remove obsolete preinstalled content.		
56	Maintenance job failed	The player network failed to execute a maintenance job, because of an error. No future attempts will be made.	Player network engine reports when a maintenance job fails.	Yes	Alert

57	Maintenance job failed (retrying)	The player network failed an attempt to execute a maintenance job, because of an error. The job will be retried and may succeed on a future attempt.	Player network engine reports when a maintenance job fails, but will be retried.		
58	Maintenance job waiting for files	The player network failed to execute a maintenance job, because some files required for installation are not available yet. A future attempt will be made at the next scheduled execution time.	Player network engine reports when a maintenance job fails because some required files are missing.		
59	Transmission Server missing files	The transmission server failed to broadcast a file, because the file is not available. This may indicate a problem with the source file server or the file may have been replaced by a newer revision.	Network transmission engine cannot broadcast a file because the file does not exist on the file server.		
60	Transmission Server broadcast failed	The transmission server failed to prepare the a broadcast, because an unexpected error occurred. This problem can result in players not receiving needed files or plans.	Network transmission engine fails to build a broadcast package.		
61	Transmission server message failure	The transmission server failed to process a message, because an unexpected error occurred. This problem may automatically resolve itself on a retry, however it indicates an unexpected condition that should be investigated by technical support.	Network transmission engine fails to process a received message.		
62	Player Invalid license	The <ProductName> is not playing content, because the Playback Module does not have a valid license.	Player engine cannot play scripts because it does not have a valid license.	Yes	Alert

63	Failed cleaning up health logs	When uploading health logs, an error occurred cleaning up old files. The cleanup will be completed at a later time. No action is required.	There is a problem cleaning up old temporary files, but the upload of the Health logs will not be impacted (processing will continue.)		
64	Health logs cannot be uploaded	One or more health log(s) for this <ProductName> will not be available because an error occurred while uploading the file(s).	A non-recoverable error happened while uploading the health logs. Processing of health logs will stop.	Yes	Alert
65	Health logs not uploaded (retrying)	One or more health log(s) for this <ProductName> will not be available because an error occurred while uploading the file(s). Another attempt will be made again later.	A recoverable error uploading the Health logs happens, and the upload will be retried.		
66	Heartbeat not delivered	Heartbeat could not be delivered.	Player health subsystem discovers it can not deliver the heartbeat to the server. It is NOT alertable, as it is not recommended to cause another heartbeat when a heartbeat can not be delivered.		
67	Failed to register Scala Maintenance	The Scala Player Transmission Client failed while trying to register the Scala Maintenance expiration date. This is not a serious problem, however it may may result in some incorrect prompts when attempting to install a service pack on this player. The most likely cause of this problem is the Scala Network Transmission Client is not running under an administrator account.	Player network engine cannot register a license.		
68	Configuration problem	Configuration Problem. Software is not functioning properly. Please check your configuration and/or contact Scala Technical Support.	A configuration problem not covered by a more specific problem.		

69	Product not authorized	Product authorization failed, because the product hardware key is not installed or was not detected. This problem will result in a product not operating. Check that hardware key is plugged in, and that the key driver has been installed.	An error occurred while authorizing a product.		
70	Product license invalid	Product authorization failed because the product license is not valid. This problem will result in a product not operating. Check that a valid license file has been purchased and installed correctly.	An error occurred while authorizing a product.		
71	Transmission Server broadcast send failed	The transmission server failed to send a broadcast package or envelope to a broadcast server. This problem can result in players not receiving needed files or plans.	Network transmission engine fails to push a broadcast package or envelope to a broadcast server.		
72	Download failed	Download of file failed. This problem may correct itself on a future attempt.	File download failure. The file transfer engine normally retries when appropriate.		
73	Upload failed	Upload of file failed. This problem may correct itself on a future attempt.	File upload failure. The file transfer engine normally retries when appropriate.		
74	Problem reading transitions	Some scripts may play incorrectly because of errors reading the transition definitions.	Problem when reading the transition-definition files.	Yes	Alert
75	Render monitor problem	The Render Monitor will not work correctly because of an error.	Render Monitor fails.		
76	Server Support service not running	Thumbnails for media and messages may not be updated, because the Scala Server Support module failed to start.	Some intervention, such as a reboot of the host computer, may be needed to resume functionality. This problem is reported when the Server Support module of Content Manager fails to start up.		

77	No Server Support tray icon yet	The Scala Server Support engine does not yet have a tray icon, because it is having trouble creating one. This problem is only a delay and will be reported again if it persists.	The Server Support service is having trouble creating the tray icon.		
78	No Server Support tray icon	The Scala Server Support engine does not have a tray icon, because it failed to create one after repeated attempts.	The Server Support service gives up creating the tray icon.		
79	No players defined	It appears that there are no players defined for this network. You must create and configure players in Scala Content Manager before refreshing the player list in <ProductName>.	If the redirect.xml file is not found, then there are no players defined in the Content Manager.		
80	Player Config Invalid license	The Playback Configuration Module cannot determine playback options, because the Playback Module does not have a valid license.	Player configuration engine cannot determine playback capabilities because the player has an invalid license.		
81	Broadcast failed	Broadcast failed. Player plans and content files embedded in the broadcast may not have be received.	A broadcast failed.		
82	Broadcast send envelope failed	Broadcast send envelope failed. Player plans and content files embedded in the broadcast will not have be received. This problem may resolve itself on a future attempt, but until resolved the broadcast data cannot be transmitted.	Broadcast send envelope failed (applies to package drivers only).		

83	Broadcast confirmation failed	Broadcast confirmation failed. Player plans and content files embedded in the broadcast may not have be received. This problem may resolve itself on a future attempt, but until resolved the broadcast reception state of the players cannot be determined.	Broadcast confirmation failed.		
84	Broadcast Server plan download failed	The Scala Broadcast Server may not have the latest plan, because it is having trouble downloading it. This problem is only a delay and will be reported again if it persists.	Broadcast server cannot receive plans because the folder does not exist or a connection issue occurs.		
85	Broadcast Server plan status upload failed	The Broadcast Server cannot return plan status, because it is having trouble uploading it. This problem is not necessarily serious, and may resolve itself on a future retry, however it can result in incorrect or out dated status information on the server.	Broadcast server cannot return plan status.		
86	Broadcast Server failed to abort	The Broadcast Server cannot abort orphaned broadcast. This problem is not necessarily serious, and may resolve itself on a future retry, however it can result in active broadcasts being delayed.	Broadcast server cannot abort orphaned broadcasts.		
87	No Broadcast Servers defined	It appears that there are no broadcast servers defined for this network. You must create and configure broadcast servers in Scala Content Manager before refreshing the broadcast server list in <ProductName>.	If the broadcast-redirect.xml file is not found, then there are no broadcast servers defined at the Content Manager.		

88	Logging failed (disk space below reserve)	Player could not write log entries to IC.log because the remaining free space on the partition is below the disk space reserve level. Remove files to increase the free space on the disk.	Player detected that it is running out of disk space, so it will not log entries until more space is freed.	Yes	Alert
89	Media download failed (disk space below reserve)	Player is not playing the current plan because there is insufficient disk space available to download required media (the remaining free space on the partition is below the reserve level.) Remove files to increase the free space on the disk so that media may be downloaded.	Player will not store newly downloaded media because there is not enough free disk space. The content playing will be out of date.	Yes	Alert
90	Playback audit logging failed (disk space below reserve)	Player could not write log entries to the Playback Audit Log because the remaining free space on the partition is below the disk space reserve level. Remove files to increase the free space on the disk.	Player detected that it is running out of disk space, so it will not playback audit log entries until more space is freed.	Yes	Alert
91	Transmission Client detected UAC	Some features, including Install System File and Install Software Update, will not work because Windows User Account Control (UAC) is enabled. UAC is not suitable for a remotely managed Player.	Windows User Account Control (UAC) should be disabled on Player PCs because there is no user present. If it is enabled, remote software updates will fail because there is no user to ask permission from. Player would have to be updated by an operator using a conventional installer, instead of via the remote maintenance capability of Content Manager and Player.	Yes	Alert
92	Screen problem during playback	Playback is active but some media items may not have displayed due to issues with the screen.	An issue with the screen is preventing a media item from being displayed.	Yes	Alert

93	Player failed to finish media item (watchdog)	Watchdog detected that Player failed to complete playing the current media item when expected, and may need to be rebooted. Please contact Technical Support if this problem persists.	The watchdog detected that Player failed to complete playing the current media item when expected, and may need to be rebooted.	Yes	Alert
94	Cannot embed font	The published ScalaScript contains a font that cannot be embedded. To successfully distribute this script, ensure that the target machines already have the necessary font(s) installed.	The ScalaScript contains a font that cannot be embedded. Please make sure that the target machines have the necessary font(s) installed.		
95	Media file missing, download failed	A media item is missing at the source and could not be downloaded. This might be the item itself or a ScalaScript missing a referenced file. Re-uploading the file or re-publishing the ScalaScript is suggested.	A media item is missing from the source and could not be downloaded. This problem may be solved by re-uploading the file or publishing the ScalaScript.	Yes	Alert
96	Media item did not play	Media item <itemname> did not play.	A media item did not play.	Yes	Alert

List of Scala External Problem Codes

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
1000	External problem	The module "<ModuleName>" reported a problem: "<custom message>".	Error noted by the custom integration software not better described by a more specific code.	Yes	Alert
1001	External warning	The module "<ModuleName>" reported a warning: "<custom message>".	Warning noted by the custom integration software not better described by a more specific code.		
1002	External hardware problem	The module "<ModuleName>" reported a problem with the Player hardware: "<custom message>".	Error related to the Player hardware monitored or managed by the custom integration software.	Yes	Alert
1003:	External hardware warning	The module "<ModuleName>" reported a warning with the Player hardware: "<custom message>".	Warning related to the Player hardware monitored or managed by the custom integration software.		

1004	External display problem	The module "<ModuleName>" reported a problem with the Display or Screen: "<custom message>".	Error related to the display or screen monitored or managed by the custom integration software.	Yes	Alert
1005	External display warning	The module "<ModuleName>" reported a warning with the Display or Screen: "<custom message>".	Warning related to the display or screen monitored or managed by the custom integration software.		
1006	External device problem	The module "<ModuleName>" reported a Device problem: "<custom message>".	Error related to a device used or managed by the custom integration software.	Yes	Alert
1007	External device warning	The module "<ModuleName>" reported a Device warning: "<custom message>".	Warning related to a device used or managed by the custom integration software.		
1008	External communication problem	The module "<ModuleName>" reported a Communications problem: "<custom message>".	Error related to communication (e.g. network connection) used by the custom integration software.	Yes	Alert
1009	External communication warning	The module "<ModuleName>" reported a Communications warning: "<custom message>".	Warning related to communication (e.g. network connection) used by the custom integration software.		
1010	External software problem	The module "<ModuleName>" reported a Software problem: "<custom message>".	Error related to the custom integration software itself.	Yes	Alert
1011	External software warning	The module "<ModuleName>" reported a Software warning: "<custom message>".	Warning related to the custom integration software itself.		
1012	External data problem	The module "<ModuleName>" reported a Data problem: "<custom message>".	Error related to the data used by the custom integration.	Yes	Alert
1013	External data warning	The module "<ModuleName>" reported a Data warning: "<custom message>".	Warning related to the data used by the custom integration.		

Additional Topics

- Scala Certified Third-Party PC Players details the current list of pre-configured PC Player images.
- Example PC Hardware Specifications provides Player specifications that will assist you in meeting your solution's requirements and budget for use with Scala Enterprise.

Advanced Configuration Options for Player

Shortcuts to Sub-topics within this Page:

Installation Options

The Scala installers accept various command-line parameters that affect the installation, or the values used in installation. To use these, open a command prompt and type

```
setup.exe /OPTION1=value /OPTION2=value ...
```

If *value* contains spaces, enclose it in quotes, for example

```
setup.exe /OPTION1="C:\Temp\My Folder"
```

Silent Installation

Silent installation can be accomplished by passing **/SILENT** or **/VERYSILENT** as command-line arguments. **/SILENT** installs ask no questions, but show installation progress.**/VERYSILENT** installs ask no questions and do not show progress during installation.

To assist with silent installs, the installers accept various additional command line parameters given below.

Common Installation Options

All the Scala installers accept:

- **/LOG=*filename***: Log the results to *filename*, which can be used to trouble-shoot a silent install.
- **/DIR=*folderpath***: Specify the full path where the product should be installed.
- **/LANGUAGE=*language***: Select *language* during installation.
  - These are the accepted values for Player installs (NOT case sensitive):
    - Arabic
    - English
    - French
    - Japanese
    - Korean
    - Russian
    - SimplifiedChinese
    - Spanish
    - TraditionalChinese
- **/ROOTDATAFOLDER=*path***: Specify the path to be used for storing various configuration and data items. This corresponds to the **WIN32_RootDataFolder** keyword in **MMOS.INI** (see here), but the command-line option is also supported for Content Manager.

Scala Player Installation Options

The Scala Player installer also supports these options:

- **/NOSERVICE**: Install Player Transmission Client as a process rather than a service (supported only on fresh installs, Release 10 and newer).
- **/SERVICE**: Install Player Transmission Client as a service rather than a process (supported only on fresh installs, Release 6.1 and earlier).

Preloaded Content for Players

Scala Players support the notion of **preloaded content**. This allows you to pre-install media items on the Player systems before putting them in the field, to optimize away the need for the player to download some or all of their initial content when the player first connects.

> **Note:**
> Any preloaded content is not made available for use until you add it to the plan (i.e., by putting it into a playlist that is scheduled, or by marking it as Non-Scheduled Content), and the player picks up and processes that plan.

The way preloaded content works is that when the player goes to download a given media item from Content Manager, it first checks for an exact match in the **PreLoadedContent** folder. If found, the preloaded copy is used, and the download is skipped.

An exact match is defined as a file having the same base filename as the media item in the plan (i.e., without the revision number), and the same MD5 signature.

By default, this folder Player looks in is:

```
... \ProgramData\Scala\InfoChannel Player 5\Network\PreLoadedContent
```

but this location can be overridden by adding the following to your MMOS.INI file

```
PreLoadedContent=path to the desired folder
```

Fill this folder with content, for example you can place a file **BigVideo.mpg** in this folder. If the player's plan requires a revision of a file called **BigVideo.mpg**, and the MD5 signature of the preloaded copy matches the MD5 signature of the revision needed by the plan, the preloaded copy will get installed, and the download will be skipped.

When placing files in the preloaded content folder, omit the revision. That is, use **BigVideo.mpg** rather than **BigVideo[12345].mpg**.

For ScalaScripts, you need to publish the ScalaScript from Designer to a local folder, then place the top-level SCB file (without its revision), and also copy the script-media files from the **_shared** subfolder into an equivalent **_shared** subfolder within the preloaded content folder. (Individual script-media files cannot be made preloaded — you need to preload one or more ScalaScripts that use the script-media files of interest.)

Font Exclusion List

Scala Players use intelligent file transfer to avoid uploading or downloading files that are already present. However, font licensing rules generally require that fonts be transmitted with their documents (Scala scripts), which defeats the benefit of intelligent file transfer. This is not a big issue with Western fonts because of their comparatively small size, but with Asian fonts this can be a significant issue.

Scala Designer supports a "font exclusion list". In a Scala network, if a set of fonts is known to be pre-installed on ***all*** players, then naming these fonts in the font exclusion list will cause them to be not included by default when publishing to Scala networks. (By default, fonts not on the exclusion list are published as normal.)

In the **Advanced Publish Options** menu, the **Include Fonts?** option still allows you to exclude all fonts. If you choose to include fonts, the new **Exclude Standard Fonts?** option lets you control whether the fonts on the exclusion list are excluded or transmitted.

The list of excluded fonts itself is an XML file that can be found at:

```
Program Files\Scala\Designer 5\System\FontEmbeddingExclusionList.xml
```

Modifying this file is straightforward, but care must be taken to only list fonts that are indeed present on all players. Otherwise, a player may receive a script without all the necessary fonts, which can produce an incorrect display and run-time errors.

Advanced Customization Options

Most Scala products have a variety of advanced configuration options available through the use of the **MMOS.INI** file. Content Manager uses a file called **features.xml** for some of its advanced customization.

MMOS.INI is a file that lives in the program's installation folder, e.g. **D:\Scala\Player** or **C:\Program Files\Scala\Designer**, or wherever your Scala product(s) are installed. Normally, each installation folder can have its own **MMOS.INI** file with its own settings.

The **MMOS.INI** file can be UTF-8, in which case it should begin with the UTF-8 *byte-order mark*, which consists of the hexadecimal values *EF BB BF*.

The **MMOS.INI** file begins with the optional *byte-order mark*, followed by the word **[Scala]** as shown inside square brackets, followed by one or more lines of the form

OptionName = value

Anything after a semi-colon is treated as a comment and is ignored by the Scala applications.

Here is a simple example:

```
[Scala]
; Open on the desktop in a borderless window
DESKTOP_Borderless = 1

; Force the window to be topmost always
DESKTOP_TopMost = 1
and so on.
```

You may find you already have an **MMOS.INI** file. If you do, you may wish to review which settings are already in force. But remember, anything after a semi-colon is a comment and does not have any effect.

If you do not have an **MMOS.INI** file, it is a simple matter to make one in any text-editor such as **Notepad**.

Windows 7 (and Newer) Note:
Under Windows 7 and up, if you try to create files inside the **Program Files** folder, Windows will create a per-user shadow-copy inside the Windows "Virtual Store". Depending on your system configuration and user rights, you may need to create the **MMOS.INI** file in a regular folder, then use Windows Explorer to drag it over to the correct destination inside Program Files.

MMOS.INI Options Applying to All Scala Products

WIN32_RootDataFolder: Control the location of all Scala config files, logs, settings, temporary files, etc.

```
WIN32_RootDataFolder = path
```

When set, Scala data that is normally stored under the Windows-standard configuration areas is stored instead under the specified path. Also the Scala temporary folder appears under the specified path. Thus, most of the locations where Scala reads and writes files can be controlled.

This is the simplest way to move the locations where such files are stored. There are additional **MMOS.INI** keywords to move specific folders such as the **Content** and**LocallyIntegratedContent** folder, but it is often better to move them all with this one keyword.

You can install the products specifying **/RootDataFolder=*path*** on its command-line, and Setup will set **WIN32_RootDataFolder** correctly (creating an**MMOS.INI** file if necessary, otherwise modifying the existing one.)

The Content Manager installer supports **/RootDataFolder=*path*** on its command-line. This sets **WIN32_RootDataFolder** for Content Manager itself, as well as for the Transmission Server and Server Support components. (In those components, the installer also sets **WIN32_CommonProductRootDataFolder**, so those components can locate Content Manager's location where needed.

Note:
For Content Manager, changes to **WIN32_RootDataFolder** must be done using the installer, rather than by hand-editing the **MMOS.INI** files.

Note:
This option is not yet supported for the Playback Audit Reporting Module.

WININET_EnableServUDirectoryCacheKludge

The directory caching of the Serv-U FTP server can return incorrect results. Scala recommends that directory caching be disabled when using the Serv-U FTP server. However, if this is not possible you can enable a workaround by adding this to your **MMOS.INI**

```
WININET_EnableServUDirectoryCacheKludge = 1
```


(The workaround will hurt media transfer performance.)

TCPIPTOOLS_FTPClientKeepAliveCommandChannel

Setting this instructs the FTP client to set the socket "keep-alive" option on the FTP command channel. This can resolve certain command-channel timeouts that can sometimes be caused by intervening firewalls or routers. To enable this, add the following to your **MMOS.INI**

```
TCPIPTOOLS_FTPClientKeepAliveCommandChannel=1
```

Scala Transmission Server and Scala Player MMOS.INI Options

These MMOS.INI Options apply to both the Scala Transmission Server service and Scala Player:

SSCOMMON_EncryptionKey: Set custom encryption key for protecting usernames / passwords.

The Scala network encrypts all usernames and passwords that are transmitted or stored. Health monitoring messages are also encrypted, and job command files and responses are sealed as well. You can select your own custom encryption key by setting:

```
SSCOMMON_EncryptionKey = encryption-key-string
```

Set this on both Transmission Server and all Players or else things will not function. Note that there is no support for migrating stored usernames/passwords from one key to another, so this key is best established from the beginning.

The **encryption-key-string** should be 5-7 characters in length (40 to 56 bits).

Scala Designer and Scala Player MMOS.INI Options

These MMOS.INI Options apply to both Scala Designer and Scala Player:

Path Options

MEDIA_Content

You can override the location of the Content folder by setting:

```
MEDIA_Content=path
```

MEDIA_LocalIntegratedContent

Normally, when a Scala script references some media, that media is sent along with the script when the script is published to a Scala network. However, any media that is**Linked Content** is ***not*** sent with the script that references it. Such content either needs to be added separately within Scala Enterprise Content Manager, or needs to be installed, delivered, or generated on the player.

> **Note:**
> When installing, delivering, or generating content on the Player, you should read and understand the **Locally Integrated Content** support features.

When resolving references to Linked Content, the Scala software *first* looks in the Content folder, and if the file is not found there, it looks in the LocallyIntegratedContent folder. The reason for two folders and the essential difference is that:

- The **Content** folder is managed by the Player network engine, *i.e.*, things sent as content from Scala Enterprise Content Manager are placed there.
- The **LocallyIntegratedContent** folder is for content managed outside of Scala Players, *e.g.*, placed here by any custom integration application.

One big difference is that cleanup of old/unused content will not touch files in the **LocallyIntegratedContent** folder.

By default, the **Content** and **LocallyIntegratedContent** folders are placed side-by-side as


```
Documents and Settings\All Users\Documents\Scala\Content
Documents and Settings\All Users\Documents\Scala\LocallyIntegratedContent
```

but the **WIN32_RootDataFolder** keyword overrides this to

```
WIN32_RootDataFolder\Documents\Content
WIN32_RootDataFolder\Documents\LocallyIntegratedContent
```

Display Options

DESKTOP_Borderless/TopMost/CustomPosition

Scala Player can now run on the desktop as a top-most borderless window of arbitrary or full size. You can specify the left, top, width and height. As an example, add this to your **MMOS.INI**

```
DESKTOP_Borderless = 1
DESKTOP_TopMost = 1
DESKTOP_CustomPosition = 100 50 800 600
```

Omitting **DESKTOP_CustomPosition** will make the window fill the primary display.

These options are also supported by Scala Designer.

MM3D_MinWindowDimension=n

Set the client area of the window, and sets the limit for the value to be 32 x 32.

MM3D_EnsureVBlankDuringPresentKludge

This enables a workaround for device driver issues with very old video cards. Some device drivers do not properly maintain frame-synchronization during display updates. Ordinarily, a Direct3D device driver waits for the display device to enter vertical blank before performing the display update. Playback relies on this for smooth, shear-free animation. Some drivers don't handle this properly, resulting in jerky animation and/or horizontal shearing. When this workaround is enabled, playback waits for the display device's vertical blank period instead of relying on the device driver to wait for vertical blank. This workaround was initially added to address an issue with the Intel 945 graphics chipset, and playback will automatically recognize the Intel 945 chipset and enable this workaround.

In some preliminary tests, this workaround has also shown a performance improvement to movie playback on multiple display players. If you enable this workaround, you should probably also disable **MM3D_UseBackBufferLockKludge** as it will likely interfere with the **MM3D_EnsureV BlankDuringPresentKludge** workaround.

To enable this workaround, use

```
MM3D_EnsureVBlankDuringPresentKludge=1
```

MM3D_UseBackBufferLockKludge

This enables a workaround for device drivers that consume a large amount of CPU waiting for vertical blank. Most Direct3D devices apart from those from nVidia and ATi require this workaround. Playback detects those devices and will enable this workaround as necessary. You can override that behavior with this setting. Note that the Intel 945 *does not* require this workaround, other Intel devices (845, 865, 915, 946, 965) currently require this workaround.

To enable this workaround, use

```
MM3D_EnsureVBlankDuringPresentKludge=1
```

MM3D_UseATIOddTextureSizeKludge

Due to a driver bug on certain ATI-based systems, some wide text elements or crawl-segments could end up displayed as a white rectangle. There is now a workaround that can be enabled by setting

```
MM3D_UseATIOddTextureSizeKludge=1
```

in your **MMOS.INI** file.

AllowDXVA=0

When playing back H.264 or WMV/VC-1 video on most systems, hardware-accelerated video is now used. This results in better image quality and performance, combined with lower power consumption. This new capability requires Windows 7 or newer. To force software-based video decode, use the **MMOS.INI** setting

```
AllowDXVA=0
```

MM3D_MaxWidthforDXVA2 and MM3D_MaxHeight forDXVA2

Most graphics hardware has a resolution limit for hardware-accelerated video, beyond which things may not work, or may even crash. By default, we limit hardware-accelerated video to 1920x1088 or smaller. If you know your graphics card can go higher, use the **MMOS.INI** setting

```
MM3D_MaxWidthForDXVA2=width
MM3D_MaxHeightForDXVA2=height
```

DSHOWRENDER_FFMPEGFallbacktoDirectShow

When Video files are not recognized by the new playback subsystem, the system will attempt to play it using other Windows codecs. This may be useful in rare or obscure cases. In normal systems where you have good control over the media formats used, it can be a good idea to set the **M MOS.INI** setting

```
DSHOWRENDER_FFMPEGFallbackToDirectShow=0
```

WIN32Book_PreventSwitchout=1

Setting this flag to **ON** in Designer (it is on by default in Player) will log Windows Terminal Services session change events, including a "locked console."

```
WIN32Book_PreventSwitchout=1
```

DSHOWRENDER_CorrectFileTSDiscontinuties

"Timestamp discontinuity reconciliation" for local video file playback is disabled by default. Locally stored audio or video files do not usually need to correct for these continuities. They are only necessary for streams impacted by data loss, such as video streaming. This flag is set to off to fix this:

```
DSHOWRENDER_CorrectFileTSDiscontinuities=0
```

Media-Handling Options

If a video stream has multiple audio tracks, we select the one whose language matches the system's language. This can be overridden with the **M MOS.INI** key


```
DSHOWRENDER_IPTVISO639LanguageID=0xnnnnnn
```

where *nnnnnn* is the hex representation of ISO-639 language code, e.g. (0x737061, corresponding to 'spa', for Spanish.)

DSHOWRENDER_AllowAC3

AC3 is a patented audio encoding format. It is commonly found in broadcast digital TV (IPTV, ATSC, DVB, etc), but it not commonly used otherwise. Although Scala Player and Designer do not include an AC3 decoder, it is possible to use a third party DirectShow AC3 decoder to perform AC3 decoding duties. Because the AC3 encoding format is patented, it is subject to patent licensing terms from the patent holder in countries, like the U.S., that honor those patents.

By default Player/Designer will not expose an AC3 stream. To tell Scala Designer and Player to expose an AC3 stream so a third party DirectShow AC3 decoder can see it, use this mmos.ini setting:

```
DSHOWRENDER_AllowAC3=1
```

DSHOWRENDER_UseSafestRecognition:

When Scala tries to identify files as video, it sometimes needs to invoke third-party CODECs installed on the system. Rare combinations of these CODECs with certain media files can crash. By setting

```
DSHOWRENDER_UseSafestRecognition = 1
```

Scala will only use more conservative ways to identify video files.

FLASHLOADER_MaxTextureSize:

Limits the maximum texture-size (resolution) used for Flash clips, that effectively gives better performance for slightly fuzzier visual quality, for large Flash clips. Set

```
FLASHLOADER_MaxTextureSize=n
```

Where *n* is at least 400. If the Flash clip is larger than *n* in either dimension, playback will cut its size in half repeatedly until both dimensions are less than or equal to *n*. The Flash clip will be drawn at its correct size, but with reduced detail, enabling higher performance.

A small number of WMV videos are encoded interlaced, and interlacing artifacts could be visible when played in Scala. Playback of WMV files can now be forced to progressive mode by setting the following **MMOS.INI** flag

```
DSHOWRENDER_ForceWMVProgressive=1
```

In the future, this will become the default behavior.

Most WMV or WMA files use 16-bit audio. Fixed a problem where WMV or WMA files that used other-than 16-bit audio played back as noise. To enable this change, you must set the following in your **MMOS.INI**

```
DSHOWRENDER_FixWMVAudioRemap=1
```

WEBCLIP_Useragent

The "User-Agent" string used for **WebClip** can be customized using the **MMOS.INI** setting:

```
WEBCLIP_UserAgent=string
```


Value that will be returned as the User-Agent HTTP header, which identifies your browser to a web server. If empty, it uses the default User-Agent string from the version of Chromium built into Player/Designer.

WEBCLIP_CachePath

```
WEBCLIP_CachePath
```

When set to a valid directory name, CEF will use this directory to store the browser cache. Also, CEF will not delete the files in this directory when Player/Designer shuts down, so the cache will persist between runs of Player/Designer (unless you also use WEBCLIP_DeleteCacheOnShutdown).

WEBCLIP_Persist_Session_Cookie

Used in conjunction with the WEBCLIP_CachePath flag, this flag will tell CEF to keep session cookies for a webclip.

```
WEBCLIP_PersistSessionCookies=1
```

WEBCLIP_DeleteCacheOnShutdown

```
WEBCLIP_DeleteCacheOnShutdown=0
```

When this setting is on, Player/Designer will delete all the files within the CachPath directory when shutting down. Apart from WEBCLIP_DeleteCacheOnShutdown, there is currently no explicit mechanism to automatically remove files from the web cache or manage how large it gets. CEF decides the maximum size of the cache based on available disk space.

WEBCLIP_ShareInput=0

This behavior is enabled by default. You can disable it with this mmos.ini setting.

The input system for the webclip is separate from the input system used by ScalaScript buttons and hotkeys. When an interactive webclip is on screen, it gets the opportunity to handle input before ScalaScript buttons and hotkeys, even if there are ScalaScript buttons are visibly in front of the webclip. In the past, the webclip would consume all input, so any ScalaScript button that overlapped with a webclip would never get any input. The webclip will now provide the ScalaScript input system with its own copy of mouse and keyboard input, so the same input goes to **both** the webclip **and** any ScalaScript buttons that overlap with the webclip

WEBCLIP_DisableAccelerated2DCanvas, WEBCLIP_DisableGPU and WEBCLIP_Disable3DAPIs

These three boolean variables are used to disable different aspects of hardware acceleration used by webclip. They assist the user with potential compatibility, driver bugs, or performance issues introduced by the introduction of hardware acceleration for 2D and 3D in Scala Release 11.

These all default to off. These control the corresponding "disable" chrome command line flag, respectively:

```
--disable-accelerated-2d-canvas
--disable-3d-apis
--disable-gpu
```

WEBCLIP_IgnoreCertificateErrors=1

This passes the command flag **--ignore-certificate-errors** to Chromium. It disables the security features related to certificate verification. If a web page fails certificate verification, this flag tells the browser to show the page anyway. During testing, there are times where this flag is helpful to either diagnose certificate problems or lift restrictions during development when the web server is not available or may not be production ready.

Warning:
Because leaving this flag in place has significant security risks, if you use it, we provide a strong warning against it.

"You are using an unsupported webclip flag: Stability and security will suffer."

This will appear as an error in logs and is intended to be obvious so the end user won't forget to disable it.

WEBCLIP_DisableWebSecurity=1

This options allows for the use of the chromium flag **--disable-web-security**. It disables enforcement of the same-origin policy, and is meant to make it easier to test web sites during development. This flag is for testing and debugging purposes only and is not supported for normal use.

Warning:
When this flag is enabled, it will warn you against using this flag:

"You are using an unsupported webclip flag: Stability and security will suffer."

WEBCLIP_LogJSConsole

This boolean variable defaults to FALSE. When on, any javascript console messages get logged in the scala log. When off, the javascript console messages are ignored.

WEBCLIP_AllowDevTools

This boolean variable defaults to off. When on, if a webclip has focus, and you hit **Ctrl-Shift-I**, it will open Chrome's Developers Tool window. Ctrl-shift-I is the same key used by the English version of the consumer version of Chrome. You must use "Playback in a Window" and not a full screen mode with the "Developer Tool" window.

Note:
This feature is only for developing and troubleshooting web content inside of a webclip. Stability and security may be compromised.

WEBCLIP_Enable MediaStream=0

Webcams are enabled by default, but can be disabled using this flag. WEBCLIP_EnableMediaStream is on by default. This flag allows webcams for use inside a web browser.

WEBCLIP_ProxyBypass

This string specifies list of web addresses where webclip should not use the proxy and overrides the default bypass behavior. The format of this string matches the format used by Chrome's Bypass
list. This includes a special token for variations of localhost, <local>. For example, to add an exception for localhost, for all addresses matching 192.168.10.* and scala.com:

```
WEBCLIP_ProxyBypass="<local>;scala.com;192.168.10.*"
```

If you use this setting, <local> must be present if you want to bypass the proxy for localhost.

WEBCLIP_UseOSProxySettings

This boolean tells the webclip to use the OS for proxy settings. This flag overrides WEBCLIP_ProxyBypass.

WEBCLIP_Locale

A string variable which sets the locale string passed to the Blink/Webkit subsystem of Chrome. Using the special "<OS>" value makes Scala query the PC for its locale string, which is typically a two letter ISO 3166 country code (e.g. US English: "en-US," German: "de-DE," Great Britain: "en-GB.")

WEBCLIP_EnableSystemFlash=1

Setting this to 1 will allow your webclip to use the system wide Flash PPAPI plugin.

DSHOWRENDER Book

DSHOWRENDER_ForceRTPMulticastViaRTSP=FALSE

This Boolean variable defaults to FALSE. When it is set to TRUE, it forces RTSP requests to ask for multicast.

DSHOWRENDER_StreamingTimeoutToErrorMS

With a time value is in milliseconds, (the default value is 300000, or ~ 5 minutes), DSHOWRENDER_StreamingTimeoutToErrorMS is nearly identical to DSHOWRENDER_FrameStuckErrorMS, except DSHOWRENDER_StreamingTimeoutToErrorMS applies only to streaming video and has a much larger default value (currently 5 minutes).

The value for these settings is so high because it should be possible for a UDP broadcast to drop its signal in bad weather and recover.

DSHOWRENDER_FrameStuckErrorMS

While playing a video file, Player/Designer will trigger an error if the video decoder does not deliver a frame for an extended period of time. The default time out period is 25000 milliseconds, but you can override it with:

```
DSHOWRENDER_FrameStuckErrorMS=<timeout to error in milliseconds>
```

The timeout value is in milliseconds. Note this does not apply to network video streaming, there is a separate setting (DSHOWRENDER_StreamingTimeoutToErrorMS) to govern that.

DSHOWRENDER_StreamInitNoDataTimeoutMS and DSHOWRENDER_StreamInitSomeDataTimeoutMS

These flags are specific to RTSP, RTP and UDP streaming, and they govern the timeout on network data when initializing a streamclip/BG for playback:

DSHOWRENDER_StreamInitNoDataTimeoutMS = 5000 ms; // 5 second timeout if nothing arrives during init

DSHOWRENDER_StreamInitSomeDataTimeoutMS = 20000 ms; // 20 second timeout if some data arrives

The timeout is shorter if there are no data packets received. The shortness of the timeout is because a longer one will delay either the Player or the thumbnail generator, while the system is waiting for these timeout to happen.

The other 2 timeout values pertain to a "rebuild" after playback successfully started. If a stream changes characteristics on the fly or there is some error, the streaming clip will trigger a "rebuild" to basically reinitialize itself. The timeouts here are considerably longer that the first initialization timeouts:

DSHOWRENDER_StreamRebuildNoDataTimeoutMS and DSHOWRENDER_RebuildSomeDataTimeoutMS

These values pertain to a "rebuild" after playback successfully started. If a stream changes characteristics on the fly or there is some error, the streaming clip will trigger a "rebuild" to reinitialize itself. The timeouts here are considerably longer that the first initialization timeouts:

DSHOWRENDER_StreamRebuildNoDataTimeoutMS = 35000; // 35 second timeout if nothing arrives during rebuild
DSHOWRENDER_StreamRebuildSomeDataTimeoutMS = 180000; // 180 second timeout if some data arrives during rebuild

DSHOWRENDER_AllowDXVA2ForRTPTCP

This applies to the RTP over TCP streaming. It defaults to 0, but it has these possible values:

- 0 = never
- 1 = always try
- 2 = only when coded size matched visual size.

DSHOWRENDER_AllowDXVA2ForRTP

This setting applies to RTP over streaming, not transport stream over UDP. it controls if DXVA is allowed, and defaults to 0, but it has these possible values:

- 0 = never
- 1 = always try
- 2 = only when coded size matched visual size.

The default for this setting is 2. Setting it to 1 does not guarantee you will be able to get DXVA, but allows you to attempt to do so.

DSHOWRENDER_AllowDXVA2ForTSoverUDP

This setting controls if DXVA2 is allowed when streaming via transport system. It defaults to 1, but has two possible values.

- 0 = never
- 1 = always

Scala Player MMOS.INI Options

(See additional options that apply to both Scala Designer and Scala Player, and to both Scala Transmission Server and Scala Player.)

Display Options

Added additional logic to restore Player if ever it is minimized from outside Player's control. To enable this, use the following **MMOS.INI** setting


```
MM3D_ForceUnminimize=1
```

Player Start and Exit Handling

There is basic support for requiring a ***numeric*** password to exit playback. In your **MMOS.INI** file, set

```
INPUTMGR_EscapeKey=0
INPUTMGR_EscapePassword=12345
```

To exit, you must then type **<Esc>12345<Enter>**. The password can be any number from 1 to approximately 4.2 billion.

Typically, you should also disable the Window close function (**Alt+F4**):

```
INPUTMGR_WindowClose=0
```

Input Command Options for Touch Screens

Using this setting allows you to tell the Player to default to using the touchscreen for input setting buy default instead of using the mouse. It's default setting is OFF.

```
INPUTMGR_InteractTouchScreen=1
```

RUNIC_StartScript:

Specifies a custom outermost script that the Player should run, instead of **System\icstart.sca**. Ultimately, your custom script should invoke **System\icstart.sca**. The custom script lets you add certain functionality that must be present at the top-level context of the playback script. This example causes playback to exit when the mouse moves (but see also **RUNIC_AllowScriptExit** below):

```
!ScalaScript500
:"screenblanker_start.sca"
{
Group:OnNotification(Mouse.X, Quit(9999));
OnNotification(Mouse.Y, Quit(9999));

Sequence:// This is where the Scala-standard start script gets run:
Script("ScalaProgram:\System\icstart.sca");

}
```

NETIC_SkipAdminTest:

If you run the Player under a limited-user account, at startup Player normally logs a Problem 7 report about features that may not work without Administrator rights. The problem report can be suppressed by setting the **MMOS.INI** flag:

```
NETIC_SkipAdminTest=1
```

RUNIC_AllowScriptExit:

Normally, if a script deliberately exits playback, the player considers this an error and restarts the PC so that the display resumes. If you intend to allow exit, set the **MMOS.INI** keyword


```
RUNIC_AllowScriptExit=1
```

NETIC_Reboot:

Control whether the Scala Player transmission client reboots or restarts when it processes a **Reboot** job command. The normal behavior is to reboot, but if you want the network engine to restart without rebooting, set

```
NETIC_Reboot = off
```

RUNIC_Reboot

Control whether the Scala Player graphical engine reboots or restarts if it abnormally exits.

Normally, if the Scala Player graphical engine exits abnormally, the PC will be rebooted. Set

```
RUNIC_Reboot = off
```

to cause the graphical engine to be restarted without the PC being rebooted.

RUNIC_MonitorConfigRetryLimit=n

Added a new mmos.ini file variable

```
PLAYBACKBASE_MonitorConfigRetryCount
```

to change the retry behavior when the monitor config fails to open during startup. When this is set to a non-zero value, the Player will reboot and try again only the specified number of times, then it will try a fallback display config once. If that also fails, it will stop trying and not reboot. To keep track of the number of reboot attempts, Player uses a registry key named "Monitor Config Attempts."

Path Options

MEDIA_Channels

You can override the location of the Channels folder by setting

```
MEDIA_Channels=path
```

(See also **MEDIA_Content** in the section on Designer and Player.)

PreLoadedContent

You can override the location of the Channels folder by setting

```
PreLoadedContent=path
```

For details, see Preloaded Content for Players.

Response / Reporting Options

You can now override the URL and port number that Player should use for sending heartbeats. This is useful if you set up an additional connector on Content Manager, so that you can then use network traffic shaping tools to differentially manage heartbeat traffic. To enable this feature, use the **MMOS.INI** setting


```
NETCLIENT_HeartbeatDestinationBaseURL=http:// hostname[:portnum]
```

Where *hostname* is the alternate hostname to use, and optional *portnum* is the port number to use.

SSHEALTH_LogUploadDelayHours

For nightly retrieval of ic.log and playback audit log files during some time distributed between midnight and 4am. This setting governs the delay after midnight before the player uploads its logs. Using the **mmos.ini** setting

```
SSHEALTH_LogUploadDelayHours=h
```

tells the player to delay for a random amount up to *h* hours after startup or midnight, before connecting to upload its log files. (The default value is 4 hours.)

SSHEALTH_HeartbeatStartupMaximumDelayMinutes

In order to balance network loads (e.g. when players restart at about the same time due to scheduled reboots, maintenance jobs, etc.), you can instruct Player to delay the first heartbeat after startup. This delay will be a random amount between zero minutes and the maximum number of minutes you set using the following **MMOS.INI** keyword:

```
SSHEALTH_HeartbeatStartupMaximumDelayMinutes=n
```

By default, there is no delay.

Dial-up Connection Options

NETCLIENT Dial-up Connection Warning Limits

a family of options to set up certain dial-up connection warning-limits, and report an error back to Scala Enterprise Content Manager if those limits are exceeded. (In order for the network to continue to function, the Player will continue to dial after the warning-limits are exceeded — the error report back to Scala Content Manager is there to alert the operator.)

Select a combination of settings based on what you are interested in monitoring. In turn, this is usually based on how you pay for telephone and internet service.

NETCLIENT_ResetDialupStatisticsEveryNHours

Sets the length of the warning-period over which the dial-up connection warning-limits apply. After this many hours, the measurements are reset. There will be a maximum of one error reported back to Scala Enterprise Content Manager per period.

```
NETCLIENT_ResetDialupStatisticsEveryNHours=n
```

`The default value is 24 hours.`

NETCLIENT_ErrorIfDialupConnectedMoreThanNHours:

Sets a warning-limit based on total connect time. If a player is connected for this many hours per warning-period, the warning-limit error will be reported.

```
NETCLIENT_ErrorIfDialupConnectedMoreThanNHours=n
```

The default value is 0 (unlimited). Use this setting if you are charged based on the amount of time your dial-up connection is active.

NETCLIENT_ErrorIfDialupAttemptedMoreThanNTimes:

Sets a warning-limit based on the number of dial-up *attempts*. If a player makes more than this number of attempts per warning-period, the warning-limit error will be reported.


```
NETCLIENT_ErrorIfDialupAttemptedMoreThanNTimes=n
```

The default value is 0 (unlimited). Use this setting if you are charged per dial-up attempt (regardless of whether or not the call succeeded).

NETCLIENT_ErrorIfDialupConnectedMoreThanNTimes:

Sets a warning-limit based on the number of *successful* dial-up connections. If a player makes more than this number of successful connections per warning-period, the warning-limit error will be reported.

```
NETCLIENT_ErrorIfDialupConnectedMoreThanNTimes=n
```

The default value is 0 (unlimited). Use this setting if you are charged per completed dial-up connection (e.g., some minimum charge for making the connection).

NETCLIENT_ErrorIfDialupFailedMoreThanNTimes:

Sets a warning-limit based on the number of *failed* dial-up connections. If a player makes more than this number of failed connection attempts per warning-period, the warning-limit error will be reported.

```
NETCLIENT_ErrorIfDialupFailedMoreThanNTimes=n
```

The default value is 0 (unlimited). Use this setting if you are having problems with an excessive number of dial-up failures. However, keep in mind that if a player cannot connect due to dialup failures it will not be able to report this error to Scala Enterprise Content Manager until it has connected successfully.

NETCLIENT_AltContentURL=url

Replace the list of download locations, as it is normally used for content directory mirroring.

NETCLIENT_LargePlaylistSupport=1

Monitor large playlists without sending as many "content folder changed" messages, which allows the NetIC process to not be as busy. If this variable is set, Content Manager will only be informed when ALL FILES in a large playlist have been downloaded.

Windows 10 and Scala Enterprise

Scala Enterprise and Microsoft Windows 10

Scala Enterprise Release 11.05 is tested and certified under versions of Windows 10 as indicated on the chart below:

Windows Edition	Designer	Content Manager	PC Player
Windows 10 Home	✗	✗	✗
Windows 10 Mobile	✗	✗	✗
Windows 10 Enterprise	✓*	✗	✓*
Windows 10 Pro	✓*	✗	✓*
Windows 10 Education	✓*	✗	✓*
Windows 10 Mobile Enterprise	✗	✗	✗
Windows 10 IoT Core	✗	✗	✗

Windows 10 IoT Enterprise	 *		 *

* Notes For PC Player

Scala Media Players

- Scala Media Players come preconfigured with **Windows 10 IoT Enterprise 2016 Long-Term Servicing Branch (version 1607)** . The Scala Player application is fully tested and certified in this configuration.

General Windows 10 Installations

- The only version of Windows 10 IoT Enterprise supported by PC Player is **Windows 10 IoT Enterprise 2016 Long-Term Servicing Branch (version 1607)**. Failure to can cause adverse effects in Players.
- Most versions of Windows 10 do not let you prevent Windows Update from modifying the system and rebooting when Microsoft decides. Windows 10 Professional allows users to define active hours so that reboots can occur outside of key times. However, the reboots can still occur at inconvenient times. Only a properly configured Windows 10 IoT Enterprise system can fully control whether Windows Update occurs.
- When using VNC with Windows 10, a recent build of VNC (e.g. TightVNC 2.8.8 or newer) should be used, otherwise you cannot remotely view the player output.

Player Software for Android

This is the homepage for Android Player documentation.

The Scala certified Players we currently have documentation for include:

- IAdea KitKat (4.4) Version Player
- IAdea Ice Cream Sandwich (4.0) Version Player

Certified Android Players

See List of Scala Certified Players for a list of certified players.

Problem Codes

If there is an error with a Scala application report errors with problem codes. Found in the error is what went wrong, and a consequence. For example, an error might be "File not found", and the consequence is "Your script did not play correctly."

The following codes are defined for Scala Android Players. If your code does not appear in this list, it may be in the list found on Monitoring Player Health.

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
2000	Internal problem	Internal Problem. Software is not functioning properly. Rebooting is suggested. Please contact Technical Support.	Indicates an internal problem in the software.	Yes	Alert

2001	Application terminated abnormally	The application terminated abnormally. Please contact Technical Support.	Reserved for future use.	Yes	Alert
2002	Player not running	The Playback Module is not running. It may have failed to start or someone may have manually closed it. Playback will not resume automatically, and some intervention, like a Reboot command, is needed to resume playback.	The graphical component is not running or stops responding. Rebooting may cure this problem.	Yes	Alert
2003	Media played incorrectly	Media played incorrectly	A media item played incorrectly. See the associated error message for details.	Yes	Alert
2004	Plan unreadable	The Scala Android Player Transmission Client may not have the latest plan, because the plan file is corrupt or incomplete. This problem is not necessarily serious, and may resolve itself on a future retry.	The player network engine cannot receive plans because the plan does not exist on the server, or appears to be corrupt. This problem may resolve itself on a future retry.	Yes	Alert
2005	Player invalid license	The player is not playing content, because the Playback Module does not have a valid license.	Problem with the license the file received from the server. See the associated error message for more details.	Yes	Alert
2006	Logging failed (disk space below reserve)	The player could not write log entries because the remaining free space on the partition is below the disk space reserve level. Remove files to increase the free space on the disk.	Player detected that it is running out of disk space, so it will not log entries until more space is freed.	Yes	Alert
2007	Media download failed (disk space below reserve)	The player is not playing the current plan because there is insufficient disk space available to download required media (the remaining free space on the partition is below the reserve level.) Remove files to increase the free space on the disk so that media may be downloaded.	Player will not store newly downloaded media because there is not enough free disk space. The content playing will be out of date.	Yes	Alert

2008	Playback audit logging failed (disk space below reserve)	The player could not write log entries to the Playback Audit Log because the remaining free space on the partition is below the disk space reserve level. Remove files to increase the free space on the disk.	Player detected that it is running out of disk space, so it will not playback audit log entries until more space is freed.	Yes	Alert
2009	Media file missing, download failed	A media item is missing on the server and could not be downloaded. Re-uploading the file is suggested.	A media item is missing from the source and could not be downloaded. This problem may be solved by re-uploading the file or publishing the ScalaScript.	Yes	Alert

Advanced Options

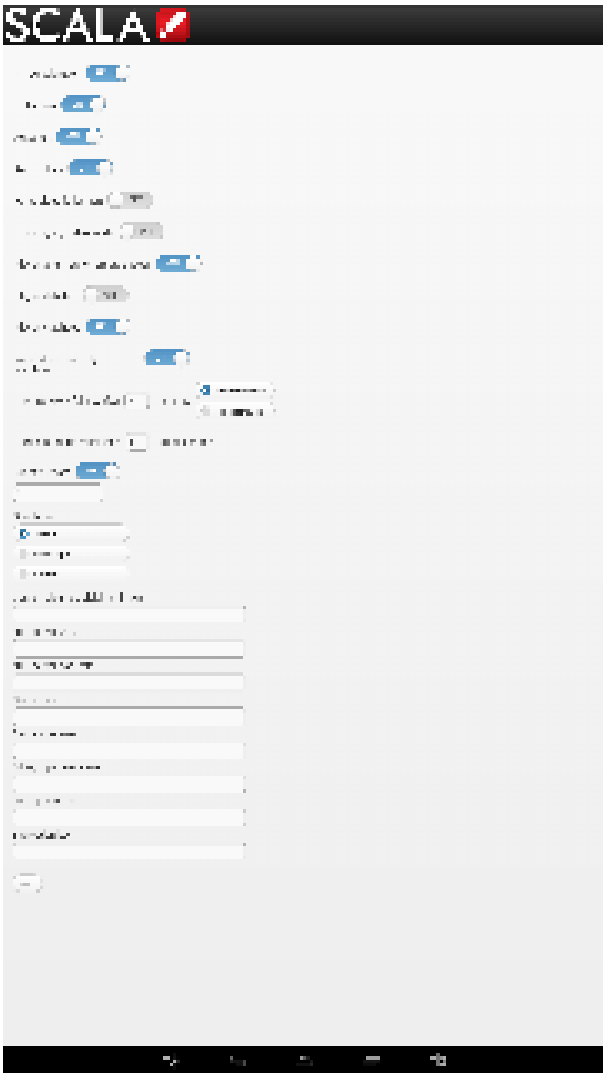
When configuring your Android Player, it may be necessary to make changes to the Advanced options. The pages listed below offer a guide to the Advanced Options screen:

- IAdea Players
- Android Players

For Android Players

For some of the settings on this page, it is recommended that you follow the Scala guideline in the document. Not doing so will negatively impact your Player.

On the Player setup, click on the Advanced Options button to get to the following screen, which will allow you to set options related to your Player:



- **Hardware Acceleration**: Certain rendering functionality can be accelerated by hardware found on these devices. As a result of internal testing, Scala has noticed various visual anomalies and reliability issues when this settings is enabled on Android devices prior to version 4.4. As a result, it is recommended that set this option to **Off**. For players running Android version 4.4 or newer, this setting is enabled **On** by default. This will allow the player to be able to render video through HTML5.
- **Fullscreen**: Allows you to play content over then entire screen.
- **Autostart**: Enabling this option will allow you to automatically start the Scala Player on the device. This option is **On** by default.
- **Auto Unlock**: Controls whether or the Scala Player unlocks a non-password protected device lock screen. It is **On** by default.
- **Force Video Fullscreen**: Ability to force video to always play fullscreen. If your device supports scaling to a frame, the default setting of **Off** should be used.
- **Force Legacy Video Mode:** Setting this option will force the use of the standard MediaPlayer API, instead of HTML5 video. This option is only used for Players running Android version 4.4 or newer.
- **Player admin panel remote access:** Ability to perform administrative function on your Player from a remote location.
- **Player statistics**: Player will periodically dump system memory usage and CPU load of the device. This should be **Off** by default and should be used only for debugging purposes.
- **Player watchdog**: Application that protects the system from specific software or hardware failures.
- **Network connectivity watchdog:** Protects the system from the following:
    - **Network Failure**: Specific time period (in minutes), to either restart the network the player is on, or restart the device itself.
    - **Reboot Limit**: Specific number of times the Player can reboot during the day.
- **Nightly reboot:** Time (in 0-24 value) at which you want the Player to perform its daily reboot. This setting will default to 3 (3am). If necessary, change this to a time that is more useful for the needs of your device. Doing a nightly reboot will help your Player avoid memory leak issues.
- **Orientation**: Controls the screen orientation option:
    - **Sensor:** Orientation set by the device's g-sensor.
    - **Portrait:** Forces portrait mode.
    - **Landscape:** Forces landscape mode.

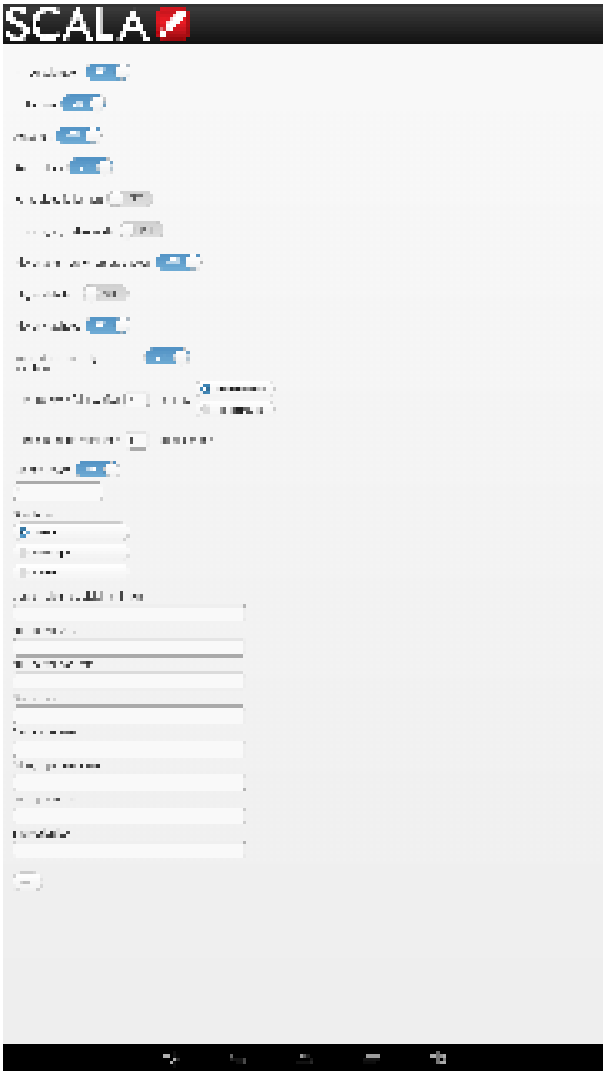
The following options must be filled with a value:

It is possible to enter no value for those options, and the default value will be used if no value entered.

- **Content clean up disk limit in MB**: Value at which the Player will performa cleanup round.
- **NTP server URL**: Controls the option to use Network Time Protocol (NTP) to keep the Player's clock synced with an NTP server. If you are not using the built-in Android NTP client, the URL you are using on your network should be entered here. If this is not set, the default value "pool.ntp.org" will be used.
- **NTP server pool rate:** For those using NTP, this controls the frequency at which the Player syncs its time with the NTP server. The default is every 5 minutes.
- **Cache size**: Memory reserved for caching recently received content files not in use, but that may be necessary. The default is 8 MB.
- **Cache Max Size:** Maximum size of the Player cache. The default for the max is 512 MB.
- **Billing Logs queue size**: Size of the amount of the amount of billing logs the Player will hold in memory before dumping them to disk.
- **Encryption key**: Option to set a 56 bit, 7 character key to encrypt and protect Player plans. If you are using an encryption key on your Content Manager server, this is where the matching key should be entered on the Player.

For IAdea Players

For some of the settings on this page, it is recommended that you follow the Scala guideline in the document. Not doing so will negatively impact your Player.



Using the screen you see above, you can control the following settings in the Advanced Options tab of your Player.

- **Hardware Acceleration**: Certain rendering functionality can be accelerated by hardware found on these devices. As a result of internal, Scala has noticed various visual anomalies and reliability issues when this settings is enabled on Android devices prior to version 4.4. As a result, it is recommended that set this option to **Off**. For KitKat (4.4) Version Players, this setting is enabled **On** by default. This will allow the player to be able to render video through HTML5.

- **Fullscreen**: Allows you to play content over then entire screen.
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- **Auto Unlock**: Controls whether or the Scala Player unlocks a non-password protected device lock screen. It is **On** by default.
- **Force Video Fullscreen**: Ability to force video to always play fullscreen. If your device supports scaling to a frame, the default setting of **Off** should be used.
- **Force Legacy Video Mode:** Setting this option will force the use of the standard MediaPlayer API, instead of HTML5 video. Models with 4K capabilities must have this set to **On**. This option is only used for Players running Android version 4.4 or newer.
- **Player admin panel remote access:** Ability to perform administrative function on your Player from a remote location.
- **Player statistics**: Player will periodically dump system memory usage and CPU load of the device. This should be **Off** by default and should be used only for debugging purposes.
- **Player watchdog**: Application that protects the system from specific software or hardware failures.
- **Network connectivity watchdog:** Protects the system from the following:
  - **Network Failure**: Specific time period (in minutes), to either restart the network the player is on, or restart the device itself.
  - **Reboot Limit**: Specific number of times the Player can reboot during the day.
- **Nightly reboot:** Time (in 0-24 value) at which you want the Player to perform its daily reboot. This setting will default to 3 (3am). If necessary, change this to a time that is more useful for the needs of your device. Doing a nightly reboot will help your Player avoid memory leak issues.
- **Orientation**: Controls the screen orientation option:
  - **Sensor:** Orientation set by the device's g-sensor.
  - **Portrait:** Forces portrait mode.
  - **Landscape:** Forces landscape mode.

The following options must be filled with a value:

It is possible to enter no value for those options, and the default value will be used if no value entered.

- **Content clean up disk limit in MB**: Value at which the Player will performa cleanup round.
- **NTP server URL**: Controls the option to use Network Time Protocol (NTP) to keep the Player's clock synced with an NTP server. If you are not using the built-in Android NTP client, the URL you are using on your network should be entered here. If this is not set, the default value "pool.ntp.org" will be used.
- **NTP server pool rate:** For those using NTP, this controls the frequency at which the Player syncs its time with the NTP server. The default is every 5 minutes.
- **Cache size**: Memory reserved for caching recently received content files not in use, but that may be necessary. The default is 8 MB.
- **Cache Max Size:** Maximum size of the Player cache. The default for the max is 512 MB.
- **Billing Logs queue size**: Size of the amount of the amount of billing logs the Player will hold in memory before dumping them to disk.
- **Encryption key**: Option to set a 56 bit, 7 character key to encrypt and protect Player plans. If you are using an encryption key on your Content Manager server, this is where the matching key should be entered on the Player.

Player Hardware

System Requirements

Before installing Player, make sure you have a system that meets Scala's recommended specifications.

Recommended Operating Systems:

- Windows 10 IoT (64-bit)
- Windows 8.1 (64-bit)
- Window 7 (64-bit)
- Windows Embedded 8.1. Pro (64-bit)
- Windows Embedded 8.1 Industry (64-bit)
- Windows Embedded Standard 7 (64-bit)
- Windows Embedded POSReady 7 (64-bit)

Supported Operating Systems:

- Windows 10 IoT (64-bit)
- Windows 8.1 (32-bit)
- Windows 7 (32-bit)
- Windows Embedded Standard 2009

Scala Media Players

Scala has combined their digital signage system knowledge with decades of experience and best practices to create media players that are

designed for performance, stability, and compatibility. Each Scala Media Player comes "Scala Ready" with relevant Scala and third-party software installed, making setup easy and giving you more time to focus on creating your digital signage content. See the Scala Media Player Guides page for more information.

Media Players from Third-Party Vendors and General Specifications

See the section on Media Players from Third-Party Vendors for more information.

Scala Media Players

Scala has combined their digital signage system knowledge with decades of experience and best practices to create media players that are designed for performance, stability, and compatibility. Each Scala Media Player comes "Scala Ready" with relevant Scala and third-party software installed, making setup easy and giving you more time to focus on creating your digital signage content.

Scala's lineup of digital signage media players support a range of applications and performance needs so you can choose the best media player for your digital signage project. See Scala Media Players for more information.

Media Players from Third-Party Vendors

Scala offers a range of media players specifically designed and optimized for digital signage. See Scala Media Players for more information on Scala's in-house players.

However, certain third-party vendors manufacture players that are capable of running Scala digital signage software successfully.

In this section you will find:

- PC Hardware Specifications
- Scala Certified Third-Party PC Players

Example PC Hardware Specifications

The following chart details low-end, mid-range, and high-end Player specifications that may be helpful in meeting your solution's requirements and budget for use with Scala Enterprise.

Performance Definitions	Low-End Player	Mid-Range/Basic Player	High-End Player
Maximum Supported Display Resolution @60FPS	Up to 1x 1366x768 or 1440x900 @ 60 FPS	1x1920x1080, or up to 2x1366x768(2x1440x900) @ 60 FPS	2x1920x1200, up to 6x1920x1080 @ 60 FPS; (with AMD RADEON E6760/FireProW600/RADEON HD 7750 EyeFinity6); and a careful consideration of systemic limitations.
Video files: PAL and NTSC resolution-class formats	Up to 1x 1366x768 or 1440x900 @ 60 FPS	• 720x480/576i;p @ 25/50, 29.97/59.94, 25, 30 Hz; 1280x720p @ 50 or 60 Hz; 1920x1080 @ 24, 25, 30 Hz; MPEG-2: 12-16MbpsVideo, 320KbpsAudio CBR; H.264 to 20Mbps CBR; HD-WMV9(VC-1) to 30Mbps. • Four NTSC/PAL(480p/576p)-class; Two ATSC(720p)-class; or a single ATSC(1080p)-class video clip(s) displayed at one time.	• 720x480/576i;p @ 25/50, 29.97/59.94, 25, 30 Hz; 1280x720p @ 50 or 60 Hz; 1920x1080 @ 24, 25, 30, 50, 60 Hz; MPEG-2: 12-16MbpsVideo, 320KbpsAudio CBR; H.264 to 20Mbps CBR; HD-WMV9(VC-1) to 30Mbps. • Eight NTSC/PAL(480p/576p)-class; Six ATSC(720p)-class; or a four ATSC(1080p)-class video clips displayed at one time.
Display	Two Fractional, up to full display, Picture, (.BMP, .JPG, .PNG, .TIF), elements with up to full display transition effects	Multiple Fractional to full screen Picture, (.BMP, .JPG, .PNG, .TIF), elements with up to full display transition effects.	

Screen width text crawl	A single 80pt full horizontal screen width text crawl feed filled by text file or RSS	Up to two 80pt full horizontal screen width text crawl feeds filled by text file or RSS.	Up to four 200pt full horizontal screen width text crawl feeds filled by text file or RSS.
Zones	Four Zones on a single display	Up to six Zones per display.	Up to nine Zones per display/channel.
Channel Playback	Single channel playback @ 1x 1366x768 @ 60 Hz	• Single Channel Playback @ 1x (1920x1080 @ 60 Hz) • Dual channel playback at: 2x(1366x768 @ 60 Hz) • With careful script design a marginal 2x(1920x1080 @ 60 Hz display might be supported as long as the video clips are of lower, 24/25/30 Frame Rates and (<10Mbps MPEG-2) bit rates.	• Dual channel playback at: 2x(1920x1200) @ 60 Hz; [4x(1920x1080) @ 60 FPS with EyeFinity4 or Matrox GXM] OR • [6x(1920x1080) @ 60 Hz) with the use of AMD EyeFinity6]

Graphics sub-system and System Memory	• An Integrated Graphics Processor, (iGPU—also known as Chipset, Built-in, Integrated CPU Graphics, APU), with at least 4096 MB of Single-Bank PC3-10600 System Memory or better memory. At least 512MB of this Shared Memory must be allocated to the iGPU - or a dedicated, minimally with 64-bit wide DDR3 video memory data bus, 512MB PCIeX16-gen2, PEG, Graphics Card.
	• AMD Brazos APU: E-350, E-450, E2-1800
	• Intel Celeron G5#0T, G16#0T
	  • Intel Pentium G6#0T, G20#0T, G21#0T; Intel Core-i3-21#0T, -32#0T, -4#30T;
	• Intel/NVIDIA-ION2: Atom 330/D525 + NVIDIA GeForce210(GT218)
		• An Integrated Graphics Processor, (iGPU—also known as Chipset, Built-in, Integrated CPU Graphics, APU), with at least 4096 MB of Dual-Bank PC3-10600 RAM, or better, system memory.
		• At least 1024MB of this Shared Memory must be allocated to the iGPU - or - a dedicated PCIeX16-gen2, PEG, Graphics Card, with a 64-bit wide GDDR5, (or 128-bit DDR3), video RAM data bus, having at least 1024MB memory.
		• AMD Llano APU: A8-3500M+; A8-3800+ AMD Trinity APU: A8-4500M+; A8-5500+ AMD Richland APU: A8-5550M+; A8-6500+
		• Intel Core-i5, -2400S, -2500S, -3470T, -4570T
			• A Discrete Graphics Processor on a PCIeX16 (X8 MXM)-gen2/-gen3 “Graphics Card” with, minimally, (256-bit /DDR3, or 128-bit/GDDR5, wide video RAM data bus), having at least 1024MB of memory.
			• The system motherboard chipset and specific motherboard implementation must support a full 16 lanes to the PCIeX16, PEG, slot. (8 lanes MXM)
			• Dual-1080p-output:
			  • System memory must be at least 4096MB of Dual-Bank PC3-10600 or better—PC3-12800 strongly encouraged.
			• 4x or 6x -output 1080p Players:
			  • System memory may be a little as 2x2GB PC3-10600. However, it is strongly suggested that units be configured with 2x4GB, 8GB, of PC3- 12800, or better, memory.

CPU	At least a Dual Physical Core CPU of a minimum rated core-speed of 1.6GHz and with 2x512KB of L2(or 1x2MB L3) cache.	At least a Dual Physical Core/Four Virtual CPU's or a Two CPU Module, (with a total of Four CPU Execution units), at a minimum rated core-speed of 1.4GHz and with at least 4x1024KB of L2(or 1x3MB L3), cache.	At least a Quad Physical Core/(Eight Virtual CPU's) or a Three CPU Module, (with a total of Six CPU Execution units), at a minimum rated core- speed of 2.0GHz and with at least 3x2MB of L2(or 1x6MB L3), cache.
Audio	Intel High Definition Audio, (a.k.a. HD Audio/Azalia), Specification.		
Storage	At least 40 GB	At least 60 GB	At least 80 GB

Hardware	• AMD Brazos APU: E-350, E-450, E2-1800, E2-3000;
	• Intel Celeron G5#0T, G16#0T ;
	  • Intel Pentium G6#0T, G20#0T, G21#0T; Intel Core-i3-21#0T, -32#0T, -4#30T;
	• Intel/NVIDIA-ION2: Atom 330/D525 + NVIDIA GeForce210(GT218)
		• AMD Llano APU: A8-3500M+; A8-3800+ AMD Trinity APU: A8-4500M+; A8-5500+ AMD Richland APU: A8-5550M+; A8-6500+
		• Intel Core-i5, -2400S, -2500S, -3470[T|S], -4570[T|S]; Motherboards with Intel AMT or DASH functionality are desirable.
			• AMD FX-6300, -8320, -8350 with 990FX chipset motherboard supporting up to 4xPCIeX16-gen2 which are electrical X8.
			• Intel Core -i7-3612QM, -3840QM with QM67 chipset; Intel Core -i7-3770[T|S] with Q77, Z77 Chipsets; Intel Core -i7-4770[T|S] with Q87, Z87 Chipsets; Intel Core -i7-3930K, -4930K; with X79 Chipset;
			• Intel XEON E3-12## with C216 Chipset.
			  • Motherboards with Intel AMT or DASH functionality are desirable.

RAM	4096MB of PC3-10600 or better. Dual-Bank memory preferable.	4096MB of PC3-10600 or better. Dual-Bank PC3-12800 preferable.	• Dual-Output: Dual-Bank 4096MB of PC3-10600 or better. • Quad-/Hex- Output: Dual-Bank, 2x4GB=8GB, of PC3-12800 or better preferable; Quad-Bank: 4x2GB=8GB or 4x4GB=16GB PC3-12800 or better.
Integrated Graphics	Intel Integrated Graphics: HD 2000; HD 2500; HD 3000; HD 4000. Use of Intel GMA 500, GMA 600, GMA 3600, & GMA 3650 iGPU's are PROHIBITED for a Scala Player system	Intel Integrated Graphics: HD 2500; HD 3000; HD 4#00(GT2) HD 5#00(GT3); Iris Pro 5200(GT3e)	Does not apply
	AMD RADEON HD 6310, 6320, 7340, 8280	AMD RADEON HD 6620G, 6380G, 6520G, 6550D, 7560D, 7640G, 8550G, 8570D	
Discrete Graphics	AMD RADEON HD 5450, 6350, 7450, 8350 with 512MB of DDR3; NVIDIA GeForce 405 with 512MB of GDDR3; or better.	AMD RADEON HD 6450 w/GDDR5; 7570, 8470 NVIDIA GeForce GT430, GT530, GT630w/GDDR5, or better.	AMD RADEON E6760, HD 7750, FirePro W600, V7900 or better. NVIDIA GeForce GTX 646, 650, 760 or better.
		Multi-output V_SYNC is only possible with AMD EyeFinity# or NVIDIA with Matrox GXM	

Scala Certified Third-Party PC Players

The version of the Scala Enterprise Player shown in this chart is the one used in the certification and the creation of the Scala Enterprise Player Image for the Player listed. These pre-configured images are optimized for long term stable playback. It may be necessary to update the Player version to a more current one, which can be done by using either a Content Manager maintenance job or the Installer.

Current as of September 29, 2016

Certified Player	Description	Operating System/Software	Video Outputs & Options	Languages	Release Date	Image Revision	Notes	Territorial Restrictions
NEC/AARONN STv2 Gen-4 OPS Player (ADVANTECH SOM-5894)	• Active Cooling: (Large, quiet, fan with full-COMv2.1-spec Heat Spreader) • Ultra-Small-Form-Factor Gen-4 (Haswell) Intel Celeron /PDC/Core-i[3|5|7] CPU; • Dual Channel RAM • OPS-integrat display out + back-panel mini-DisplayPort	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.01.04. • Flash Player 10.3.183.90.	• Integral OPS Display Output; • Back-Panel mDP.	• Windows: US English • Windows UI: EN	2016.09.08	RC0a-WIP"8a	• The supplied samples were based on the Intel Gen-4(Haswell) Ceelron 2000E long life CPU. This part is limited to 1GB of total Unified Memory Frame Buffer allocation. • Performance assumes 2x 2GB DDR3 SODIMM for Dual-Channel system memory. Units configured with 1x 4GB, a Single-Channel DRAM configuration, will have substantially inferior performance. • WIFI: [mPCIe] Intel -N, -AC, 2###, 3###, 6###, 7260; SparkLAN WPEA-121N	Available in NEC in markets NEC sells the Gen-4 STv2.(SOM-5894) [Initially Germany/Europe]

							• YES: WDM USB TV-Tuner/Video-Capture can be installed.	
iBASE SI-60E	• Smallest practical form factor for a 12x Player. • Intel Gen-4 Core i5/-i7, Active cooling, 12x HDMI outputs from an EyeFinity6 (RADEON E8860 w/2GB GDDR5) via the use of three 2x4 Video Wall Controller Modules. • Dual-Channel, (DDR3-1600/-1866), memory.	• OEM Windows7PRO x64/IE11/WMP12 image with • Scala Enterprise Player Release 11.00.06 • Flash Player 10.3.183.90	12x HDMI outputs from an EyeFinity6 (RADEON E8860 w/2GB GDDR5) via the use of three 2x4 Video Wall Controller Modules.	• Windows: US English • Windows UI: EN	2016.04.20	RC0a-WIPA		

							• 12-output Player with integral EDID & Display Continuity. • Chipset RAID-1. • mPCIe TV-Tuner/Video-Capture can be installed. Support of any market available mPCIe TV/Video input devices remains TBD. • WIFI: [mPCIe] Intel Advanced-N/-AC, 2K, 6K, 7K-series. • Effective 60FPS performance to 8 outputs. (Marginal 12 output performance, (30+FPS), due to the limitations of dual-channel RAM. • Integral Video Wall Controller and configuration software has UI/Functionality marginality.	

IntelNUC 5i3MYBE, NUC5i5MYBE *** Seneca Data HDn ***	• Intel Gen-5 ULV Core-i3/i5 • Active cooling. Ducted HSF Dual-Channel, (DDR3-1333L/-1600L), RAM. • 2x mDP [1x eDP on PCBA;	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled Scala Enterprise Player • Release 11.00.03. • Flash Player 10.3.183.90. • Seneca Data ONLY WS7P SKU build. • Build was done by Seneca Data and QA'ed by Scala.	• 2x mDP outputs • Strongly advise Active-Mode mDP-to-HDMI/DVI-D Dongles +EDID-Emulators	• Windows: US English • Windows UI: EN	2016.05.05	RC1-7PSSC444G	• Intel Collage Mode support for Dual V_SYNC.(requires external mDP-to-HDMI/DVI-D and EDID emulators for stable deployments) Can do2x1920x1080@60FPS • WIFI: [M.2] Intel 7265 • YES: WDM USB TV-Tuner/Video-Capture can be installed.	Currently only available in North America from Seneca Data as its HDn, gen-5 product

Seneca Data HD2.5-H170+	• Intel Gen-6 Core-i5/7 plus AMD PCIeX16 AMD FirePro W4100, W600 or Matrox C-420/-680 EyeFinity 4x or 6x PEG. • Slim form factor Desktop/Rack Embedded PC. • Intel H170 Chipset. • Dual-Channel DDR4-2133 memory; Intel GbE • 4x or 6x mDP	• Windows Embedded Standard 7 (WS7E-SKU), EWF enabled. • Scala Enterprise Player, Release 11.00.06 • Flash Player 10.3.183.90. • Seneca Data ONLY WS7P SKU build! • Build was done by Seneca Data and QA'ed by Scala.	4x or 6x mini-Display Port	Windows: US English	2016.05.05	RC5-7PSSC427G	• Basically a full-desktop discrete graphics PC. • Embedded dCPU support Soft-EDID functionality as well as Soft-Display Continuity; however HW-EDID emulators would still be advised.	

iBASE SI-304	• Active cooling. (Chassis fan & HSF) • AMD Kaveri (Consumer-Mobile vs. Embedded), Full Height Mini-ITX, Small Form Factor Chassis. Quad-Core APU; Dual-Channel, (DDR3-1866/-2133) memory.	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.04. • Flash Player 10.3.183.90.	4x HDMI	• Windows: US English • Windows UI: EN	2016.01.27	RC1-WIPC	• EyeFinity4 capability AND internal HW-EDID emulators. (emb-APU SKU also has Soft-EDID emulation) • Enough performance for 4x1920x1080@60FPS. WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

Actineon Siilent8-LP	• PASSIVE COOLING: (No Fan) • Ultra-Small-Form-Factor Intel BayTrail Dual or Quad-Core CPU; Dual Channel RAM. • 1xaVGA-15 • 1xHDMI	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.04. • Flash Player 10.3.183.90.	Dual-output: aVGA-15 + HDMI	• Windows: US English • Windows UI: EN	2015.12.30	RC1-WIP9	• No Intel Collage Mode support w/E38## SoC (Collage mode with Celeron-J1900 SoC) 2x1920x1080 @60FPS possible with Dual-Channel RAM. (requires external EDID emulators) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	Available in US only.

iBASE SI-12	• PASSIVE COOLING: (No Fan) • Ultra-Small-Form-Factor Intel BayTrail Dual or Quad-Core CPU; Dual Channel RAM.	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.04. • Flash Player 10.3.183.90.	2x HDMI	• Windows: US English • Windows UI: EN	2015.12.29	• RC2a-WIP8a • RC2a-WIP8aj (Japanese RTFM)	• No Intel Collage Mode support w/E38## SoC (Collage mode with Celeron-J1900 SoC) 2x1920x1080@60FPS possible with Dual-Channel RAM. (requies external EDID emulators) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

DFI EC700-BT	• PASSIVE COOLING: (No Fan) • Ultra-Small-Form-Factor Intel BayTrail Dual or Quad-Core CPU; Single Channel RAM. • 1xDVI-I	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	Dual-output, DVI-I+HDMI	• Windows: US English • Windows UI: EN	2015.11.17		• No Intel Collage Mode support • Single channel memory (requires external EDID emulators) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

DFI MP90-521 (HD101-H81D)	• Active cooling. (Chassis fan & HSF [centrifugal blower]) • Intel H81 PCH/Intel-gen4 (Celeron, Pentium, Core-i3/5/7); Full-height Mini-ITX, Dual-Channel, (DDR3-1333), RAM. • Dual-output, (1xDVI-I, 1xHDMI);	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	Dual-output, DVI-I+HDMI (Strongly advise Active-Mode DP-to-HDMI/DVI-D Dongles+EDID-Emulators)	• Windows: US English • Windows UI: EN	2015.11.12	RC0-WIP"6"	• 2x1920x1080 @60FPS and has support for the Intel Collage Mode so there is V_SYNC for the two outputs if they are used with DVI-D/HDMI display devices. (requires external EDID emulators) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

DFI MP90-528X (BE171)	• Active cooling. (Chassis fan & HSF) • AMD Kaveri (Consumer-Mobile vs. Embedded), Full Height Mini-ITX, Small Form Factor Chassis. Quad-Core APU; Dual-Channel, (DDR3-1866/-2133) memory. • 4x-DisplayPort;	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	4x full-size DisplayPort connectors. (Strongly advise Active-Mode DP-to-HDMI/DVI-D Dongles+EDID-Emulators)	• Windows: US English • Windows UI: EN	2015.11.12	RC1-WIP"A"	• EyeFinity4 capability but requires external EDID emulators, and Display Port to HDMI/DVI-D Dongles as the SKU of the AMD APU involved does not have the software EDID emulation feature of the more expensive Embedded parts. • Enough performance for 4x1920x1080@60FPS. • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

Actineon Siilent8-DLP	• PASSIVE COOLING: (No Fan) • Ultra-Small-Form-FactorAMD Kabini Dual or Quad-Core APU; Single Channel RAM.	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	2x HDMI with built-in StayConnect (tm), a form of HDMI-connection sustaining functionality, & Cable-Retention bracket screws	• Windows: US English • Windows UI: EN	2015.11.05	RC0-WIP"D"	• HW&FW Support for DASH. • StayConnect is not HW EDID emulation. (the device driver does support software EDID emulation) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	Available in US only.

Actineon Siilent8-QLP	• PASSIVE COOLING: (No Fan) • Ultra-Small-Form-Factor AMD TRINITY Dual or Quad-Core APU; Dual Channel RAM.	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	4x HDMI (with built-in StayConnect (tm), a form of HDMI-connection sustaining functionality, & Cable-Retention bracket screws	• Windows: US English • Windows UI: EN	2015.11.05	RC0-WIP"C"	• HW&FW Support for DASH. • StayConnect is not HW EDID emulation. (the device driver does support software EDID emulation) • WIFI: [mPCIe] Intel -N, -AC, 2###, 6###, 7260; SparkLAN WPEA-121N • YES: WDM USB TV-Tuner/Video-Capture can be installed.	Available in US only.

IntelNUC 5i3MYBE, NUC5i5MYBE	• Intel Gen-5 ULV Core-i3/i5 • Active cooling. Ducted HSF • Dual-Channel, (DDR3-1333L/-1600L), RAM. • 2x mDP [1x eDP on PCBA;	• Windows Embedded Standard 7 (WS7E-SKU) • EWF enabled • Scala Enterprise Player, Release 11.00.03. • Flash Player 10.3.183.90.	2x mDP outputs (Strongly adivse Active-Mode mDP-to-HDMI/DVI-D Dongles+EDID-Emulators)	• Windows: US English • Windows UI: EN	2015.10.29	RC0-WIP5	• Has Intel Collage Mode support for Dual V_SYNC.(requires external mDP-to-HDMI/DVI-D and EDID emulators for stable deployments) Currently only available in North America from Seneca Data as its HDn, gen-5 product Can do2x1920x1080@60FPS • WIFI: [M.2] Intel 7265 • YES: WDM USB TV-Tuner/Video-Capture can be installed.	

iBASE-SI-64	• Intel Gen-3 Corei5/7 plus AMD PCIeX8 E6760 1GB GDDR5 GFX • Slim form factor Desktop/Rack Embedded PC. Intel Q77 Chipset. Dual-Channel DDR3-1600 memory; Intel GbE with iAMT8.0 4c DVI-D, (1x DVI-I)	• Windows Embedded Standard 7 (WS7P-SKU) WS7P • EWF enabled • Scala Enterprise Player, Release 10.5.5 • Flash Player 10.3.183.90.	4xDVI-D(1x is DVI-I)	• Windows: US English • Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR IME for CN/JP/KR	2015.08.12	RC0-WIP"A"	This is basically a full-desktop discrete graphics PC with remote management. The embedded dCPU support Soft-EDID functionality-, however HW-EDID emulators would still be advised.	
AOpen DE6140	• Active cooling. (HSF) • AMD TRINITY (Consumer-Mobile vs. Embedded), Small Form Factor Chassis. Quad-Core APU; Dual-Channel, (DDR3-1333/-1600) memory. • 4x-HDMI;	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.5.5 • Flash Player 10.3.183.90.	4x HDMI	• Windows: US English • Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2015.07.14	RC3a-WIP-7a There is a custom image build for H&M, RC4a-WIP8, which contains H&M proprietary configuration, fonts and media assets.		

- Stability and performance testing passed for dual/triple/quad output(2GB UMA Frame Buffer w/8GB system RAM), 2 x 1920 x 1080 x 32bpp @60FPS, (EyeFinity-2 mode--EyeFinity-3 and -4 mode availabl e but the system can not maintain a consistent 60FPS), High-Bit-Rate Scala stress test when configured with 2x2GB-DDR3-1600 system memory and the iGPU Frame Buffer set to 2GB. (2GB w/8GB system for 3x and 4x)

							• WiFi Options: mPCI, Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195. • YES: WDM TV-Tuner/Video-Capture can be installed.	
HP 4-4200m	PASSIVE COOLING: (No Fan) Small-Form-FactorAMD Kabini Dual or Quad-Core APU; Single Channel RAM. 2x DisplayPort	• Windows Embedded Standard 7 (WS7P-SKU) WS7P • EWF enabled • Scala Enterprise Player, Release 10.5.5 • Flash Player 10.3.183.90.	2x Full-size DisplayPort outputs.	• Windows: US English • Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2015.05.11	RC2a-WIP"A"	Currently only available via a Virutal OEM agreement in North America from Seneca Data. Has EyeFinity2 support. (requires external EDID emulators, and DisplayPort to HDMI/DVI-D Dongles) This unit only has single-channel memory so it can not really manage 2x1920x1080@60FPS.	
Seneca Data HDn Intel NUC D34010WY[K|B] D54250WY[K|B]	Intel NUC, Core-i#-Gen 4, (Intel Haswell), Core-i3/i5, QM87 chipset		1x mini-DisplayPort; 1x mini-HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2015.01.15	RC3a-WIP-5		

		• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.4.5; • Flash Player 10.3.183.90.					• Stability and performance testing passed for two-output, Intel Collage Mode, 2 x 1920 x 1080 x 32bpp @60FPS, High-Bit-Rate Scala stress test with Core-i5 & 8GB of Dual-Channel RAM. (Core-i3-gen4 D34010 has lower media decode performance; esp. for Flash Clips, Transport Streams, and Video Streaming Clips; otherwise general two screen performance is very close to that of the higher end Core-i5-gen4 unit!)	

							• YES: WDM TV-Tuner/Video-Capture can be installed.	
SHUTTLE DS81	• SHUTTLE DS81, Intel Haswell Core-i3/i5/i7, HM81 chipset	• Windows Embedded Standard 7 • (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.4.2; • Flash Player 10.3.183.90.	• 2x Display Port; 1x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2015.01.13	RC2a-WIP-4	• Stability and performance testing passed for three-output, Intel Collage Mode, 3 x 1920 x 1080 x 32bpp @60FPS, High-Bit-Rate Scala stress test with Core-i7 & 8GB of Dual-Channel RAM. • YES: WDM TV-Tuner/Video-Capture can be installed.	

iBASE SI-83	iBASE SI-83, Intel Haswell Core-i5/i7	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90	2x DisplayPort; 1x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.12.10	RC1a-WIP-3	• Stability and performance testing passed for three-output, Intel Collage Mode, 3 x 1920 x 1080 x 32bpp @60FPS, High-Bit-Rate Scala stress test with Core- i7 & 8GB of Dual-Channel RAM. • YES: WDM TV-Tuner/Video-Capture can be installed.	

PEGATRON AMIS SIASHAIT2 SST X4-J1800	• Consumer-level, non-servicable, Plastic; Ultra-Small-Form-Factor. • Intel BayTrail Celeron J1800	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.4.2 • Flash Player 10.3.183.90	1x aVGA-15; 1x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.11.19	RC0a-WIP-7	• Stability and performance testing passed for single-output 1 x 1920 x 1080 x 32bpp @60FPS, Medium-Bit-Rate Scala stress test, with 4GB of Single-Channel RAM. • YES: WDM TV-Tuner/Video-Capture can be installed.	
AOpen DE6100	• AMD TRINITY R-series, (Dual- or Quad-Core)	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90.	2x HDMI + 1x DisplayPort. (3x HDMI w/Active-DP-Dongle)	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.10.03	RC2a-WIP-6a	• Stability and performance testing passed for dual output, 2 x 1920 x1080 x 32bpp @60FPS, (EyeFinity-2 mode), High-Bit-Rate Scala stress test when configured with 2x2GB-DDR3-1666 system memory and the iGPU Frame Buffer set to 1GB.	

- Quad-Core units are capable of a marginal 3 x 1920 x 1080 x 32bpp @60FPS; EyeFinity-3 Mode. (Best for mostly-static electronic menu board applications with minimal animations)
- Limitations of the Dual-Core APU Models: No V_SYNC on secondary outputs. (No-EyeFinity-n modes possible) As such, the Dual-Core APU units are best recommended for single-output applications.
- WiFi Options : mPCI, Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195.

							• YES: WDM TV-Tuner/Video-Capture can be installed.	
AOpen DE6140	• AMD TRINITY R-series, (Quad-Core)	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90.	4x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.10.03	RC2a-WIP-6a		

							• Stability and performance testing passed for dual/triple/quad output(2GB UMA Frame Buffer w/8GB system RAM), 2 x 1920 x 1080 x 32bpp @60FPS, (EyeFinity-2 mode--EyeFinity-3 and -4 mode availabl e but the system can not maintain a consistent 60FPS), High-Bit-Rate Scala stress test when configured with 2x2GB-DDR3-1666 system memory and the iGPU Frame Buffer set to 1GB. (2GB w/8GB system for 3x and 4x)	

							• WiFi Options: mPCI, Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195. • YES: WDM TV-Tuner/Video-Capture can be installed.	
iBASE SI-38	Slim-Small-Form-Factor AMD Trinity Dual or Quad-Core APU.	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90.	2x DVI-I(aVGA-15 or HDMI w/Dongle)	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.10.02	RC6a-WIP-2	• Stability and performance testing passed for dual output, 2 x 1920 x 1080 x 32bpp @60FPS, (EyeFinity-2 mode), High-Bit-Rate Scala stress test when configured with 2x2GB-DDR3-1666 system memory and the iGPU Frame Buffer set to 1GB.	

- Quad-Core units are capable of a marginal 3 x 1920 x 1080 x 32bpp @60FPS; EyeFinity-3 Mode.
- (Best for mostly-static electronic menu board applications with minimal animations) Limitations of the Dual-Core APU Models: No V_SYNC on secondary outputs. (No-EyeFinity-nmodes possible) Dual-Core APU units are best recommended for single-output applications.
- WiFi Options : mPCI WiFi: Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195.

							• YES: WDM TV-Tuner/Video-Capture can be installed.	
iBASE SI-38n	PASSIVE COOLING: (No Fan) Slim-Small-Form-Factor AMD Trinity Dual or Quad- Core APU.	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90.	2x DVI-I(aVGA-15 or HDMI w/Dongle)	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.10.02	RC6a-WIP-2	• Stability and performance testing passed for dual output, 2 x 1920 x 1080 x 32bpp @60FPS, (EyeFinity-2 mode), High-Bit-Rate Scala stress test when configured with 2x2GB-DDR3-1666 system memory and the iGPU Frame Buffer set to 1GB. • Quad-Core units are capable of a marginal 3 x 1920 x 1080 x 32bpp @60FPS; EyeFinity-3 Mode. • (Best for mostly-static electroni	

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							plic atio ns. • WIFI Options : mPCI WiFi: Intel Centrin o 6205-N; AzureW ave AW-NB 087K; AzureW ave SW-NE 195. • YES: WDM TV-Tun er/Vide o-Captu re can be installed .	

iBASE SI-22	PASSIVE COOLING: (No Fan) Ultra-Small-Form-Factor AMD Kabini Dual or Quad- Core APU.	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90	2x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.10.02	RC3a-WIP-7c	• Stability and performance testing passed for a marginal dual output, 2 x 1920 x 1080 x 32bpp @60FPS, (EyeFinity-2 mode), Medium-Bit-Rate Scala stress test when configured with 1x4GB-DDR3-1666 system memory and the iGPU Frame Buffer set to 1GB. • YES: WDM TV-Tuner/Video-Capture can be installed.	

iBASE SI-58-B3	iBASE SI-58-B3 Intel IvyBridge Core-i5/i7	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.3.3 • Flash Player 10.3.183.90	6x HDMI	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.09.29	RC4-WIP-9	• Stability and performance testing passed for hex-output, 6 x 1920 x 1080 x 32bpp @60FPS, High-Bit-Rate Scala stress test with Core-i7 & 8GB of Dual-Channel RAM. • YES: WDM TV-Tuner/Video-Capture can be installed.	

Mdina QE1000 GX-420CA SBC/USFF	Ultra Small Form Factor AMD Kabini G-series, (Quad-Core); Single-Channel DDR3 memory.	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.2.4	1x HDMI; 1x DisplayPort Dual-Independent Extended Desktop test (no V_SYNC on secondary output)	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2014.06.18	RC1b-WIP-3	• Stability and performance testing passed for single output (1GB UM Frame Buffer w/4GB system RAM), 1 x 1920 x 1080 x 32bpp @60FPS, (no EyeFinity-2 mode w/current driver set); High-Bit-Rate Scala stress test when configured with 1x4GB-DDR3-1600 system memory and the iGPU Frame Buffer set to 1GB. • WiFi Options: mPCI, Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195. • No TV-Tuner/Video-Capture support.	

Shuttle DS61	Ultra-Small-Form-Factor Intel H61 chipset with IvyBridge Core-i3/i5/i7	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.1.6	• Intel IGX: Dual-Independent Mode. No V_SYNC on 2nd outputs. • 1x DVI-I(HDMI w/Dongle), 1x HDMI.	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2013.12.12	RC9-WIP-M	• Stability and performance testing passed for single output, 1920 x 1080 x 32bpp @60FPS, High-Bit-Rate Scala stress test. Capable of 2 x 1920 x 1080 x 32bpp @60FPS. • WiFi Options: mPCI WiFi: Intel Centrino 6205-N; Intel Centrino 6300-N; Intel Centrino N-1000; AzureWave AW-NB087K; AzureWave SW-NE195. Realtek RTL8192xx; Realtek RTL8188SU; • No TV-Tuner/Video-Capture support.	

AOpen DE5100(i)	• Intel IvyBridge Core-i3/i5/i7	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala Enterprise Player, Release 10.0	1x DVI-; 1x DisplayPort.	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2013.07.12	RC0-WIP-8	• Stability and performance testing passed for single output, 1920 x 1080 x32bpp@60FPS, High-Bit-Rate Scala stress test. Capable of 2 x 1920 x 1080 x 32bpp @60FPS; Dual-Independent Mode. [no V_SYNC on secondary output]. • Wifi Options: mPCI, Intel Centrino 6205-N; AzureWave AW-NB087K; AzureWave SW-NE195. • No TV-Tuner/Video-Capture support.	

Mdina QS1000B AMD Trinity Small-Form-Factor Mdina QS2000B AMD Trinity Mini-ITX-Form-Factor	Mdina AMD Trinity Dual or Quad-Core APU	• Windows Embedded Standard 7 (WS7P-SKU) • EWF enabled • Scala 5 Player, Release 6.1.2	1x DVI-I; 1x HDMI.	• Windows UI: EN, ES, IT, NL, DE, PL, BR, RU, NO, JP, CN, KR • IME for CN/JP/KR	2013.01.28	RC1-WIP-J	• Quad-Core Capable of Dual-Output w/AMD-EyeFinity-2 for Horizontal/Vertical-Spanning. • The QS1000B Ultra-Small-Form-Factor w/Single Channel DDR3 memory for marginal 1x1920x1080 @60FPS functionality. • The QS2000B Dual Channel DDR3 memory for good 1x1920x1080 @60FPS and marginal 2x1920x01080 functionality.	

IAdea Android Players

IAdea offers a wide array of devices that are certified to support Scala Enterprise software.

Recently, IAdea has added a new group of players that runs on the version of Android known as KitKat.

- If your version of Android is before version 4.4, go to the Ice Cream Sandwich (4.0) Version Players.
- If your version of Android is version 4.4 or above, go to the KitKat (4.4) Version Players.

Certified IAdea Android Players

A list of Certified IAdea Players can be found in List of Scala Certified Players.

Problem Codes

If there is an error with a Scala application report errors with problem codes. Found in the error is what went wrong, and a consequence. For example, an error might be "File not found", and the consequence is "Your script did not play correctly."

The following codes are defined for Scala IAdea Media Appliances. If your code does not appear in this list, it may be in the list found on either Monitoring Player Health or in the list of codes found on the Player Software for Android page.

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
10101	Internal problem	Internal Problem	The IAdea Media Appliance is not functioning properly. Please email support@iadea.com with the detailed error, description of what is observed, and reproduce steps if known.	Yes	Alert
10102	Invalid appliance license	The IAdea Media Appliance is not playing content, because it does not have a valid license.	Problem with the license the file received from the server. See the associated error message for more details.	Yes	Alert
10103	Content played incorrectly	Content played incorrectly. There was an error playing a particular media item. That media item may be in an unsupported format.	Content played incorrectly. See the associated error message for details.	Yes	Alert
10201	Configuration problem	The IAdea Media Appliance cannot receive or play content because of a configuration problem preventing it from communicating with the Content Manager Server.	Content Manager is configured with a WINS name which the IAdea players are unable to resolve. Please configure your server address using either an IP address (e.g., 192.168.0.100) or a Fully Qualified Domain Name (FQDN, e.g, server.domain.com). Alternatively you may specify a Content Manager address replacement in Bridge Server to override the default server name.	Yes	Alert
10202	Configuration problem	The IAdea Media Appliance cannot receive or play content because of a configuration problem preventing it from communicating with the Bridge Server.	If you installed Bridge Server separately from Content Manager, please check to confirm you have allowed firewall access to the Bridge Server.	Yes	Alert

10301	Software mismatch	Software is not functioning properly because the IAdea Bridge Server and the Scala Content Manager software versions are incompatible..	Updating all software to the current version may resolve this issue.	Yes	Alert

KitKat (4.4) Version Players

Jump Directly To:

Introduction

IAdea has introduced a series of devices that use the advanced capabilities of Android 4.4. This line of high-performance Android-based devices are equipped with state-of-the-art quad-core CPU and optimized for graphics performance when used with Scala. These additional new devices incorporate core enhancement technologies from IAdea to offer superior system stability and display quality, compared to commodity playback devices available in the market.

This range of devices will work with the latest Scala Enterprise software, the proven, feature-rich, market-leading solution for large-scale deployments. Users can take advantage of flexible and dynamic content scheduling functions of the software, and be assured that the system provides the robustness and architecture for future expansion.

Supported Devices for Android 4.4

The following table outlines the current range of IAdea products supported using the Scala Android Player and which Scala licenses can be used with those products. See List of Scala Certified Players for more information about Scala licenses.

IAdea Product Name with Brief Description	Firmware Version	Classic Licenses	Feature-Based Licenses
XDS-1078: 10" digital signage player	1.2.81.457	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
MBR-1100: entry level media player supporting up to 1080p via the HDMI port	1.2.79.451	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
MBR-1100 Rev. 1.1: entry level media player supporting up to 1080p via the HDMI port	1.2.79.451	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
XMP-6200: media player supporting up to 1080p via the HDMI port	1.2.79.451	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
XMP-6250: media player supporting up to 1080p via the HDMI port	1.2.80.450	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
XMP-6400: media player supporting up to 1080p via the HDMI port	1.2.80.450	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
XDS-2170: 21" All-in-one smart signboard	1.2.83.468	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01
XMP-7300: 4K device	1.2.8.296	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01

Note:
Live HDTV-in and RS 322 communication with industrial display is now possible on the XMP-6400 model through a widget. Please contact IAdea or visit the IAdea Support site for more details.

Features

Highlights

- Android player certified by Scala for multi-frame content
- Scala player integrated into factory firmware for best reliability and performance
- Support of full screen media for images, html, videos and widgets.
- Scala Messages converted to images
- Significantly improved Hardware Accelerated HTML performance. Be sure that the HW_ACCELERATED flag is set to 1.
- Smooth Scala supported transitions between images and videos in playlists
- Capability to overlay images or Web Clips/Widgets over video, including Web Clips/Widgets with transparent background

Currently supported transitions are: "Cut", "Dissolve" ,"Straight" , "ScrollIn" ," ScrollOut" , "FlyFade" , "Fade" , "ShortFade" , "ZoomUp" , and "ZoomFade", but it should also be noted that transitions are limited to Cut wipes between videos.

Playback Functionality

To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.

Scala observed that some videos playing on this Player appear to be drawn without the proper aspect ratio adjustment. This can typically be resolved by re-encoding your video with ffmpeg.

Scala Android Enhanced HTML Player License

- Single Channel
- Multi Zone – 1920 x 1080 (Device dependent)
- JPEG and PNG images
- H.264 Video – content can be 1080p;
- H.265 Video HEVC up to 4k (3840 x 2160)
- Scala Messages converted to images
- HTML5 content from a Web URL or pre-packaged HTML5 Widgets

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists
  - Conditional playback based on Player metadata
- Scheduling
  - Time table – day parting
  - Macro Scheduling individual playlist items

Player Monitoring and Maintenance

The IAdea Android Player has these monitoring capabilities:

- Status
- Heartbeats
- Inventory
- Console.log hooking–allows HTML 5 creators to see their JS logging without using the DEBUG level. However, it writes to the logs very often, and as a result Scala recommends not leaving this option enabled for long.
- Logs are available for: Proof-of-play, Player health or Player logs. As running these logs more frequently can impact your system performance, Scala recommends having these logs run only on a daily basis.

- Error reporting is based on a simplified set of errors
- Maintenance jobs can be performed for software updates and retrieval of system logs

> When performing a software update, the file itself is labeled to indicate the KitKat (4.4) version of Android when you retrieve it, but may appear as **IAdea KK 4.4** when listed in the maintenance job.

Daily reboots of the Player can be done using the daily reboot function (found on the Settings page of the player).

Scala has also created an APK tool (look for this image on your Apps screen: ) that allows you to remove all Scala software and return the device to its factory settings, should the need arise. This tool can also be used for daily reboots as well.

CTRL + D can be used to stop your Player if necessary.

Limitations / Unsupported Functions

These features are not available:

- Flash media is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported
- ScalaScript support is not available
- Transitions are limited to Cut wipes between videos
- The following audio-related options:
  - Audio visual= OFF
  - The Volume option
  - Audio ducking on media with audio
- AC3 track encoding in videos. AAC MUST be used instead.

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Installation

Overview

Before you can setup an IAdea player for use with Scala Enterprise there are a few basic requirements:

- Scala Enterprise Content Manager Release 10.5 or better
- Scala Enterprise Content Manager must be licensed for IAdea Android Players
- Have the approved APK or Scala add-on package installed. This should come on the device from the factory or download the add-on package from IAdea Support.

Create a Test Channel that can be Assigned to your IAdea Player

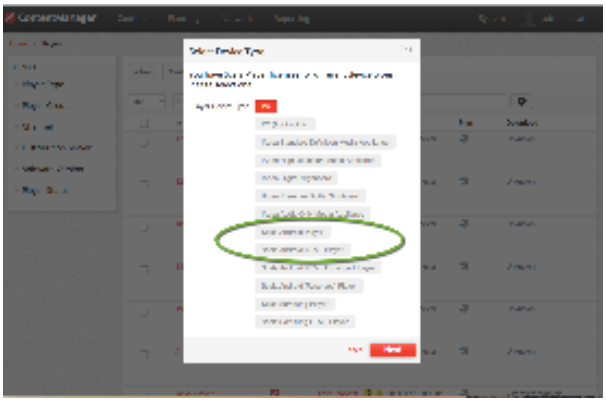
For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your IAdea player.

Content Manager

> A USB mouse is temporarily required to configure the device, and may be disconnected once the device is configured, and connected to Content Manager. A USB keyboard is optional, and can be used when configuring Scala Player to enter the URL to Content Manager, Username, and Password.

Content Manager - Player Setup

- From the Network | Players list. Click **+ New**, select **Scala Android Player** or **Scala Android HTML Player** and click **Next** (the IAdea players above in the list are for use with an IAdea Bridge Server)

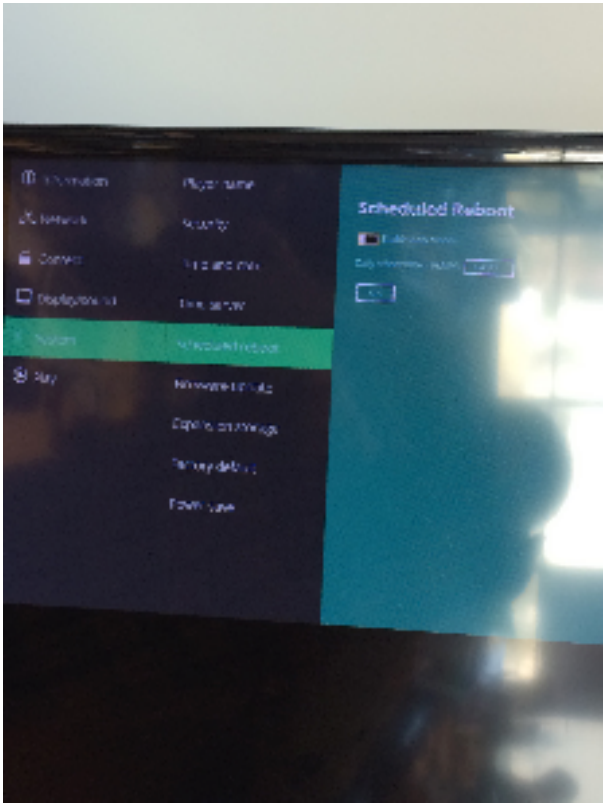


- Create a New Player Name and click **Create**
- Edit the Player Properties and assign the "test channel" you created earlier.
- Return to the Player list, select the **Player** and then choose **Generate plan**.

Configuring IAdea player –Generic Model

> **Note:**
> IAdea provides the option to order its player in the “Scala SKU.” In that case, no software installation is needed on the player and you can skip ahead and read the section titled **Configuring IAdea player – Scala SKU**.

1. Please configure **network** and **time zone.**
2. Turn off the nightly firmware reboot. This can be done by going to **System**, and choose **Scheduled Reboot**. Slide **Enable Daily Reboot** to **Off,** and click **Set**.

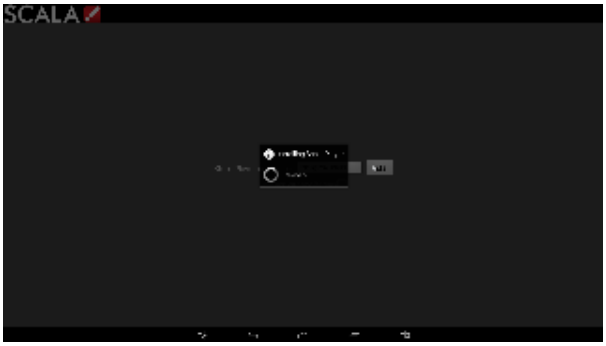


Click on the arrow on the left to go back to first screen.

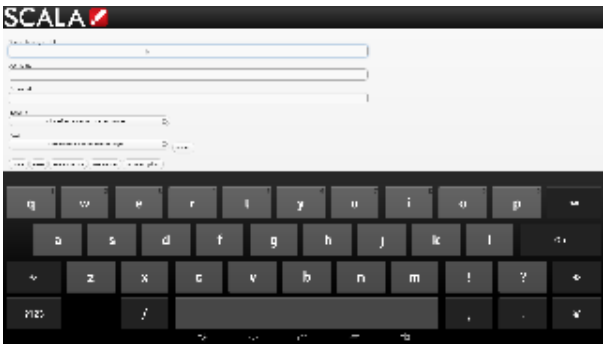
Configuring the IAdea player – Scala SKU

Once you go back to the Basic Settings, after a short period of time (about 15 seconds), it will automatically advance to the Scala Installation Utility.

Click **Install** button to start installation. Use the default installation folder as shown below. Scala recommends that you leave the box unchecked next to "store logs on same partition" should be left unchecked. These options should only be modified with assistance from Scala technical support.



Configuration page shows up after installation finishes.



1. Enter the **Content Manager URL**, which is the URL you would use to access Content Manager.
2. Enter the **Username**. This is the player account.
3. Enter the **Password**. This is the password for the player account.
4. Click the **Refresh** button. The Network Name is filled in. By default, the first available player is selected. Click the Player Name drop down button if you need to select another Player.

5. Click the **Advanced** options button to show additional Player options. Edit any advanced options as you see fit.
6. Click **Save and Restart** to exit the Configuration menu. Player will then start. An informative message is shown that the player is downloading content.

Adding More Storage via the SD Slot

The main sdcard is split into several partitions, which can have a different filesystem and behave differently.

Scala uses the /sdcard partition for Content and the /data partition to store our internal files and logs. The write load is put on /data (logs are responsible for most of the load).

At installation, there are two options:

- Choose a partition where to install the Content (/sdcard by default). If you have an external (physical) sdcard you can choose it. Such a mount point can be /mnt/external or /mnt/extsd (there is no standard). The installer tries to guess the mount points available and propose a list.
- Select the Option "store logs in same location" (unchecked by default) which will put the logs into the same partition defined for Content.

When your install is done, if you want to change the install path there is only one way. The previous install must be cleaned using the A PK Uninstaller, which will clean the previous install. After the reboot, the install screen will show again to allow you to chose a new install path.

Updating Your Player

The APK file for this Player can be updated, should a new version become available. This can be done via a Maintenance Job in Content Manager. The procedure for this update can be found Updating Your Network.

Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Troubleshooting the Player

Steps for Reinstalling the Software on a Reformatted Player

Sometimes it may become necessary to reset your Player to the factory settings. The process for how to reinstall your software on the device should the need arise, is as follows:

1. Contact IAdea or visit the IAdea Support site to download "IAdea firmware + Scala Add-on Package" and perform an upgrade if needed.

   Note:
   The firmware mentioned here is supplied by IAdea and great care should be taken when applying firmware. Please consult with IAdea before applying such updates.
2. Prepare a USB drive (FAT/FAT32 formatted) and save the downloaded .pkg file into its root folder.
3. On the IAdea player, go to the **Advanced System Firmware update** menu as shown below. Click **OK** and follow on-screen instructions to insert USB drive to install the add-on package.

You have now converted your IAdea player to a “Scala SKU.”

Changing the Network and Time Zone Settings

Accessing the basic setting menu can be done by rebooting the Player, following by cancelling the autorun within 15 seconds once the Player

boots to the Basic Settings menu.

HTML Content is not Displayed

Usually this is because the Content Manager is offline. It is necessary to reestablish network connectivity.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health, while codes specific to this player can be found on the IAdea Android Players page.

Legacy Media Players

⚠ The following legacy players are certified for use with **Scala Android Player 11.03**. These devices may operate with Scala Enterprise release 11.05, however, no further regression testing will be done

Instorescreen-Avnet Android Player

⚠ The following legacy player is certified for use with **Scala Player 11.03**. This device may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Jump Directly To:

Introduction

INSTORE SCREEN™

Instorescreen has a series of integrated playback products for Scala Enterprise, starting with a neat and sleek 7” unit to a beautiful 55” unit. All playback devices are fanless, designed with industrial stability and reliability, and run 1080p content with ease in demanding retail environments. Our rugged yet carefully designed metal signature casing and tempered glass protects your investment leaving you with one less thing to worry about.

All parts used are “A” rated LED panels with vivid colors and have a lifetime of at least 40,000 hours. Boards are carefully produced for reliability and carry all necessary certifications such as UL, CE and FCC. At Instorescreen we work hard to produce reliable and dependable units, thus

avoiding black screens and costly site visits by service engineers.

Instorescreen units can also be custom designed to meet your specific needs and requirements, including special colors and logotype, as well as fully customized enclosures and fixtures. This will allow you to leverage your brand, marketing investment and packaging design into a creative and engaging digital signage solution.

Avnet is our sole distributor. They provide you with warranty and support in more than 300 locations in 80 countries worldwide.

We trust that you will be totally satisfied with our product line.

Available Scala Player Licenses for Use with Instorescreen

The Instorescreen-Avnet Android Player uses the Scala Android HTML Enhanced Player license.

Why Choose Instorescreen?

Our units are:

- Manufactured with grade “A” components - **Reliable**
- Have VESA mounting and open frame mounting options - **Flexible**
- Specifically designed for commercial and retail environments - **Robust**
- Use hardened protective glass and our signature industrial metal casing - **Durable**
- Has a network port and 3 USB ports, integrated WiFi and 3G/4G options - **Expandable**
- Use Dual Core Cortex A9 ARM processors and Dual Core Mali full HD decoder - **Powerful**

Instorescreen / Avnet Models

Standard Android (SA) Models

Model	Screen Size	Resolution	Firmware Version
SCA101SA	10.1"	1024 x 600	IN101-SA
SCA116SA	11.6"	1366 x 768	IN101-SA
SCA156SA	15.6"	1366 x 768	IN101-SA
SCA185SA	18.5"	1366 x 768	IN101-SA
SCA215SA	21.5"	1920 x 1080	IN101-SA
SCA240SA	24"	1920 x 1080	IN101-SA
SCA320SA	32"	1366 x 768	IN101-SA
SCA420SA	42"	1920 x 1080	IN101-SA
SCA460SA	46"	1920 x 1080	IN101-SA
SCABOXSA	N/A	N/A	IN101-SA

Design Android (DA)

Model	Screen Size	Resolution	Firmware Version
SCA101DA	10.1"	1024 x 600	IN101-SA
SCA116DA	11.6"	1366 x 768	IN101-SA

Portrait Android (PA)

Model	Screen Size	Resolution	Firmware Version
SCA101PA	10.1"	1024 x 600	IN101-SA
SCA240PA	18.5"	1920 x 1080	IN101-SA

Standard Android Touch (SAT)

Model	Screen Size	Resolution	Firmware Version
SCA101SAT	10.1"	1024 x 600	IN101-SA
SCA116SAT	11.6"	1366 x 768	IN101-SA
SCA156SAT	15.6"	1366 x 768	IN101-SA
SCA215SAT	21.5"	1920 x 1080	IN101-SA

Rounded Android Touch (RAT)

Model	Screen Size	Resolution	Firmware Version
SCA101RAT	10.1"	1024 x 600	IN101-SA
SCA116RAT	11.6"	1366 x 768	IN101-SA
SCA156RAT	15.6"	1366 x 768	IN101-SA
SCA215RAT	21.5"	1920 x 1080	IN101-SA

Customization

Instorescreen offers customization and additional hardware options for each of the models listed. Please see the detailed specification sheets from Instorescreen for further information.

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Highlights

- Android player certified by Scala for single and multi-frame content
- Scala Player integrated into factory firmware for best reliability and performance
- Support of full screen media for images, html, videos and widgets.

Playback Functionality by Scala License

Please Note:
To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.

Scala Android Enhanced HTML Player License

- Multi Zone – up to 1080p - Device Dependent
- JPEG and PNG images
- Scala Messages converted to images
- HTML5 content

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists

    - Conditional playback based on Player metadata
- Scheduling
    - Time table – day parting
    - Macro Scheduling individual playlist items

Player Monitoring and Maintenance

The Instorescreen/Avnet Android Player has these monitoring capabilities:

- Status
- Heartbeats
- Inventory
- Logs are available for: proof-of-play, player health or player logs
    - Console log hooking--allows HTML 5 creators to see their JS logging without using the DEBUG level. However, it writes to the logs very often, and as a result Scala recommends not leaving this option enabled for long.
- Error reporting is based on a simplified set of error
- Maintenance jobs can be performed for software updates, reboot and retrieval of system logs

Scala has also created an APK tool (look for this image on your Apps screen: ) that allows you to remove all Scala software and return the device to its factory settings, should the need arise. This tool can also be used to perform daily reboots of the Player. If the number of reboots is set to 0, the Player will not attempt to reboot should the Player's network be down.

> **Note:**
> Support for HTML5 widgets makes it possible to show basic dynamic content, such as RSS feeds. A widget is a zipped up package of HTML5, JavaScript (JS) and Cascading Style Sheet (CSS) 3; however, the device must have an internet connection to display live data.

Limitations / Unsupported Functions

These features are currently not available:

- Flash media is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported
- ScalaScript support is not available
- HD Video. Playing video with a 1920 x1080 resolution will cause show a black screen and cause the player to crash.
- The following audio-related options:
    - Audio visual= OFF
    - The Volume option
    - Audio ducking on media with audio

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

CTRL + D can be used to stop your Player if necessary.

Installation

Overview

Before you can setup an Instorescreen/Avnet player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager Release 10.2 or better
- Scala Enterprise Content Manager must be licensed for Instorescreen/Avnet Android Players
- Have the approved APK or Scala add-on package installed. Please consult with Instorescreen/Avnet for the procedure to download this file if necessary.

Create a Test Channel that can be Assigned to your Instorescreen/Avnet player

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your Instorescreen/Avnet player.

Content Manager

Content Manager - Player Setup

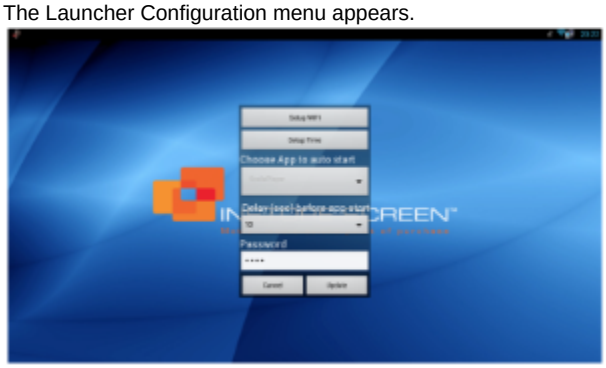
- From the **Network | Players** list. Click **+ New**, select **Scala Android Player**, **Scala Android HTML Player** or **Scala Android Enhanced HTML Player** and click **Next**

- Create a New Player Name and click **Create**
- Edit the Player Properties and assign the "test channel" you created earlier.
- Return to the Player list, select the Player and then choose **Generate Plan**.

Configuring the Instorescreen/Avnet player – Scala SKU for the first time

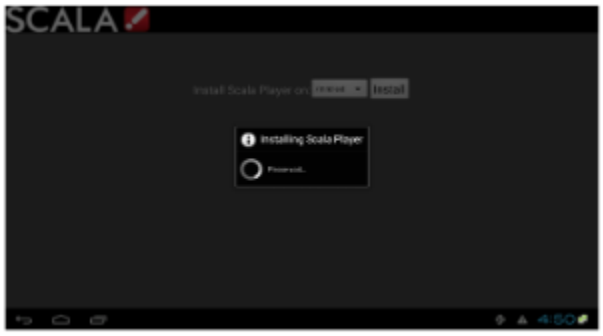
After booting up the device the initial setup screen is shown:

1. Select **Instore Launcher** and ensure you select **Always.**
   The Launcher Configuration menu appears.

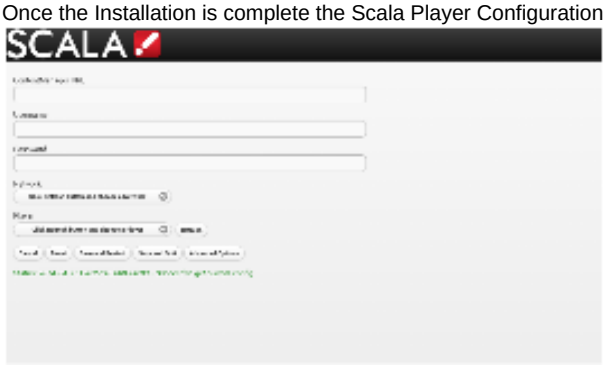


2. Select **Setup WiFi**
3. When requested to enter a password, enter **1111** and the select **OK.** The Android Settings application is shown
4. Configure your **network**, **time zone** and **sound** settings. Use the **Right Mouse Button** to exit and save the Android Settings. The Launcher Configuration menu reappears.
5. Select **Update**. You will be challenged for the password - Enter **1111.** The Scala Installation utility is launched.

6. Click Install button to start installation. Use the default installation folder as shown above.



Once the Installation is complete the Scala Player Configuration menu appears.



7. Enter the **Content Manager URL**. This same URL that you would use to access Content Manager.
8. Enter the **Username**. This is the player account.
9. Enter the **Password**. This is the password for the player account.
10. Click the **Refresh** button. The Network Name is filled in. By default, the first available player is selected. Click the Player Name drop down button if you need to select another Player.
11. Click the **Advanced** options button to show additional Player options. Edit any advanced options as you see fit.
12. Click **Save and Restart** to exit the Configuration menu.

Your Player is now configured and will start to download any content scheduled for that player.

Adding More Storage via the SD Slot

The main sdcard is split into several partitions, which can have a different filesystem and behave differently.

Scala uses the /sdcard partition for Content and the /data partition to store our internal files and logs. The write load is put on /data (logs are responsible for most of the load).

At installation, there are two options:

- Choose a partition where to install the Content (/sdcard by default). If you have an external (physical) sdcard you can choose it. Such a mount point can be /mnt/external or /mnt/extsd (there is no standard). The installer tries to guess the mount points available and propose a list.
- Select the Option "store logs in same location" (unchecked by default) which will put the logs into the same partition defined for Content.

Note:
When your install is done, if you want to change the install path there is only one way. The previous install must be cleaned using the A PK Uninstaller, which will clean the previous install. After the reboot, the install screen will show again to allow you to chose a new install path.

Updating Your Player

The APK file for this Player can be updated, should a new version become available. This can be done via a Maintenance Job in Content Manager. The procedure for this update can be found in Updating Your Network, under the heading Android Player Remote Updater.

> **Caution:**
> Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Problem Codes

If your Player has an issue, it will generate a problem code. A explanation of the general Player codes can found in Monitoring Player Health, while codes specific to this player can be found on the Player Software for Android page.

Ice Cream Sandwich (4.0) Version Players

> The following legacy players are certified for use with **Scala Android Player 11.03**. These devices may operate with Scala Enterprise release 11.05, however, no further regression testing will be done

Jump Directly To:

Introduction

A wide array of devices is now available from IAdea and certified to support the new Scala Enterprise software. The new devices incorporate core enhancement technologies from IAdea to offer superior system stability and display quality, compared to commodity playback devices available in the market.

The 10-inch XDS-1062 digital signboard meets the needs of retail product promotion and corporate conference room reservation signage perfectly. It comes with built-in support for PoE (a.k.a. IEEE 802.3af “Power-over-Ethernet”), making installation extremely easy. PoE rolls network signal and power supply into one ordinary CAT5 cable, providing greater stability over traditional WiFi networking, and easier installation than “wall-wart” power supplies. A high-res version XDS-1068 with touch screen is also available, as well as an entry-level XDS-1060 without the PoE feature. All three devices feature 300-nit enhanced brightness displays, built-in 2-watt speakers, and standard VESA mount for robust mounting.

New IAdea media players are available for applications that integrate with larger displays. Top-of-the-line is the XMP-2400 which includes HDMI and VGA video output ports the XMP-2300 targets applications needing HDMI output only. For the absolutely low-budget project, the XMP-2200 is available without the WiFi connection. The range of devices work with the new Scala Enterprise software, the proven, feature-rich, market-leading solution for large-scale deployments. Users can take advantage of flexible and dynamic content scheduling functions of the software, and be assured that the system provides the robustness and architecture for future expansion.

> **Notes on Advanced Features:**
> The IAdea devices have advanced features that are not currently supported via the Scala Android Player software. Should you need any of the following features, which are available via the optional IAdea Bridge Server, then you will need to use the IAdea SD Player License.
>
> - XMP-2400 has HD video-in capability for integrating live video from TV tuners
> - XMP-2400 has RS-232 support for integration with external devices such as professional displays
> - XMP-2400, XMP-2300 and XMP2200, using the optional IAdea GPIO adapter, support playback triggers by buttons and motion sensors

Supported Devices for Android

The following table outlines the current range of IAdea products supported using the Scala Android Player and which Scala licenses can be used with those products.

	Firmware Version	Scala Android HTML Enhanced Player

IAdea Product Name		SW-ADP-MFH
XDS-1060: 10" signboard resolution 800x480, touch buttons, similar to XDS-104	4.9.290	X
XDS-1062: 10" signboard resolution 800x480, touch buttons, PoE (Power-over-Ethernet)	4.9.290	X
XDK-0760: 7" signboard kit, resolution 800x480, no touch	4.9.290	X
XDS-1068: 10" signboard resolution 1280x800, multi-touch, Power-over-Ethernet	4.9.290	X
Brazil Only		
XMP-2200: maximum 720p, HDMI-only	4.9.290	X
XMP-2300: XMP-2200 plus WiFi	4.9.290	X
XMP-2400: XMP-2300 plus live A/V overlay	4.9.290	X
XOP-2300: XMP-2300 in Intel OPS (Open Pluggable Spec) format	4.9.290	X

Features

Note:
The firmware mentioned below is supplied by IAdea and great care should be taken when applying firmware. Please consult with IAdea before applying such updates.

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Highlights

- Android player certified by Scala for multi-frame content
- Scala player integrated into factory firmware for best reliability and performance
- Option to use the IAdea Bridge Server for full support on IAdea hardware features
- Scala Messages converted to images
- Support of full screen media for images, html, videos and widgets.

Playback Functionality

Please Note:
To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature. For a more detailed discussion of Scala's support of HTML, please see the Verifying Media Formats and HTML Programming Guidelines pag es.

Scala Android Enhanced HTML Player License

- Single Channel
- Multi Zone – 1280x720 (Device dependent)
- JPEG and PNG images
- H.264 Video – content can be 1080p;
- Scala Messages converted to images

- HTML5 content from a Web URL or pre-packaged HTML5 Widgets

> **Note:**
> Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists
  - Conditional playback based on Player metadata
- Scheduling
  - Time table – day parting
  - Macro Scheduling individual playlist items

Player Monitoring and Maintenance

The IAdea Android Player has these monitoring capabilities:

- Status
- Heartbeats
- Inventory
- Console.log hooking–allows HTML 5 creators to see their JS logging without using the DEBUG level. However, it writes to the logs very often, and as a result Scala recommends not leaving this option enabled for long.
- Logs are available for: proof-of-play, player health or player logs. As running these logs more frequently can impact your system performance, Scala recommends having these logs run only on a daily basis.
- Error reporting is based on a simplified set of errors
- Maintenance jobs can be performed for software updates and retrieval of system logs

> **Note:**
> When performing a software update, the file itself is labeled to indicate the Ice Cream Sandwich (4.0) version of Android when you retrieve it, but may appear as **IAdea ICS 4.0** when listed in the maintenance job.

Daily reboots of the Player can be done using either the daily reboot function (found on the Settings page of the player). If the number of reboots is set to 0, the Player will not attempt to reboot should the Player's network be down.

Scala has also created an APK tool (look for this image on your Apps screen: ) that allows you to remove all Scala software and return the device to its factory settings, should the need arise. This tool can also be used for daily reboots as well.

CTRL + D can be used to stop your Player if necessary.

Limitations / Unsupported Functions

These features are not available:

- Flash media is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported
- ScalaScript support is not be available
- The following audio-related options:
  - Audio visual= OFF
  - The Volume option
  - Audio ducking on media with audio

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

IAdea Bridge Server provides some of these functionalities through an additional intermediate server. Contact IAdea for details regarding Bridge Server functionality.

Installation

Overview

Before you can setup an IAdea player for use with Scala Enterprise there are a few basic requirements:

- Scala Enterprise Content Manager Release 10.1 or better

- Scala Enterprise Content Manager must be licensed for IAdea Android Players
- Have the approved APK or Scala add-on package installed. This should come on the device from the factory or download the add-on package from here.

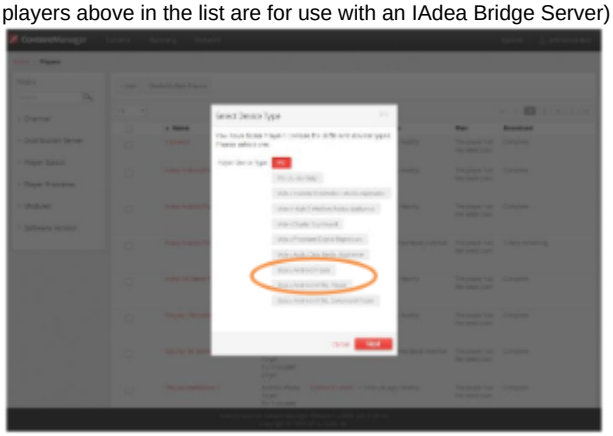
Create a Test Channel that can be Assigned to your IAdea Player

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your IAdea player.

Content Manager

Content Manager - Player Setup

- From the Network | Players list. Click **+ New**, select **Scala Android Player** or **Scala Android HTML Player** and click **Next** (the IAdea players above in the list are for use with an IAdea Bridge Server)



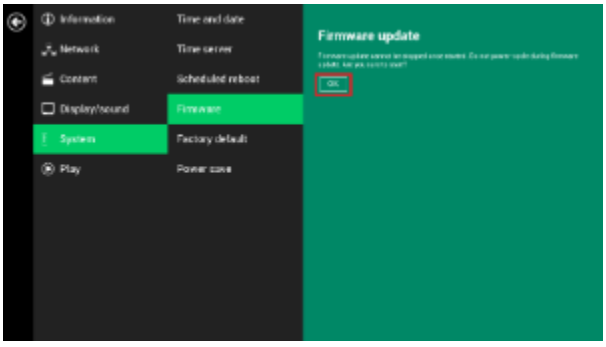
- Create a New Player Name and click **Create**
- Edit the Player Properties and assign the "test channel" you created earlier.
- Return to the Player list, select the **Player** and then choose **Generate plan**.

Setting IAdea player –Generic Model

> **Note:**
> IAdea provides the option to order its player in the “Scala SKU.” In that case, no software installation is needed on the player and you can skip ahead and read the section titled **Setting IAdea player –Scala SKU**.

If you ordered the generic IAdea model, follow these steps to configure the player:

1. Contact IAdea or visit the IAdea support site to download "IAdea firmware + Scala Add-on Package" and perform an upgrade if needed.
2. Prepare a USB drive (FAT/FAT32 formatted) and save the downloaded .pkg file into its root folder.
3. On IAdea player, go to the **Advanced System Firmware update** menu as shown below. Click **OK** and follow on-screen instructions to insert USB drive to install the add-on package.

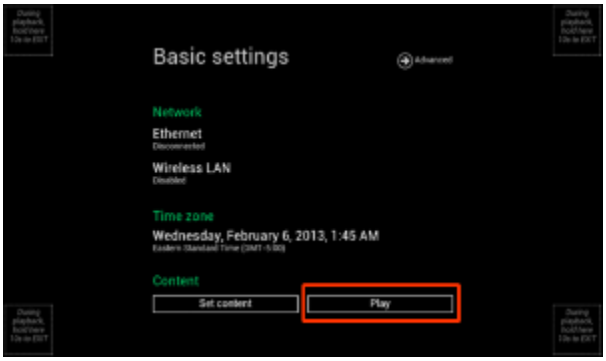


You have now converted your IAdea player to a “Scala SKU.” Now continue with the next section **Setting IAdea player – Scala Model** to complete the configuration.

Configuring the IAdea player – Scala SKU

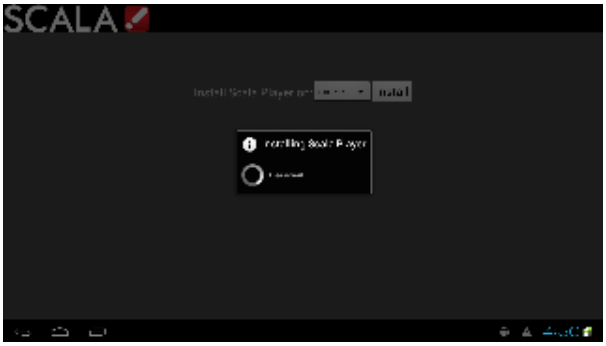
After booting up the Scala model, you can see a Basic settings page as shown below. Please configure **network** and **time zone** first, then click **Pl**

ay button to launch the Scala installation utility.



Click **Install** button to start installation. Use the default installation folder as shown below.

Installation starts once you click the **Install** button.



Configuration page shows up after installation finishes.

1. Enter the **Content Manager URL**, which is the URL you would use to access Content Manager.
2. Enter the **Username**. This is the player account.
3. Enter the **Password**. This is the password for the player account.
4. Click the **Refresh** button. The Network Name is filled in. By default, the first available player is selected. Click the Player Name drop down button if you need to select another Player.
5. Click the **Advanced** options button to show additional Player options. Edit any advanced options as you see fit.
6. Click **Save and Restart** to exit the Configuration menu. Player will then start. An informative message is shown that the player is

downloading content.

Adding More Storage via the SD Slot

The main sdcard is split into several partitions, which can have a different filesystem and behave differently.

Scala uses the /sdcard partition for Content and the /data partition to store our internal files and logs. The write load is put on /data (logs are responsible for most of the load).

At installation, there are two options:

- Choose a partition where to install the Content (/sdcard by default). If you have an external (physical) sdcard you can choose it. Such a mount point can be /mnt/external or /mnt/extsd (there is no standard). The installer tries to guess the mount points available and propose a list.
- Select the Option "store logs in same location" (unchecked by default) which will put the logs into the same partition defined for Content.

Note:
When your install is done, if you want to change the install path there is only one way. The previous install must be cleaned using the A PK Uninstaller, which will clean the previous install. After the reboot, the install screen will show again to allow you to chose a new install path.

Updating Your Player

The APK file for this Player can be updated, should a new version become available. This can be done via a Maintenance Job in Content Manager. The procedure for this update can be found here, under the heading Android Player Remote Updater.

Caution:
Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health, while codes specific to this player can be found on either the IAdea Android Players page or the Android Players page.

NEC Display OPS-DRD Digital Player

The following legacy player is certified for use with **Scala Android Player 11.03**. This device may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Jump Directly To:

Introduction

Developed for the Android operating system, the NEC OPS-DRD system is an all-in-one, system-ready solution for managing dynamic displays for cost sensitive, high volume segments where high performance video and connectivity are paramount. Applications range from kiosks, POS systems, video walls, menu boards and Out of Home Advertising across a broad spectrum of retail, hospitality, education, and entertainment environments.

Android is quickly gaining prominence in the digital signage market and offers a number of advantages for a wide range of applications. In addition to the standard Android Jelly Bean 4.2.2 operating system image, this NEC OPS-DRD system comes with a built-in media player application, which can run video files via flash memory, SD Card or USB Drive. Aboard support package is also available enabling customers to develop their own proprietary value-adds.

When combined with Scala's Player for Android, it creates an ideal solution for digital signage applications.

The NEC OPS-DRD system is a sleek, energy-efficient system with an ergonomic, space-saving design that measures just 17.5 cm x 11.8 cm x 2.5 cm and connects directly into NEC's E705, E805, E905, V, P, and X series displays, creating a seamless installation. It can also be connected externally using the OPS-DOCK docking station. The NEC Display OPS-DRD Digital Player system is backed by NEC’s worldwide software support and 3 year hardware warranty.

Why Choose NEC?

These units:

- Come with all in-one system–ready to load software.
- Are designed for the Android OS (comes with Android 4.2.2).
- Has a 1.0 GHz Allwinner Tech A31 SOC ARM Cortex-A7 Quad Core processor.
- Reflects a simple ergonomic design and is Energy Star Certified.
- Has hardware acceleration of the most demanding video formats for resolutions up to 1080p
- Features:
  - Fan-less and solid-state components, which make this ideal for 24/7 run times.
  - Built-in media player application, which can run video files via flash memory, SD Card or USB Drive.
  - HDMI video, stereo audio, RS232 control and power, which are all passed internally from the display to OPS device for simplified installation with no external connections required.
  - Easy setup with a powerful 1.0GHZ CPU and 8 logic core graphics processors, which provide more than enough horsepower for crisp full-HD video playback.
  - Durable and protected industrial strength components rated for 24 x 7 usage.
  - Extra low power consumption for economic performance.
  - Full access to the Google Play store.
  - Wired and wireless networking capabilities through integrated LAN port and wireless antenna (included).
  - 2GB dual channel DDR3 of RAMo Watch Dog Timer, which self-monitors and reboots during system instability.

Available Scala Player Licenses for Use with the NEC Display OPS-DRD Digital Player

The NEC OPS-DRD Digital Player uses the Scala Android HTML Enhanced Player license.

NEC Models

Model	Type/Screen Size	Resolution	FIrmware Version

OPS-ORD	OPS Compatible 32" to 90"	1920 x 1080	mars_jy-eng 4.2.2 JDQ39 20140325 test-keys|(2016052302024461)

Customization

The OPS-DOCK external docking station is available.

Model	Type/Screen Size	Dimensions
OPS-DOCK	External Docking Station	11.13 in. x 7.13 in x 1.5 in

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Highlights

- Android player certified by Scala for single and multi-frame content.
- Support of full screen media for images, html, videos and widgets.

Playback Functionality

Please Note:
To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.

Scala Android Enhanced HTML Player License

- Single Channel
- Multi Zone – up to 1080p - Device Dependent
- JPEG and PNG images
- H.264 Video – content can be 1080p
- Scala Messages converted to images
- HTML5 content from a web URL or pre-packages HTML 5 widgets

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists
  - Conditional playback based on Player metadata
- Scheduling
  - Time table – day parting
  - Macro Scheduling individual playlist items

Player Monitoring and Maintenance

The NEC Display OPS-DRD Digital Player has these monitoring capabilities:

- Status
- Heartbeats
- Inventory
- Logs are available for: proof-of-play, player health or player logs. As running these logs more frequently can impact your system performance, Scala recommends having these logs run only on a daily basis.
- Error reporting is based on a simplified set of error

- Maintenance jobs can be performed for software updates, and retrieval of system logs

Scala has also created an APK tool (look for this image on your Apps screen:) that allows you to remove all Scala software and return the device to its factory settings, should the need arise. This tool can also be used for daily reboots as well. If the number of reboots is set to 0, the Player will not attempt to reboot should the Player's network be down.

CTRL + D can be used to stop your Player if necessary.

Limitations / Unsupported Functions

The following features are not available:

- Flash media is not supported
- Audio playlists are not supported
- ScalaScript support will not be available
- The following audio-related options:
  - Audio visual= OFF
  - The Volume option
  - Audio ducking on media with audio

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Installation

Overview

Before you can setup an NEC Display OPS-DRD Digital Player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager Release 11.00 or better.
- Scala Enterprise Content Manager must be licensed for NEC Display OPS-DRD Digital Player
- Have the approved APK or Scala add-on package installed.

Create a Test Channel that can be Assigned to your NEC Display OPS-DRD Digital Player

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your NEC Display OPS-DRD Digital Player.

Content Manager

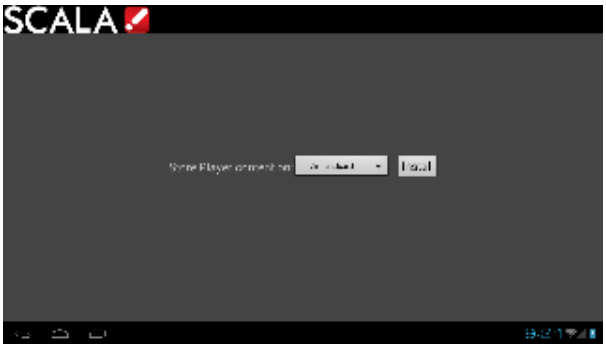
Content Manager - Player Setup

- From the **Network | Players** list. Click **+ New**, select **Scala Android Player** or **Scala Android Enhanced HTML Player** and click **Next.**

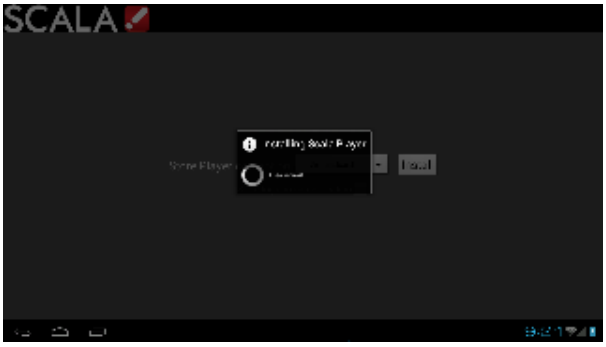
- Create a New Player Name and click **Create**
- Edit the Player Properties and assign the "test channel" you created earlier.
- Return to the Player list, select the Player and then choose **Generate Plan**.

Configuring the NEC Display OPS-DRD Digital Player

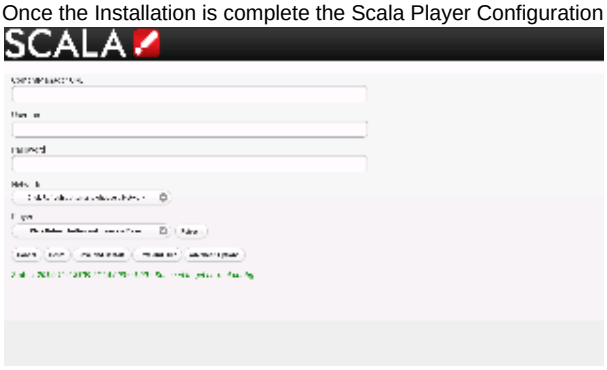
1. After booting up the device, the Scala Installation utility is launched.



2. Click Install button to start installation. Use the default installation folder as shown above.



3. Once the Installation is complete the Scala Player Configuration menu appears.



4. Enter the **Content Manager URL**. This same URL that you would use to access Content Manager.
5. Enter the **Username**. This is the player account.
6. Enter the **Password**. This is the password for the player account.
7. Click the **Refresh** button. The Network Name is filled in. By default, the first available player is selected. Click the Player Name drop down button if you need to select another Player.
8. Click the **Advanced** options button to show additional Player options. Edit any advanced options as you see fit.
9. Click **Save and Restart** to exit the Configuration menu.

Your Player is now configured and will start to download any content scheduled for that player.

Adding More Storage via the SD Slot

The main sdcard is split into several partitions, which can have a different filesystem and behave differently.

Scala uses the /sdcard partition for Content and the /data partition to store our internal files and logs. The write load is put on /data (logs are responsible for most of the load).

At installation, there are two options:

- Choose a partition where to install the Content (/sdcard by default). If you have an external (physical) sdcard you can choose it. Such a mount point can be /mnt/external or /mnt/extsd (there is no standard). The installer tries to guess the mount points available and propose a list.
- Select the Option "store logs in same location" (unchecked by default) which will put the logs into the same partition defined for Content.

Note:
When your install is done, if you want to change the install path there is only one way. The previous install must be cleaned using the A PK Uninstaller, which will clean the previous install. After the reboot, the install screen will show again to allow you to chose a new install path.

Updating Your Player

The APK file for this Player can be updated, should a new version become available. This can be done via a Maintenance Job in Content Manager. The procedure for this update can be found in Updating Your Network.

> **Caution:**
> Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes can found in Monitoring Player Health, while codes specific to this player can be found on the Player Software for Android page.

Panasonic AF1 Series Signage Displays

> The following legacy player is certified for use with **Scala Android Player 11.03**. This device may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Jump Directly To:

Introduction

Introducing Panasonic's all-new AF1 Series: the industry's most adaptable, flexible, and versatile signage display solution. Its powerful OpenPort PLATFORM™ operating system not only allows for extensive display customization in a wide variety of applications, but also makes installation and everyday operation easier than ever before. It is based on Android 4.4.3 and fully certified by Google to assure stable, secure and reliable operation. Applications running on OpenPort PLATFORM™ are throughly checked by alliance partners and Panasonic for stable and secure operation.

Simple, expandable, and reliable, the AF1 Series has an Android™-based OpenPort PLATFORM™ powered by a high-performance SoC (System on a Chip) featuring a 1 GHz quad-core CPU, 1 GB of memory, and 8 GB* internal storage. Together with verified apps created by global alliance partners for custom signage and other roles in business, these adaptive displays deliver your message with maximum impact now and in the future.

Thanks to the built-in media player function, external devices such as set-top boxes, PCs, and associated cabling are not required for digital signage applications. Wireless functionality paves the way to simple, stress-free installation while saving you time and money.

Available Scala Player Licenses for Use with Panasonic Android Player

The Panasonic Android Player uses the Panasonic Android Player Extended HTML Player license.

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Highlights

- Android player certified by Scala for multi-frame content
- Support of full screen media for images, html, videos and widgets.
- Scala Messages converted to images
- Smooth Scala supported transitions between images and videos in playlists
- Capability to overlay transparent images or Web Clips/Widgets with transparent background over image, Web Clips/Widgets

Playback Functionality

Please Note:
To ensure content plays as expected on this player, we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.

Tip:
Scala observed that some videos playing on this Player appear to be drawn without the proper aspect ratio adjustment. This can typically be resolved by re-encoding your video with ffmpeg.

Panasonic Android Player Extended HTML Player License

- Single Channel
- Multi Zone – 1920 x 1080 (Device dependent)
- JPEG and PNG images
- H.264 Video – content can be 1080p;
- Scala Messages converted to images
- HTML5 content from a Web URL or pre-packaged HTML5 Widgets

Playlist & Scheduling in Content Manager

- Media Playlists Types
    - Sequential playlists
    - Shuffle playlists
    - Pick N media items from a sub-playlist
    - Conditional playback based on Player metadata
- Scheduling
    - Time table - day parting
    - Macro Scheduling individual playlists items

Player Monitoring and Maintenance

The Panasonic Android Player has a simplified set of monitoring capabilities and is limited to:

- Status
- Heartbeats
- Inventory
- Logs are available for: Proof-of-play, Player health or Player logs. As running these logs more frequently can impact your system performance, Scala recommends having these logs run only on a daily basis.
- Error reporting is based on a simplified set of errors
- Maintenance jobs can be performed for Player reboots, software updates and retrieval of system logs

Limitations/Unsupported Functions

These features are not available:

- Cannot use DNS values retrieved from DHCP
- Flash media is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported
- ScalaScript support is not available
- Transitions on this device may not function properly. Additionally, they are limited to Cut wipes between videos
  - Currently supported transitions are: "Cut","Dissolve","Straight","ScrollIn","ScrollOut","FlyFade","Fade","ShortFade","ZoomUp",and "ZoomFade" but it should also be noted that transitions are limited to Cut wipes between videos.
- The following audio-related options:
  - Audio visual= OFF
  - The Volume option
  - Audio ducking on media with audio

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Hardware Acceleration
Hardware Acceleration is turned off for the Panasonic Android Player. It is recommended that this settings NOT be turned on, as it will have a negative impact the Player. The defaults found at Advanced Options for Android Players should be left as suggested on the page as well for the same reason.

Panasonic Android Player Supported Models

Scala recommends the following for 24x7 operation.

Model	Certified Firmware (can be checked via the "version" app)
TH-55AF1	OpenPort Platform-uboot: 1.00.00; OpenPort Platform-kernel: 3.10.53; OpenPort Platform-system: 1.04.00
TH-49AF1	OpenPort Platform-uboot: 1.00.00; OpenPort Platform-kernel: 3.10.53; OpenPort Platform-system: 1.04.00
TH-42AF1	OpenPort Platform-uboot: 1.00.00; OpenPort Platform-kernel: 3.10.53; OpenPort Platform-system: 1.04.00

To access the Display Manual, see Panasonic's Professional Displays page.

Note:
Users with pre-production models of these players may experience an issue with them where your DHCP server will run out of leasable IP addressed. Panasonic says this issue has been fixed in production models.

Installation

Overview

Before you can setup a Panasonic Android Player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager Release 11.01 or better.
- Scala Enterprise Content Manager must be licensed for Panasonic Android Players.

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your Panasonic Android Players.

Setting Up Content Manager for Panasonic Android Player

Content Manager - Player Setup

1. Create an Android Player in Content Manager. Be sure to select **Android HTML Enhanced Player,** and select **Next.** See Creating a Player for a more detailed explanation of this.
2. Select the Channel you want the Player to show. Once you have finished, click **Save and Close.** See Managing Channels for a more detailed explanation of this.

Player Setup

Tips:
The following shortcuts may be helpful:

- **ESC** key (keyboard)–Returns to the previous menu (not after Player starts).
- **Ctrl+Alt+Del** (keyboard)**–**Restarts the device.
- **Return/Back** (remote control)**–**Returns to the previous menu

1. After turning the display on, insert a USB keyboard or mouse, or the remote control that comes with the display.
2. Change the Settings for downloading the Scala Installer. This can be done by selecting **Tool>Security>Settings** from the menu on the screen.
3. In the screen that appears, select **Unknown Sources.**
4. Using one of the shortcuts listed above, go back to the previous menu and select the **Setup** box.
5. If you are using an Ethernet connection, insert an ethernet cable into the monitor, and go to the next step. If you are using Wi-Fi, select and Wireless & Networks. Confirm that Wi-Fi is set to **On**, and select the network you wish to use, entering the password, if necessary.
6. (optional) In the setup menu, select Date & Time Settings, and confirm that both Automatic Date & Time settings and your time zone are selected.
7. Using the menu screen, select the Installer option, and App Server. On the screen that appears, click on the green download icon next to Scala Player, and click OK, once you have selected the appropriate file.
8. On the next screen, select **Install**.
9. On the screen that appears, enter your Players URL, Username and Password, and select **Refresh**. Choose your **Network and Player**, and select **Save and Restart**.

Note:
Factory Settings can be reached by selecting **Tools > Settings> Back & Rest > Enter > Enter.**

Adding Scala Player and Scala Player Configuration in Favorites will make them easier to access and maintain.

Configuring Your Network

For your player to work properly, you must have your IP addresses configured properly, especially if you are using DNS. You should configure it to match your network. Fill in the the values on a screen like the one below:

Troubleshooting the Player

I can't Exit the Scala App.

For other Android devices, Ctrl + D will allow you to exit the Player.

Provided that the most current APK is installed, the Panasonic Android Player allows you to exit the app. Alt +Tab will allow you to exit the app because it will show the status bar at the bottom of the screen for a few seconds. The user can use their mouse to access the desktop. The app will not close, but instead be minimized on the top left corner of the screen. You can also swipe from the bottom to the top of the Player to exit the app as well.

The Player does not use Values Retrieved from DHCP

To ensure that your Ethernet connection is properly configured, use the screen shot below as a guide:

Configuration

Setting the value in DNS1, as seen above is only required when DHCP is configured with static IP addresses.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health while codes specific to this player can be found on either the IAdea Android Players page or the Player Software for Android page.

Samsung SSP Players

> The following legacy players are certified for use with **Scala Android Player 11.03**. These devices may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Scala offers support for three series of Samsung SSP devices. Please choose the page that corresponds with your device.

- E Series
- D Series
- C Series

Problem Codes

If there is an error with a Scala application report errors with problem codes. Found in the error is what went wrong, and a consequence. For example, an error might be "File not found", and the consequence is "Your script did not play correctly."

The following codes are defined for Scala Samsung SSP Players. If your code does not appear in this list, it may be in the list found on Monitoring Player Health.

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
3000	Internal problem	Internal Problem. Software is not functioning properly. Restarting the TV is suggested. Please contact Technical Support.	Internal problem in the software.	Yes	Alert
3003	Media played incorrectly	Media played incorrectly	A media item played incorrectly. See the associated error message for details.	Yes	Alert
3004	Plan unreadable	The Scala Samsung Player may not have the latest plan, because the plan file is corrupt or incomplete. This problem is not necessarily serious, and may resolve itself on a future retry.	Player cannot receive plans because the plan appears to be corrupt. This problem may resolve itself on a future retry.	Yes	Alert

3005	Player invalid license	The player is not playing content, because the Playback Module does not have a valid license, or the license has expired.	Problem with the license the file received from the server, or the license has expired. See the associated error message for more details.	Yes	Alert
3007	Media download failed (disk space below reserve)	The player is not playing the current plan because there is insufficient disk space available to download required media (the remaining free space on the partition is below the reserve level.) Remove files to increase the free space on the disk so that media may be downloaded.	Player will not store newly downloaded media because there is not enough free disk space. The content playing will be out of date.	Yes	Alert
3009	Media file missing, download failed	A media item is missing on the server and could not be downloaded. Re-uploading the file is suggested.	A media item is missing from the source and could not be downloaded. This problem may be solved by re-uploading the file or publishing the ScalaScript.	Yes	Alert

E Series Players

The following legacy players are certified for use with **Scala Player 11.03**. These devices will operate with Scala Enterprise release 11.04, however, no further regression testing will be done.

Jump Directly To:

Introduction

The Samsung's E Series displays feature an enhanced system-on-a-chip that supports advanced applications as a cost effective alternative to using an external media player or PC, streamlining deployment and significantly reducing total cost of ownership.

Samsung’s E Series displays are powered by a quad core Cortex-A9 1GHz processor and features a full codec video processor, 1.5GB DDR3 and 4GB of memory. This increased performance enables the platform to support more advanced applications – including touch and video wall configurations – all without the need for an external media player or PC.

When maximum up time matters the Samsung DH-E lineup is rated for 24/7 use, providing performance and dependability for businesses and organizations communicating around the clock. The slim-direct-lit displays in the DH-E lineup feature 1920 x 1080 Full HD resolution up to 450 nits brightness and a 5000:1 contrast ratio for sharp, detail-rich images and crisp, easily legible type. Built-in Wi-Fi, eliminates the need for Ethernet cabling thus further reducing installation costs. The displays are a ideal solutions for retail environments, quick service restaurants, meeting rooms, public spaces and more.

Available Scala Player Licenses for Use with Samsung SSP Player E Series

The Samsung SSP E Series Player uses the Scala Samsung SSP Extended HTML Player license.

Caution:
To use an Samsung SSP E series device, Scala Enterprise Content Manager Release 11.00.02 or better must be installed.

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Easy Installation

- Plug in Power and Internet
- Simple Pairing process direct to Content Manager via an HTTP/HTTPS connection.
- Scala playback software is automatically "live loaded" to the Samsung SSP as part of the pairing process and updated when required.
- Messages created from Scala Templates are converted to images.

Playback Functionality

Please Note:
1. To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.
2. Images greater than 1 MB, the transition may not perform optimally on the first play. Once cached, the transition should work more smoothly.

Video Encoding:
To avoid ‘screen flashing’ between videos, which is caused by the screen changing video modes, please ensure that your videos are encoded at the correct frame rate for the Region. For America this should be at 30 fps or 60 fps and for the Rest of the World 25 fps or 50fps.

Samsung SSP Extended HTML Player License

- Multi Zone – 1920x1080
- Unlimited number of independent zones or frames
- JPEG and PNG images
- H.264 Video – content can be 1080p
- Messages created from Scala Templates are converted to images
- HTML5 content from a Web URL. Setting "preloadWebPages:true" will help reduce the gap in loading web pages.

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N media items from a sub-playlist
  - Conditional playback based on Player metadata
- Scheduling
  - Time table - day parting
  - Macro Scheduling individual playlists items

Caution:
For Samsung Smart Signage Platform devices it is strongly recommended that the plan generation frequency should be set to a minimum of 20 minutes.

Player Monitoring and Maintenance

The Samsung SSP has a simplified set of monitoring capabilities and is limited to:

- Status
- Heartbeats
- Inventory
- Problem Reports–error reporting is based on a simplified set of errors.

The Samsung SSP receives the latest version of the playback software directly from Content Manager without the need of a maintenance job via a 'live loading' mechanism.

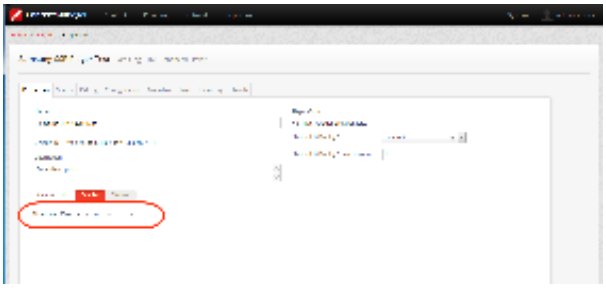
Picture in Picture (PIP)

Scala has noticed the following behaviors when trying to certify PIP on the Samsung E Series SSP Player. The following issues have been observed in testing:

- If a PIP is scheduled to play at the same time that a video is playing in another frame, the current playing video must be aborted before the PIP can be opened. Once this happens, videos in other frames are allowed to play, but there can be a delay of up to 5 seconds after opening the PIP before the next video is started. Video should play as they normally would following this.
- Only one PIP can be opened at a time. If you try to videos using PIP, the 2nd or greater PIP will be skipped and a problem report sent to Content Manager explaining the issue.
- Some PIP inputs, in particular HDMI, can take a few seconds to display because these input types must negotiate a connection with the input source.
- At the start of PIP, the screen may blank off momentarily once or twice. This is a Samsung related issue.
- During or after playing PIP, the remote control HOME button, and other buttons to open system menus may not work, or work sporadically.
- PIP always appears behind images and HTML content. Keep this in mind when creating overlapping frame sets.
- It is important to test content for at least 24 hours before deploying widely, but be aware that if scheduling PIP to open and close often (e.g., 5 minutes on, 5 minutes off, repeatedly), it is particularly important to test for stability. Scala has observed input sources that are poor at handling repetitive renegotiation of the video input with the SSP. Check that the input source does not go to sleep after a period of time when PIP is off as well..
- When using portrait mode, the Samsung SSP E Series Player limits PIP to 1080 pixels tall, and the must be on an 8 pixel boundary. There are work-arounds built-in that will force adjustments should you choose sizes that exceed either of these limitations. Additionally, problem reports will be sent to Content Manager to explain the adjustments.

Time Offset

Samsung SSP Players allow you to set the time difference between the location of your server and the Player. This must be set in Content Manager, as seen below. For the purposes of this example, the server for the Player is in New York City, while the Player itself is located in Los Angeles, which is three hours behind.



The settings seen in the image above can also be adjusted in the following ways:

- **+/-**: the Player is either ahead of or behind the time of its associated server.
- **0-12**: Number of hours in the time difference between the server and the Player. Default is set to 0
- **0, 15, 30, 45, 60**: Number of minutes, which can be modified in 15 minute increments. Default is set to 0.

This setting should be configured in Content Manager before pairing it with your Samsung SSP Players, because if a change is made to the timezone offset while the Player is running, that change will not take effect until the Player's next reboot, since that is when it syncs time with its Content Manager.

Limitations/Unsupported Functions

As the Samsung SSP is an 'Entry level' device, there are a number of features that are not available:

- Flash media (i.e. native SWF files) is not supported
- mov., .wmv, and .mpg files are not supported
- Java is not supported
- Video is always played in the background, regardless of the frame levels

- Audio playlists are not supported
- Volume on media is not supported
- Time and Event triggers are not supported
- Maintenance jobs are not supported (Note: Samsung firmware updates need to be performed according to Samsung guidelines)
- ScalaScript support is not be available
- Proof-of play logs are not supported
- Only the following transitions are officially supported:
    - Cut, Dissolve, Fade, Flyfade, Push, ScrollIn, ScrollOut, ShortFade and Straight.

Warning:
Using the following unsupported characters in filenames sent to your SSP Player will cause it to skip downloading and/or playing any content that use the following special characters:

< (less than symbol)	**>** (greater than symbol)	**|** (vertical bar)	**** (slash)	**:** (colon)
(,) (comma inside a parentheses)	**&** (ampersand)	**;** (semicolon)	**?** (question mark)	***** (asterisk)
@ (at symbol)	# (pound sign/hashtag)	**$** (dollar sign)	**%** (percent symbol)	`(apostrophe or single quote)

Additionally, the SSP Player does not support spaces in folder names.

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Series E Supported Models

Scala recommends the following for 24x7 operation.

Model	Certified Firmware
DM40E	Main[T-GFSLE2AKUC-1012.5] Sub1[T-GFSLEFWWS1-1003] Sub2[T-NVTLEFWWS1-1003] Sub3[T-MYSLEFWWS-1000])

In addition to the DM40E, the following models will also function using the certified firmware, but have not been specifically certification tested by Scala:

DHE	DBE	DME
DH40E	DB32E	DM32E
DH48E	DB40E	DM40E
DH55E	DB48E	DM48E
	DB55E	DM55E
		DM65E
		DM75E
		DM82E

Note:
Samsung, from time to time, adds new models and issues firmware updates for this range. The use of a newer model may yield similar playback performance, but should be tested extensively for compatibility before implementation, with particular attention paid to the firmware version, which should be at least equal to the listed version(s). For example if the listed version of the firmware is Version XYZ-1000, please be sure not use a firmware version older than that one, as doing so may lead to unexpected issues.

Installation

Note:
If you make any changes to the Client Connections settings under Server Settings, you must re-install Content Manager and change the "Web application settings" to mirror any changes made. If you do not, Samsung SSP Players connected to this Content Manager will no longer be able to connect. This action also requires any Samsung SSP Players connected to the system to be re-paired.

Overview

Before you can setup a Samsung SSP player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager must be licensed for Samsung SSP players
- Samsung SSP players must be set up in Content Manager prior to pairing
- Decide if you are going to show your content in portrait or landscape orientation.
- Decide if you will be pre-rotating your videos.

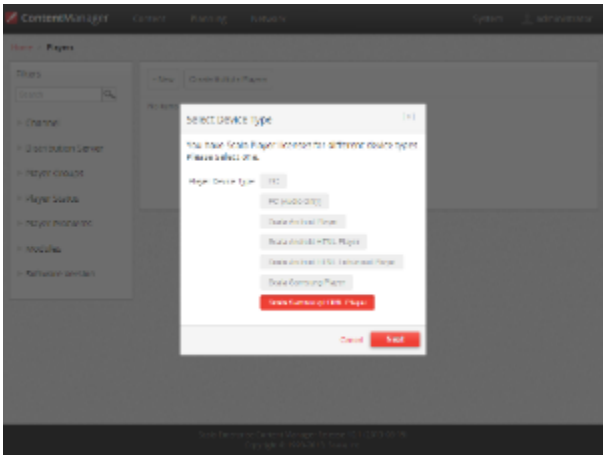
For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your Samsung SSP player.

Setting Up Content Manager for Samsung SSP

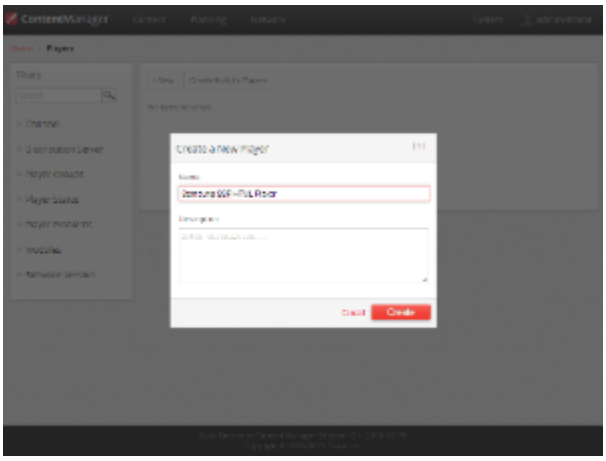
As part of the installation of Content Manager - the playback software required for the Samsung SSP players is loaded automatically. So, there is no need to send updated software to these players via maintenance jobs, as the players always check for the latest version of the playback software.

1. Content Manager - Player Setup

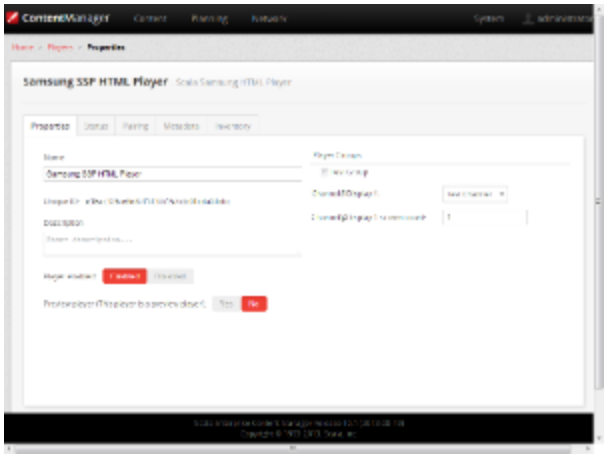
- From the **Network | Players** list, click **+ New**, select **Scala Samsung HTML Player** and click **Next.**



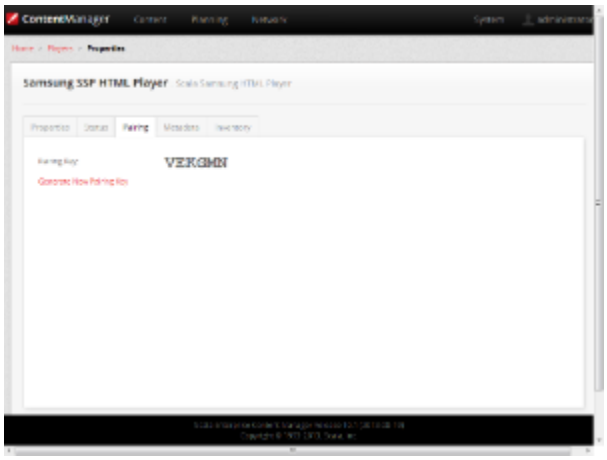
- Create a New Player Name and click **Create.**



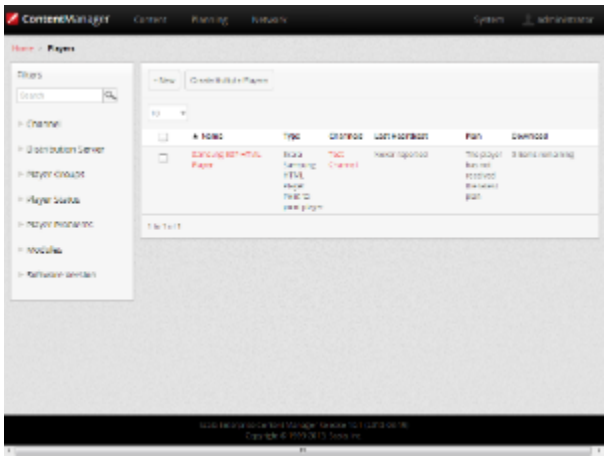
- Edit the Player Properties and assign the "test channel" you created earlier.



- Make a note of the Pairing Code found on the **Pairing** tab.



- Return to the Player list, select the Player and then choose **Generate Plan**.



Note:
If the player has already been paired, then this tab will inform you that the player is paired and will show the pairing code used.

Should you need to re-assign the Samsung SSP unit to another player, delete the Player in Content Manager and restart the Samsung SSP unit.

Setting Up and Pairing the Samsung SSP

Note:
The use of a USB keyboard is recommended, but ONLY plug it in when suggested in this guide.

1. Configuring

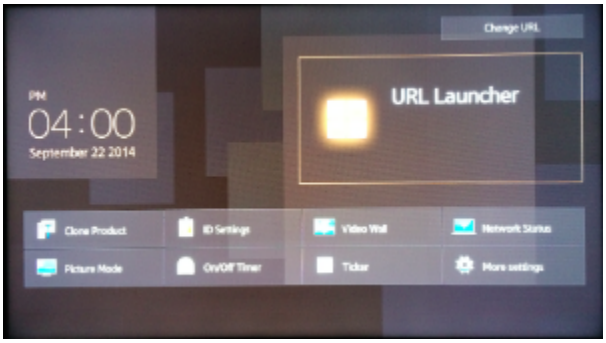
a) Use the Samsung Eight Step Setup

[Power on] the Samsung SSP via the remote control. The eight step-by-step setup menu will appear.

1. **Step 1 - Menu Language:** Set this to English.
2. **Step 2 - Display Orientation:** This is a very important step, as the setting you choose will impact your source content. The following are the settings you should use for the desired orientation of your display:
    - Select **Landscape** for either Landscape Screens.
    - Select **Portrait** for Portrait Screens.
3. **Step 3 - Network Settings**: Chose the hardwired or WiFi network that this player will be connected to from the list of networks. If it is not on the list, refresh the list. You **must** select a network on this screen as internet access is required later in the process.
4. **Step 4 - Configure Your TV:** Select **No** the on-screen list of steps should jump to Step 6.
5. **Step 5 - Auto Program:** You should not see the Antenna TV screen. If you do see a screen for setting up an Antenna TV then please restart this process.
6. **Step 6 - Clock Set:** Follow the prompts to set the display date and time.
7. **Step 7 - Play Via**: Select URL Launcher from the choices, but Leave the URL **blank** at this stage and select **Done**.
8. **Step 8 - Setup Complete**: Select **OK.**

b) Modify the Configuration

- Plug in your keyboard to the USB port if you have one, or continue using the on-screen one. Both will work in a similar manner.
- Press **Content (Home)** on the remote and the following screen appears.



- Press the **Menu** button, navigate to **On Screen Display** and choose **Display Orientation**. Modify the orientation of the On-screen Menu and Source Content to:
    - For landscape mode, configure these options as follows:
        - Onscreen menu Orientation: **Landscape.**
        - Source Content Orientation: **Landscape**.
    - For portrait mode, with rotated landscape oriented videos, configure these options as follows:
        - Onscreen menu Orientation: **Portrait.**
        - Source Content Orientation: **Portrait**. The display will only appear in the right third of the screen the rest will be snow or static.
    - For portrait mode, with pre-rotated videos, configure these options as follows:
        - Onscreen menu Orientation to **Portrait.**
        - Source Content Orientation to **Landscape**.
- Press **Content (Home)** on the remote to get back to the main screen.
- Select **Change URL** and set the URL to **$DEL** and start URL Launcher. This will remove any data the system had stored previously.

- Set **Change URL** and set the URL Please be aware that this URL **IS** case sensitive. Enter the DNS address and port number to Content Manager and append the URL to include ‘samsung’, (e.g.: "http://Your CM's DNS Address:YourPort/samsung" using the remote control or if installed, a keyboard). Click **Done**.

Screen Orientation Options:
If you are pairing a Samsung SSP Player, you can use one of the the following three case sensitive URL's to present the content on the screen:

- (<Your CM's DNS Address>: <CM Port>/samsung): sets your Player to landscape mode, and displays 1280 x 720 resolution.
- (<Your CM's DNS Address>: <CM Port>/samsungl): sets your Player to landscape mode, and displays 1920 x 1280 resolution
- (<Your CM's DNS Address>: <CM Port>/samsungp): sets your Player to portrait mode, and displays 1080 x 1920 resolution

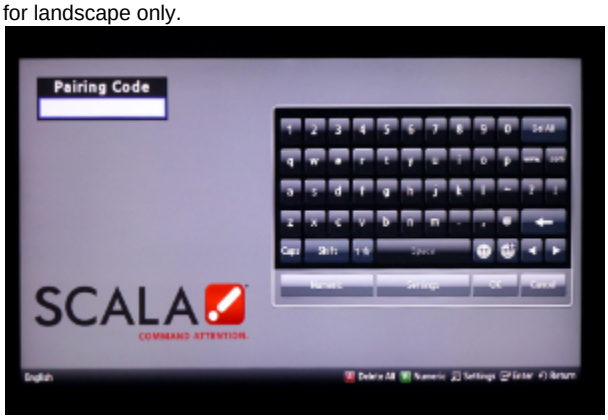
A fixed IP address is OK in a closed network, but in a network over the internet you will need to ensure you use an address that can be accessed by the Samsung SSP player.

- Press **[Return]** to back out of the menus and **[Power Off]** the Samsung SSP.

2. Pairing the Samsung SSP Player

Pairing the Samsung SSP player is a simple process and uses a pairing code system for easy configuration. A USB keyboard and mouse can be used to complete this process.

- **[Power on]** the Samsung SSP via the remote control.
  The Samsung SSP display should shows a message indicating that it starting the launcher, and connecting and the pairing Screen will appear. If you are pairing your Samsung SSP display in portrait mode, you must use a USB keyboard, as the onscreen one is supported for landscape only.



- Enter the Pairing Code, using the remote control or keyboard, that was generated when you created this player in Content Manager.
- Click **OK**.

During downloading of the content you will see a Green downloading "spinner" and on completion, the content you created as part of your test channel.

General SSP Player Guidelines

HD Content

Choosing to set your player to either of the 1920 x1080 content will allow you to show HD content on your Player. Not specifying means your content will be clipped to 1280 x 720.

Updating Your Player

Content Manager checks for a new Scala Samsung SSP Player file with every use. It will download and install the new file automatically when it becomes available.

Caution:
Scala strongly urges you **not** to remove the Samsung SSP Player file manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Troubleshooting the Samsung SSP Player

'Red Spinner' Seen on Display

During downloads the Samsung SSP display shows a Green downloading 'spinner.'

If this spinner is Red then either:

- The Content Manager is offline OR
- The Samsung SSP internal clock is not set and scheduled content cannot play.

In either case, the remedy is to reestablish network connectivity.

HTML Content is not Displayed

Usually this is because the Content Manager is offline. It is necessary to reestablish network connectivity.

No Network Connectivity

If your Player gives the following error: “Network connection failed, launching offline," it because the Content Manager you are using was not correctly installed to support Players accessing it. Reinstall Content Manager using the correct URL and the players will connect to Content Manager.

The Player is Stuck

> **Note:**
> The factory reset sequence (M**ute +1 + 8 +2 + Power**) do not work with the Samsung SSP E Series Player

In the course of certifying this device, Scala has encountered that they sometimes get stuck playing the last APP (Samsung's terminology for using either portrait or landscape), even after the URL has changed. This can be remedied by changing the URL to $DEL. This can also be used if you are repurposing an SSP Player used with another product. The player can be reset by running through the initial setup again, and using the following procedure:

1. Press **Home** on the remote.
2. Press **Source** on the remote and select either **TV** or **HDMI**.
3. Press the **Menu** button, and go to **System > Setup**.
4. Enter $DEL to clear out the last downloaded app.

Reassigning Samsung SSP Player

If you need to re-assign the Samsung SSP unit to another player, delete the original player in Content Manager and restart the Samsung SSP unit.

Fullscreen Media

In addition to External Source (Picture in Picture), the Samsung SSP player also supports the fullscreen option for images, HTML and video.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health, while codes specific to this player can be found on either the Samsung SSP Players page.

D Series Players

> The following legacy players are certified for use with **Scala Player 11.03**. These devices will operate with Scala Enterprise release 11.04, however, no further regression testing will be done.

Jump Directly To:

Introduction

The Samsung's D Series displays feature an enhanced system-on-a-chip that supports advanced applications as a cost effective alternative to using an external media player or PC, streamlining deployment and significantly reducing total cost of ownership.

Samsung’s D Series displays are powered by a quad core Cortex-A9 1GHz processor and features a full codec video processor, 1.5GB DDR3

and 4GB of memory. This increased performance enables the platform to support more advanced applications – including touch and video wall configurations – all without the need for an external media player or PC.

When maximum up time matters the Samsung DM-D lineup is rated for 24/7 use, providing performance and dependability for businesses and organizations communicating around the clock. The slim-direct-lit displays in the DM-D lineup feature 1920 x 1080 Full HD resolution up to 450 nits brightness and a 5000:1 contrast ratio for sharp, detail-rich images and crisp, easily legible type. Built-in Wi-Fi, eliminates the need for Ethernet cabling thus further reducing installation costs. The displays are a ideal solutions for retail environments, quick service restaurants, meeting rooms, public spaces and more.

Samsung also has the entry level DB-D lineup, rated for 16-hour daily operation, which provides an affordable commercial display with exceptional picture quality and all the benefits of the Smart Signage Platform. The displays are a cost-efficient solutions for signage where 24/7 operation is not required.

As of Release 10.5, Portrait Mode and the display of HD content are supported. Their use and proper setup are discussed in greater detail later in this document.

Available Scala Player Licenses for Use with Samsung SSP Player D Series

The Samsung SSP D Series Player uses the Scala Samsung SSP HTML Extended Player license.

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Easy Installation

- Plug in Power and Internet
- Simple Pairing process direct to Content Manager via an HTTP connection
- Scala playback software is automatically "live loaded" to the Samsung SSP as part of the pairing process and updated when required
- Messages created from Scala Templates are converted to images

Playback Functionality

Please Note:
1. Scala strongly recommends using the Scala playback software for video playback instead of HTML5.
2. To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature.
3. Images greater than 1 MB, the transition may not perform optimally on the first play. Once cached, the transition should work more smoothly.

Video Encoding
To avoid ‘screen flashing’ between videos, which is caused by the screen changing video modes, please ensure that your videos are encoded at the correct frame rate for the Region. For America this should be at 30 fps or 60 fps and for the Rest of the World 25 fps or 50fps.

Samsung SSP Extended HTML Player License

- Multi Zone – 1920x1080
- Up to 3 independent zones or frames
- JPEG and PNG images
- H.264 Video – content can be 1080p;
- Messages created from Scala Templates are converted to images
- HTML5 content from a Web URL. Setting "preloadWebPages:true" will help reduce the gap in loading web pages

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types

- Sequential playlists
- Shuffle playlists
- Pick N media items from a sub-playlist
- Conditional playback based on Player metadata

- Scheduling
  - Time table - day parting
  - Macro Scheduling individual playlists items

Caution:
For Samsung Smart Signage Platform devices it is strongly recommended that the plan generation frequency should be set to a minimum of 20 minutes.

Player Monitoring and Maintenance

The Samsung SSP has a simplified set of monitoring capabilities and is limited to:

- Status
- Heartbeats
- Inventory
- Problem Reports–error reporting is based on a simplified set of errors

The Samsung SSP receives the latest version of the playback software directly from Content Manager without the need of a maintenance job via a ‘live loading’ mechanism.

Picture in Picture (PIP)

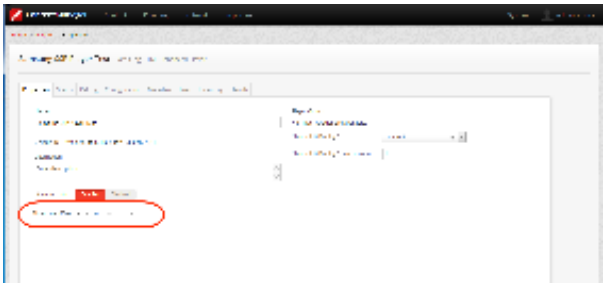
Note:
This feature will only work with DB22D-P models with “T-GFSLD2AKUC” or "T-GFSLD2DWWC" firmware.

Scala has noticed the following behaviors when trying to certify PIP on the Samsung D Series SSP Player. The following issues have been observed in testing:

- If a PIP is scheduled to play at the same time that a video is playing in another frame, the current playing video must be aborted before the PIP can be opened. Once this happens, videos in other frames are allowed to play, but there can be a delay of up to 5 seconds after opening the PIP before the next video is started. Video should play as they normally would following this.
- Only one PIP can be opened at a time. If you try to videos using PIP, the 2nd or greater PIP will be skipped and a problem report sent to Content Manager explaining the issue.
- Some PIP inputs, in particular HDMI, can take a few seconds to display because these input types must negotiate a connection with the input source.
- At the start of PIP, the screen may blank off momentarily once or twice. This is a Samsung related issue.
- During or after playing PIP, the remote control HOME button, and other buttons to open system menus may not work, or work sporadically.
- PIP always appears behind images and HTML content. Keep this in mind when creating overlapping frame sets.
- It is important to test content for at least 24 hours before deploying widely, but be aware that if scheduling PIP to open and close often (e.g., 5 minutes on, 5 minutes off, repeatedly), it is particularly important to test for stability. Scala has observed input sources that are poor at handling repetitive renegotiation of the video input with the SSP. Check that the input source does not go to sleep after a period of time when PIP is off as well..
- When using portrait mode, the Samsung SSP D Series Player limits PIP to 1080 pixels tall, and top of frame must be on an 8 pixel boundary. There are work-arounds built-in that will force adjustments should you choose sizes that exceed either of these limitations. Additionally, problem reports will be sent to Content Manager to explain the adjustments.

Time Offset

Samsung SSP Players allow you to set the time difference between the location of your server and the Player. This must be set in Content Manager, as seen below. For the purposes of this example, the server for the Player is in New York City, while the Player itself is located in Los Angeles, which is three hours behind.



The settings seen in the image above can also be adjusted in the following ways:

- **+/-**: the Player is either ahead of or behind the time of its associated server.
- **0-12**: Number of hours in the time difference between the server and the Player. Default is set to 0
- **0, 15, 30, 45, 60**: Number of minutes, which can be modified in 15 minute increments. Default is set to 0.

This setting should be configured in Content Manager before pairing it with your Samsung SSP Players, because if a change is made to the timezone offset while the Player is running, that change will not take effect until the Player's next reboot, since that is when it syncs time with its Content Manager.

Limitations / Unsupported Functions

As the Samsung SSP is an ‘Entry level’ device, there are a number of features that are not available:

- Flash media (i.e. native SWF files) is not supported
- mov., .wmv, and .mpg files are not supported
- Java is not supported
- Video is always played in the background, regardless of the frame levels
- Audio playlists are not supported
- Volume on media is not supported
- Time and Event triggers are not supported
- Maintenance jobs are not supported (**Note:** Samsung firmware updates need to be performed according to Samsung guidelines)
- ScalaScript support is not be available
- Proof-of play logs are not supported
- Widget media (i.e. wgt files) is not supported.
- Only the following transitions are officially supported:
    - Cut, Dissolve, Fade, Flyfade, Push, ScrollIn, ScrollOut, ShortFade and Straight.

Warning:
Using the following unsupported characters in filenames sent to your SSP Player will cause it to skip downloading and/or playing any content that use the following special characters:

< (less than symbol)	**>** (greater than symbol)	**|** (vertical bar)	**** (slash)	**:** (colon)
(,) (comma inside a parentheses)	**&** (ampersand)	**;** (semicolon)	**?** (question mark)	***** (asterisk)
@ (at symbol)	# (pound sign/hashtag)	**$** (dollar sign)	**%** (percent symbol)	`(apostrophe or single quote)

Additionally, the SSP Player does not support spaces in folder names.

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Series D Supported Models

24 x 7 Operation

Scala recommends the following for 24x7 operation.

Model	Certified Firmware
DM40D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTMLWWC-1040] Sub3[L-MYSLWWC-1008]
DM48D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTMLWWC-1040] Sub3[L-MYSLWWC-1008]

DM55D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTM LWWC-1040] Sub3[L-MYSLWWC-1008]
DH40D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTM LWWC-1040] Sub3[L-MYSLWWC-1008]
DH48D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTM LWWC-1040] Sub3[L-MYSLWWC-1008]
DH55D	Main[T-GFSLAKUC-1030.2] Sub1[T-GFSLAKUS-1008] Sub2[L-NTM LWWC-1040] Sub3[L-MYSLWWC-1008]
OH46D	Main[T-GFSLHAKUC-1005.1]Sub1[T-GFSLDWWS4-1008])
OH55D	Main[T-GFSLHAKUC-1005.1]Sub1[T-GFSLDWWS4-1008])

16 x 7 Operation

Samsung has an entry level D-Series, which are rated for 16 hour daily operation. While the Scala Player software runs on these displays, it is recommended that the 24x7 rated players are used for digital signage.

Model	Certified Firmware
DB32D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS1-1035]
DB40D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS1-1035]
DB48D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS1-1035]
DB55D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS1-1035]
DM32D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS1-1035]
DB10D	Main[T-GFSLD1AKUC-1006.4] Sub1[T-GFSLDWWS3-1001]
DB22D	Main[T-GFSLDAKUC-1029.6] Sub1[T-GFSLDWWS2-1021]
DB22D-P	Main[T-GFSLD2DWWC-1000.4] Sub1[T-GFSLDWWS5-1000]

Note:
Samsung, from time to time, adds new models and issues firmware updates for this range. The use of a newer model may yield similar playback performance, but should be tested extensively for compatibility before implementation, with particular attention paid to the firmware version, which should be at least equal to the listed version(s).

Installation

Note:
If you make any changes to the Client Connections settings under Server Settings, you must re-install Content Manager and change the "Web application settings" to mirror any changes made. If you do not, Samsung SSP Players connected to this Content Manager will no longer be able to connect. This action also requires any Samsung SSP Players connected to the system to be re-paired.

Overview

Before you can setup a Samsung SSP player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager must be licensed for Samsung SSP players
- Samsung SSP players must be set up in Content Manager prior to pairing
- Decide if you are going to show your content in portrait or landscape orientation.
- Decide if you will be pre-rotating your videos.

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your Samsung SSP player.

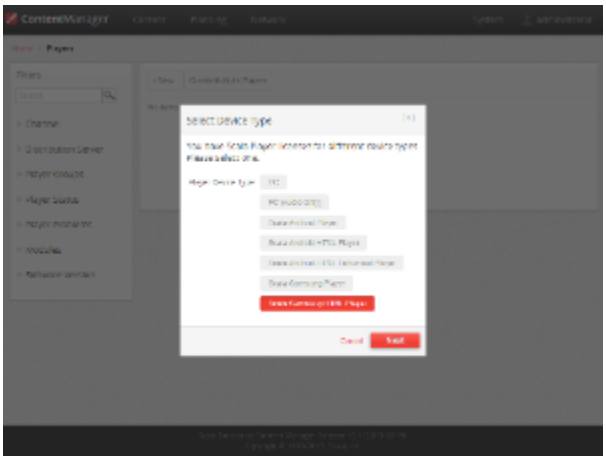
Setting Up Content Manager for Samsung SSP

As part of the installation of Content Manager - the playback software required for the Samsung SSP players is loaded automatically. So, there is no need to send updated software to these players via maintenance jobs, as the players always check for the latest version of the playback

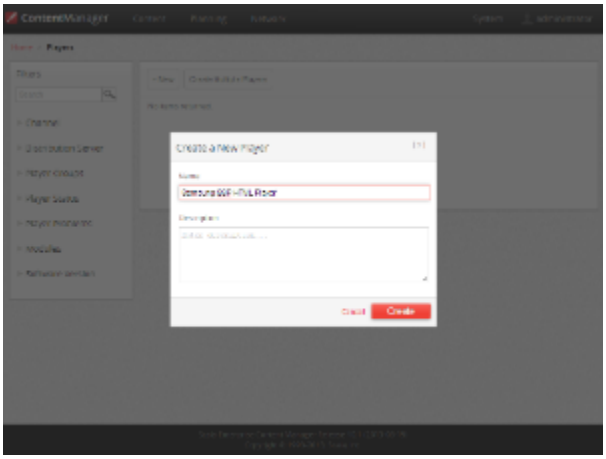
software.

1. Content Manager - Player Setup

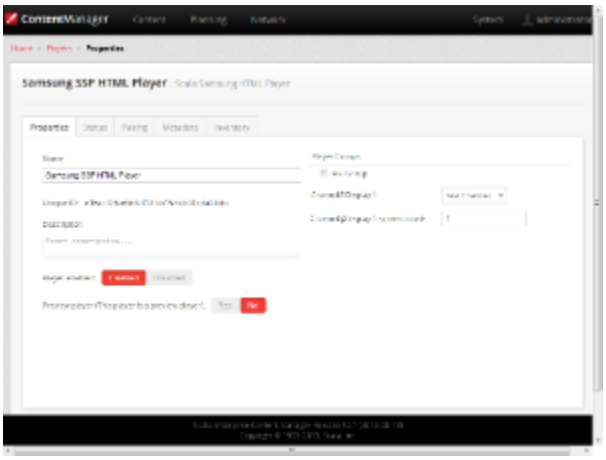
- From the **Network | Players** list. Click **+ New**, select **Scala Samsung HTML Player** and click **Next**



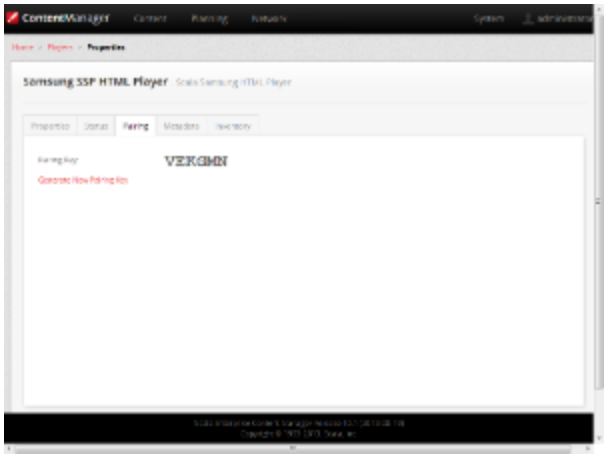
- Create a New Player Name and click **Create**



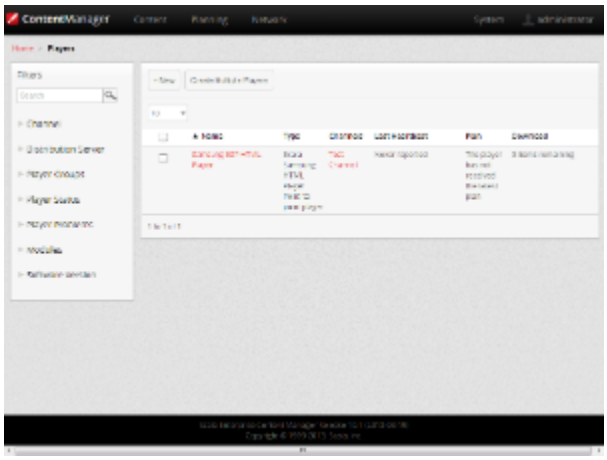
- Edit the Player Properties and assign the "test channel" you created earlier.



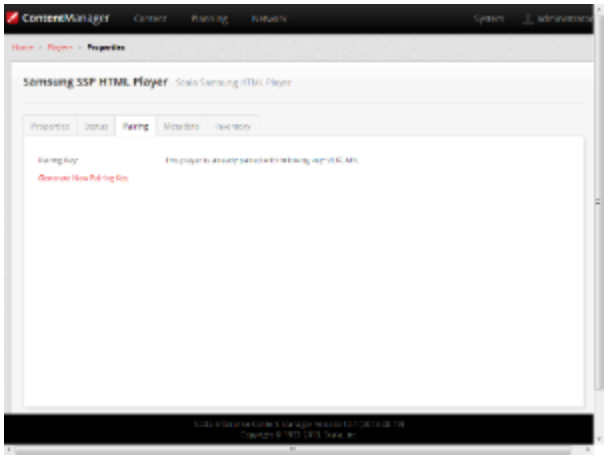
- Make a note of the Pairing Code found on the **Pairing** tab.



- Return to the Player list, select the Player and then choose **Generate Plan**.



Note:
If the player has already been paired, then this tab will inform you that the player is paired and will show the pairing code used.



Should you need to re-assign the Samsung SSP unit to another player, delete the Player in Content Manager and restart the Samsung SSP unit.

2. Are You Using Your Samsung Player in Portrait Mode?

Using Pre-Rotated Videos in Portrait Mode
It is very important that you read this before proceeding further.

Rotating landscape oriented video in portrait mode is computationally intensive. The D Series also supports an option to use video files

that have been pre-rotated for portrait mode should you find it necessary. If you decide to pre-rotate your video for Portrait Mode, the following must be done on the Content Manager Server:

1. Create a folder called **User** on the Content Manager server under the <Tomcat folder>/webapps/samsung folder. The path to this server should look something like this: C:\Program Files\Apache Software Foundation\Tomcat 7.0\webapps\samsung\user
2. In the folder you created in the previous step, add an **options.txt** file (either by making your own or copying one) with a line of options set up like this:

```
{"nightlyReboot": true,"rebootAt": 3, "rotateVideo": false}
```

3. This will disable rotating videos for **all** Samsung SSP Players in Portrait Mode on your network.

There are many resources to explain the process of rotating your videos. Scala does not endorse one specific product, but feels that researching the process and finding a method you are comfortable using is the best way to proceed.

Setting Up and Pairing the Samsung SSP

The use of a USB keyboard is recommended, but ONLY plug it in when suggested in this guide

1. Factory Reset

To ensure the correct configuration of your Samsung SSP Player, Scala recommends you perform a Factory Reset so that you are working from a clean installation.

1. Power on the Samsung SSP via the remote control by pressing **[Mute] + 1 + 8 + 2 + [Power On] .**
2. Navigate to **Option> Factory Reset> Factory Reset** to have the screen reset your player.

2. Configuring

a) Use the Samsung Eight Step Setup

[Power on] the Samsung SSP via the remote control. The eight step-by-step setup menu will appear.

Step 1 - Menu Language: Set this to **English.**

Step 2 - Display Orientation: This is a very important step, as the setting you choose will impact your source content. The following are the settings you should use for the desired orientation of your display**:**

- Select **Landscape** for either Landscape Screens or Portrait Screens with Pre-rotated Video.
- Select **Portrait** for Portrait Screens that will rotate landscape oriented video on-the-fly (Please see the note **Are You Using Your Samsung Player in Portrait Mode**)?

Step 3 - Network Settings: Chose the hardwired or WiFi network that this player will be connected to from the list of networks. If it is not on the list, refresh the list. You **must** select a network on this screen as internet access is required later in the process.

Step 4 - Configure Your TV: Select **No** the on-screen list of steps should jump to **Step 6**

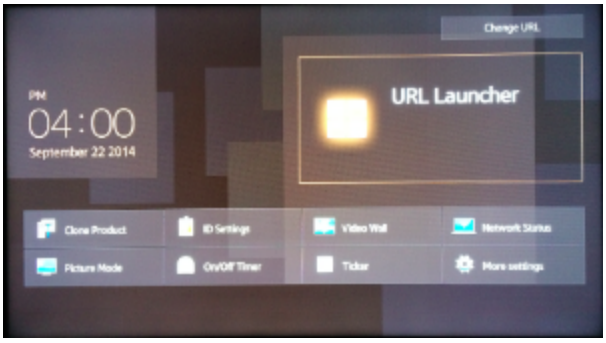
Step 5 - Auto Program: You should not see the Antenna TV screen. If you do see a screen for setting up an Antenna TV then please restart this process.

Step 6 - Clock Set: Follow the prompts to set the display date and time.

Step 7 - Play Via: Select URL Launcher from the choices, but Leave the URL **blank** at this stage and select **Done.**

Step 8 - Setup Complete: Select **OK.**
b) Modify the Configuration

- Plug in your keyboard to the USB port if you have one, or continue using the on-screen one. Both will work in a similar manner.
- Press **Content (Home)** on the remote and the following screen appears.



- Press the **Menu** button, navigate to **On Screen Display** and choose **Display Orientation**.

  Modify the orientation of the On-screen Menu and Source Content to:
  - For landscape mode, configure these options as follows:
    - Onscreen menu Orientation: **Landscape**
    - Source Content Orientation: **Landscape.**
  - For portrait mode, with rotated landscape oriented videos, configure these options as follows:
    - Onscreen menu Orientation: **Portrait**
    - Source Content Orientation: **Portrait.** The display will only appear in the right third of the screen the rest will be snow or static.
  - For portrait mode, with pre-rotated videos, configure these options as follows:
    - Onscreen menu Orientation to **Portrait**
    - Source Content Orientation to **Landscape.**
- Press **Content (Home)** on the remote to get back to the main screen.
- Select **Change URL** and set the URL to **$DEL** and start URL Launcher. This will remove any data the system had stored previously.

- Set **Change URL** and set the URL Please be aware that this URL **IS** case sensitive.
  Enter the DNS address and port number to Content Manager and append the URL to include ‘samsung’, (e.g.: "http://Your CM's DNS Address:YourPort/samsung" using the remote control or if installed, a keyboard). Click **Done.**

  Screen Orientation Options:
  If you are pairing a Samsung SSP Player, you can use one of the the following three case sensitive URL's to present the content on the screen:

  - (<Your CM's DNS Address>: <CM Port>/samsung): sets your Player to landscape mode, and displays 1280 x 720 resolution.
  - (<Your CM's DNS Address>: <CM Port>/samsungl): sets your Player to landscape mode, and displays 1920 x 1280 resolution
  - (<Your CM's DNS Address>: <CM Port>/samsungp): sets your Player to portrait mode, and displays 1080 x 1920 resolution

  A fixed IP address is OK in a closed network, but in a network over the internet you will need to ensure you use an address that can be accessed by the Samsung SSP player.
- Press **[Return]** to back out of the menus and **[Power Off]** the Samsung SSP.

3. Pairing the Samsung SSP Player

Pairing the Samsung SSP player is a simple process and uses a pairing code system for easy configuration. A USB keyboard and mouse can be used to complete this process.

- **[Power on]** the Samsung SSP via the remote control.
  The Samsung SSP display should shows a message indicating that it starting the launcher, and connecting and the pairing Screen will appear.

- Enter the Pairing Code, using the remote control or keyboard, that was generated when you created this player in Content Manager,
- Click **OK.**

During downloading of the content you will see a Green downloading "spinner" and on completion, the content you created as part of your test channel.

General SSP Player Guidelines

HD Content

Choosing to set your player to either of the 1920 x1080 content will allow you to show HD content on your Player. Not specifying means your content will be clipped to 1280 x 720.

Updating Your Player

Content Manager checks for a new Scala Samsung SSP Player file with every use. It will download and install the new file automatically when it becomes available.

> **Caution:**
> Scala strongly urges you not to remove the Samsung SSP Player file manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Fullscreen Media

In addition to External Source (Picture in Picture), the Samsung SSP player also supports the fullscreen option for images, HTML and video.

Troubleshooting the Samsung SSP Player

'Red Spinner' Seen on Display

During downloads the Samsung SSP display shows a 'Green' downloading 'spinner'

If this 'spinner' is 'Red' then either:

- The Content Manager is offline OR
- The Samsung SSP internal clock is not set and scheduled content cannot play.

In either case, the remedy is to reestablish network connectivity.

HTML Content is not Displayed

Usually this is because the Content Manager is offline. It is necessary to reestablish network connectivity.

No Network Connectivity

If your Player gives the following error: "Network connection failed, launching offline," it because the Content Manager you are using was not correctly installed to support Players accessing it. Reinstall Content Manager using the correct URL and the players will connect to Content Manager.

Using Factory Resets

Please be aware that while factory resets do wipe the device, they do not reset its file system files. If you are doing any of the setup described

above on this page, and make an error or run into some sort of issue, a factory reset is necessary before you can restart the process.

Clearing the Last Downloaded APP

In the course of certifying this device, Scala has encountered that they sometimes get stuck playing the last APP, even after the URL has changed. This can be remedied by changing the URL to $DEL. This should clear out the last downloaded APP and help you avoid having to do a factory reset. However, if it does not remedy the situation, a factory reset is then recommended.

Reassigning Samsung SSP Player

If you need to re-assign the Samsung SSP unit to another player, delete the original player in Content Manager and restart the Samsung SSP unit.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health, while codes specific to this player can be found on the Samsung SSP Players page.

C Series Players

The following legacy players are certified for use with **Scala Player 11.03**. These devices will operate with Scala Enterprise release 11.04, however, no further regression testing will be done.

Jump Directly To:

Important note for users of the Samsung Smart Signage Platform “C” Series:
The “C” Series of the Samsung Smart Signage Platform relies upon SSL 3.0 when connecting via HTTPS, meaning it cannot talk over HTTPS to a server that has been patched against Poodlebleed. Content Manager 10.4.3 addresses this within the server, but you will need to obtain an upcoming firmware update from Samsung and apply that to these screens before applying those updaters. For a more detailed explanation of Scala's response to Poodlebleed including this issue, click here.

Introduction

With the trend in the digital signage industry continuing to embrace Linux/Android based embedded playback devices, Samsung has introduced their Smart Signage Platform (SSP), which is essentially a series of their commercial displays with an embedded media player.

The “easy entry” model of the Samsung Smart Signage Platform, from a network management and total cost of ownership perspective, fits very well to the market trends that we see where end users are looking for an integrated communication solution that is easy and fast to install. The collaborative solution of Scala and Samsung enables end users to create and use eye-catching dynamic content on Samsung’s top quality displays and platform, using Scala’s proven high level Content Management System.

Available Scala Player Licenses for Use with Samsung SSP Player C Series

The Samsung SSP C Series Player uses the Scala Samsung SSP HTML Extended Player license.

Features

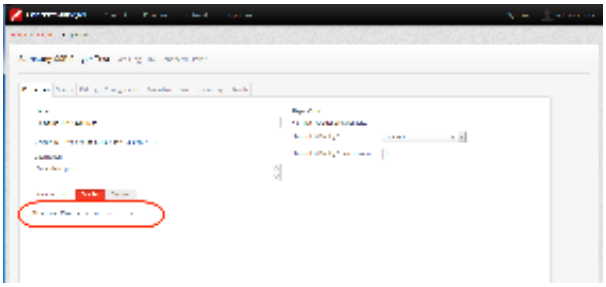
Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Easy Installation

- Plug in Power and Internet
- Simple Pairing process direct to Content Manager via an HTTP connection
- Scala playback software is automatically "live loaded" to the Samsung SSP as part of the pairing process and updated when required
- Messages created from Scala Templates are converted to images

Time Offset

Samsung SSP Players allow you to set the time difference between the location of your server and the Player. This must be set in Content Manager, as seen below. For the purposes of this example, the server for the Player is in New York City, while the Player itself is located in Los Angeles, which is three hours behind.



The settings seen in the image above can also be adjusted in the following ways:

- **+/-**: the Player is either ahead of or behind the time of its associated server.
- **0-12**: Number of hours in the time difference between the server and the Player. Default is set to 0
- **0, 15, 30, 45, 60**: Number of minutes, which can be modified in 15 minute increments. Default is set to 0.

This setting should be configured in Content Manager before pairing it with your Samsung SSP Players, because if a change is made to the timezone offset while the Player is running, that change will not take effect until the Player's next reboot, since that is when it syncs time with its Content Manager.

Playback Functionality

Please Note:
To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature. For a more detailed discussion of Scala's support of HTML, please see the Verifying Media Formats and HTML Programming Guidelines pages.

Video Encoding:
To avoid 'screen flashing' between videos, which is caused by the screen changing video modes, please ensure that your videos are encoded at the correct frame rate for the Region. For America this should be at 30 fps or 60 fps and for the Rest of the World 25 fps or 50fps.

Samsung SSP Extended HTML Player License

- Single Channel
- Multi Zone
- Up to 3 independent zones or frames
- JPEG and PNG images
- H.264 Video – content can be 1080p;
- Messages created from Scala Templates are converted to images
- HTML5 content from a Web URL

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists
  - Conditional playback based on Player metadata
- Scheduling

- Time table – day parting
- Macro Scheduling individual playlist items

> **Note:**
> For Samsung Smart Signage Platform (SSP) devices, it is recommended that the plan generation frequency should be to a minimum of 20 minutes.

Player Monitoring and Maintenance

The Samsung SSP has a simplified set of monitoring capabilities and is limited to:

- Status
- Heartbeats
- Inventory
- Problem Reports–error reporting is based on a simplified set of errors

The Samsung SSP receives the latest version of the playback software directly from Content Manager without the need of a maintenance job via a 'live loading' mechanism.

Limitations / Unsupported Functions

As the Samsung SSP is an 'Entry level' device, there are a number of features that are not available:

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- mov., .wmv, and .mpg files are not supported
- Audio playlists are not supported
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- Time and Event triggers are not supported
- Maintenance jobs - (**Note**: Samsung firmware updates need to be performed according to Samsung guidelines)
- ScalaScript support is not available
- Proof-of play logs are not supported
- Only the following transitions are officially supported:
  - Cut, Dissolve, Fade, Flyfade, Push, ScrollIn, ScrollOut, ShortFade and Straight.

> **Warning:**
> Using the following unsupported characters in filenames sent to your SSP Player will cause it to stop downloading the plan and/or the plan content: < (less than symbol); > (greater than symbol); | (vertical bar); \ (slash); : (colon); (,) (comma inside a parentheses); & (ampersand); ; (semicolon); ? (question mark); *(asterisk); @ (at symbol); # (pound sign/hashtag); $ (dollar sign); % (percent symbol); and `(apostrophe or single quote). Additionally, the SSP Player does not support spaces in folder names.

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Installation

Overview

Before you can setup a Samsung SSP player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager must be licensed for Samsung SSP players
- Samsung SSP players must be set up in Content Manager prior to pairing

Create a Test Channel that can be Assigned to your Samsung SSP player

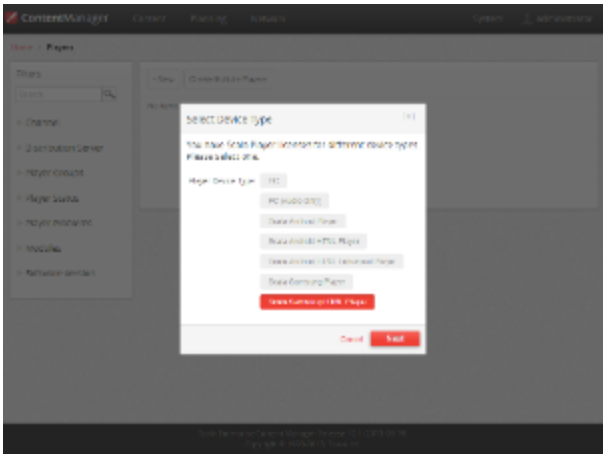
For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your Samsung SSP player.

Content Manager

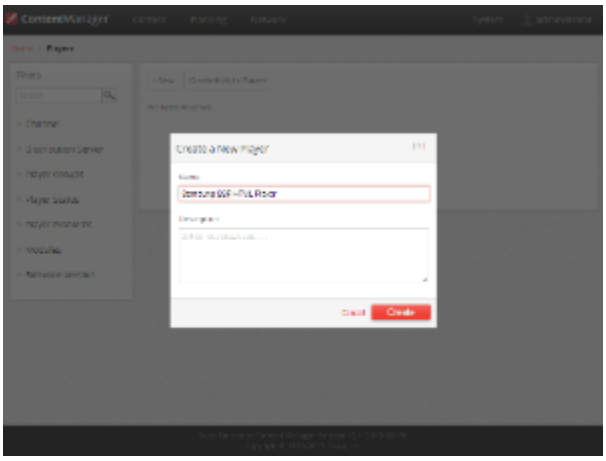
As part of the installation of Content Manager - the playback software required for the Samsung SSP players is loaded automatically. So, there is no need to send updated software to these players via maintenance jobs, as the players always check for the latest version of the playback software.

Content Manager - Player Setup

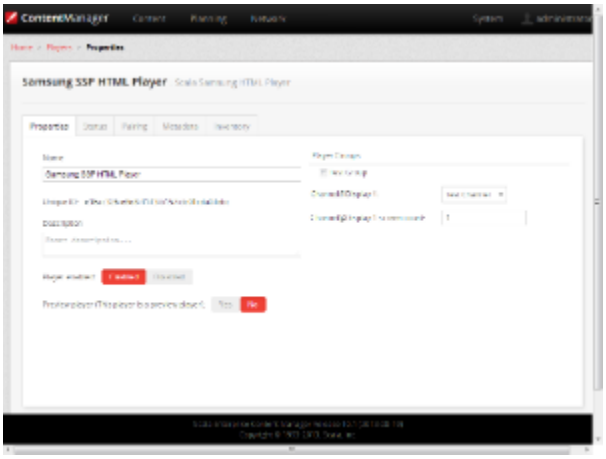
- From the **Network | Players** list. Click **+ New**, select **Scala Samsung HTML Player** and click **Next**



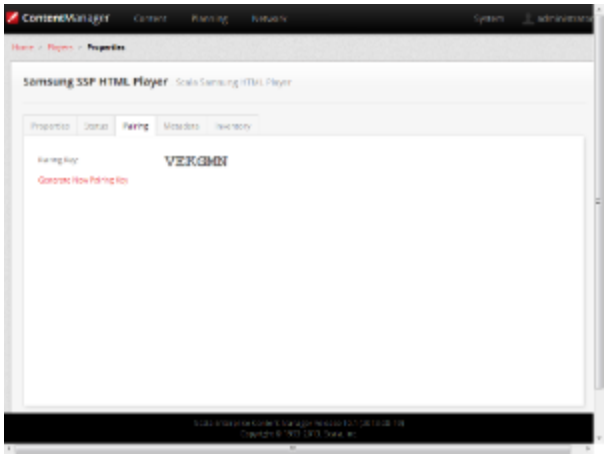
- Create a New Player Name and click “**Create**”



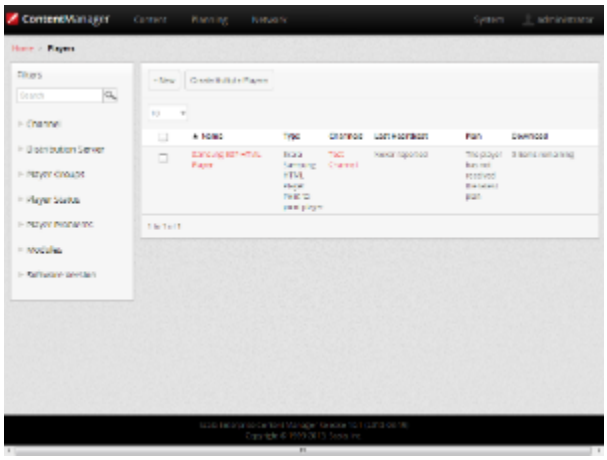
- Edit the Player Properties and assign the "test channel" you created earlier.



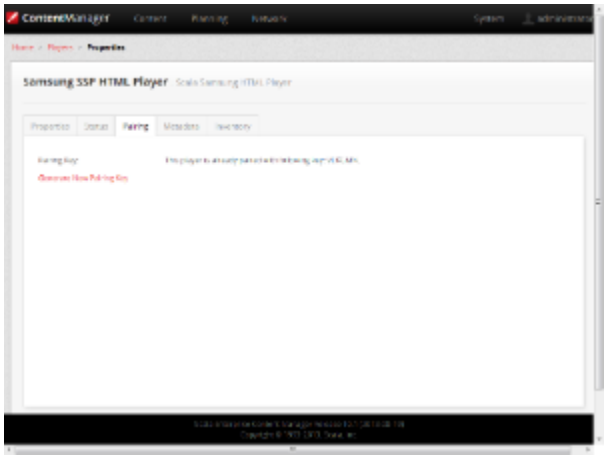
- Make a note of the Pairing Code found on the **Pairing** tab.



- Return to the Player list, select the Player and then choose **Generate Plan**.



Note:
If the player has already been paired, then this tab will inform you that the player is paired and will show the pairing tab used.

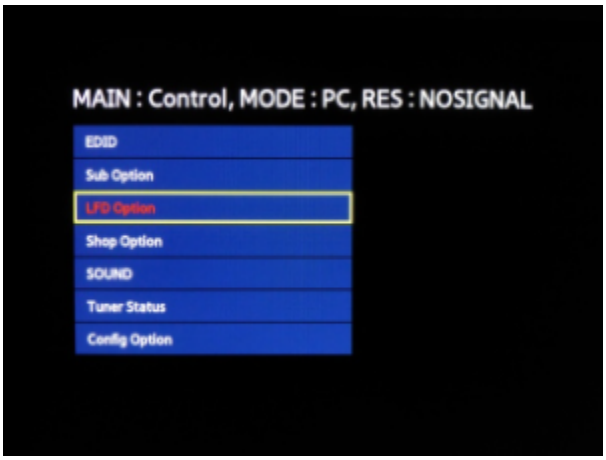


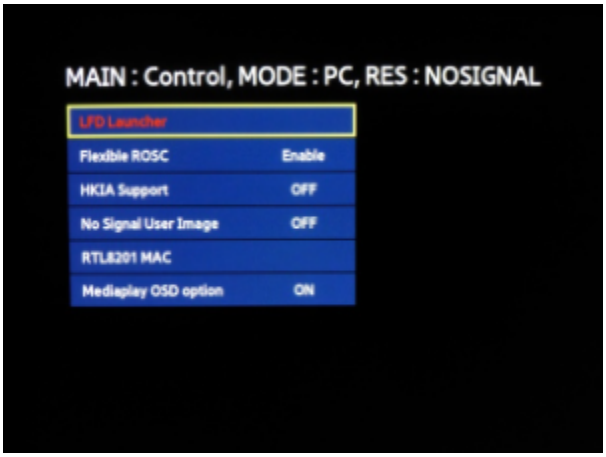
Should you need to re-assign the Samsung SSP unit to another player, delete the player in Content Manager and restart the Samsung SSP unit.

Pairing the Samsung SSP Player

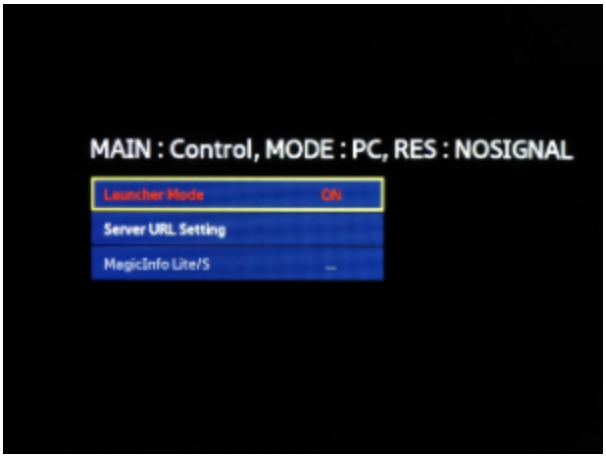
Pairing the Samsung SSP player is a simple process and uses a pairing code system for easy configuration.

1. **[Power off]** the Samsung SSP via the remote control.
2. Then press **[Mute] + 1 + 8 + 2 + [Power On].**
3. Navigate to the **Control->LFD Option->LFD Launcher** menu entry.

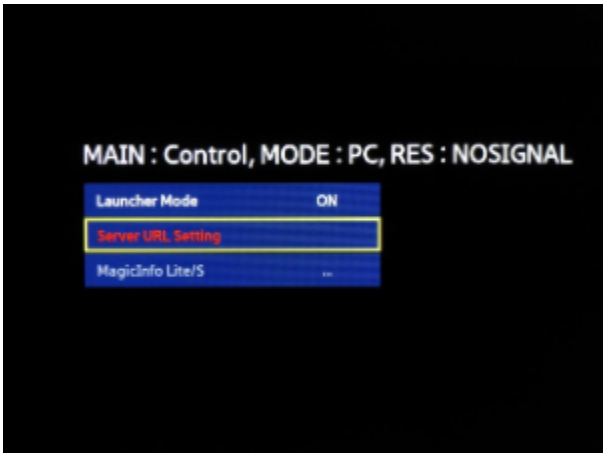




4. Make sure the Launcher is set to Launcher Mode **On.**

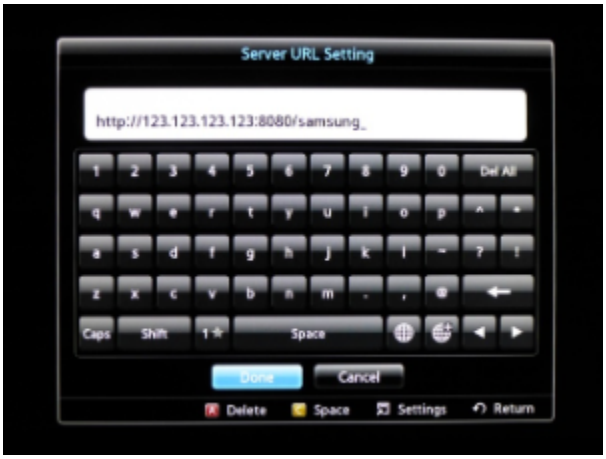


5. Go to **Server URL Setting.**



6. Enter the IP address and port number to Content Manager and append the URL to include ‘samsung’, e.g.: "http://123.123.123.123:8080/samsung" using the remote control or if installed, a keyboard. Click **Done.**

> **Note:**
> The URL is case sensitive.



7. Press **[Return]** to back out of the menus and **[Power Off]** the Samsung SSP.
8. **[Power on]** the Samsung SSP.

The Samsung SSP display should shows a message indicating that it starting the launcher, and connecting.

- Finally, enter the Pairing Code that was generated when you created the player in Content Manager, using the remote control.

- Click **OK.**

During downloading of the content you will see a Green downloading "spinner" and on completion the content you created as part of your test channel.

Updating Your Player

The Samsung SSP Player checks with Content Manager for a new APK file with every use. It will download and install the new APK file automatically when it becomes available.

> **Caution:**
> Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Troubleshooting the Samsung SSP Player

'Red Spinner' Seen on Display

During downloads the Samsung SSP display shows a 'Green' downloading 'spinner'

If this 'spinner' is 'Red' then either:

- The Content Manager is offline OR
- The Samsung SSP internal clock is not set and scheduled content cannot play.

In either case, the remedy is to reestablish network connectivity.

HTML Content is not Displayed

Usually this is because the Content Manager is offline. It is necessary to reestablish network connectivity.

Reassigning Samsung SSP Player

If you need to re-assign the Samsung SSP unit to another player, delete the original player in Content Manager and restart the Samsung SSP unit.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes is found at Monitoring Player Health, while codes specific to this player can be found on the Samsung SSP Players page.

Scala Enterprise Player for Chrome

> The following legacy player is certified for use with **Scala Android Player 11.03**. This device may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Jump Directly To:

Introduction

Together, Scala's Enterprise content management software, Chrome OS devices and Chrome Device Management (CDM) harmoniously offer an easy to deploy, manageable, secure, and scaleable signage solution that is robust, yet cost effective for businesses of all sizes.

Device Management for Chrome OS devices provides a secure, locked down platform on which to run Scala software. By adding Google's CDM to the CMS solution running on Chrome OS form factors, companies are able to remotely deploy and manage devices, install Scala software, monitor the overall device health of the signage program and troubleshoot screens while collecting device health logs. With CDM, Scala customers will experience all the benefits they are used to, with a more manageable and stable platform.

Unlike legacy digital media players, Chrome devices, from manufacturers such as Asus, AOPEN, Lenovo and HP, provide a mix of performance, cost-effectiveness and flexibility not previously available. Chrome OS form factors are capable of rich dynamic HTML5 content, advanced scheduling of content, and screen zones, while also being a capable picture and video player, offering better HTML performance and more up-to-date HTML standards. The central deployment and management capability via CDM reduces the need for onsite technical support, making the simplicity of implementing and maintaining the Scala software solution even simpler and more turn-key.

Note:

For more information on Chrome Device Management and Google for Work, click on the picture to the right.

The true value of the Google offering is in the ability for these devices to be centrally managed on a network founded on the ease of manageability and scale. Chrome creates an environment where there is less room for error, and also a lower cost of ownership.

Business Need	Feature	Managed	Unmanaged
Chrome device monitoring, alerts, and troubleshooting	Remote health monitoring and upload of system logs	X	
Enterprise grade support	Phone and online access to Google Enterprise Support	X	
Manage device settings, restrict access, and install applications	Remote setting of device policy, management of user access, and installation of software	X	
Manage OS Update	Restrict and control automatic updates if needed	X	
Manage user access and permissions	Remote user management and delegated admin access	X	
Troubleshoot and reset devices	Remote OS level reboot command and screen capture	X	

Available Scala Player Licenses for Use with Scala Enterprise

The Scala Enterprise Player uses the Scala Enterprise Player for Chrome License (SW-CBX-SEE) .

Supported Google Chrome Devices

While Google's Chrome OS will work on a variety of devices, the following is the list of certified devices that can be used with Scala Enterprise. All devices use the Scala Enterprise Player for Chrome License.

Product Name and Description	Click on the Picture for Manufacturer Information	Model	Memory	Disk Space
Chromebox Devices				
Asus CN60 Core i3		CN60 Core i3	4 GB	16 GB
Asus M004U		AS CN60	2 GB	16 GB
AOPEN Chromebox		DE3255	4 GB	32 GB
HP Chromebox PC		J5N49UT	2 GB	16 GB
Chromebase Device				
AOpen Chromebase Commercial Mode		WT22M-FBG	4 GB	32 GB
Chromebit Device				
Chromebit CS10		B013-C	2 GB	16GB

Features

Easy Installation

- Scala's simple Pairing process direct to Content Manager via an HTTP/HTTPS connection.
- Use Google CDM to install/maintain the player. A license for this service is required. Chrome device management console licenses are available directly from Google or from an authorized Google reseller.

Playback Functionality

> **Note:**
> To ensure content plays as expected on this player, always test the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature. Once you have determined that this content is working properly, it is advisable to lock down updates.
>
> Scala still advises keeping a portion of your devices on the Beta channel, such as those in a lab, or locations that are less critical. Google has some recommendations as to why this beneficial in Chrome release best practices.

Scala Enterprise Player for Chrome License (SW-CBX-SEE)

- Multi Zone – 1920x1080 or 3840x2160
- Unlimited number of independent zones or frames
- JPEG and PNG images (Opaque or transparent)
- H.264 video up to 4K
- Messages created from Scala Templates are converted to images
- HTML5 content from a Web URL
- WebGL & Flash content in a Web Page, but limited by Chrome
- Multiple videos limited only by Chrome; minimal gap between videos in most cases
- Seamless transition between plan changes when possible.
- Offline startup; videos and images cached and managed by Scala; HTML content can use AppCache if offline is required.
- Currently supported transitions, listed by category:
    - Webpage: "Cut","Dissolve","Straight","ScrollIn","ScrollOut","FlyFade","Fade","ShortFade",
    - Images and video: "ZoomUp","ZoomFade" in addition to the Webpage list,
    - RandomAlways & RandomOnce
        - **RandomAlways:** Picks a transitions at random among the transitions supported by the media type.
        - **RandomOnce**: Similar to RandomAlways, but also shuffles the available transitions to avoid back-to-back repeating transitions.
- Video audio level control

Playlist & Scheduling in Content Manager

- Media Playlists Types
    - Sequential playlists
    - Shuffle playlists
    - Pick N media items from a sub-playlist
- Scheduling
    - Time table - day parting
    - Macro Scheduling individual playlists items using Content Manager's smart playlists.

Advanced HTML Content

- Scala.js supported
    - Scala.done() supported
    - Scala.getMetadataValue() supported
    - Scala.ready(callback)

Player Monitoring and Maintenance

Scala Player (EE) for Google Chromebox has a set of monitoring capabilities:

- Connecting directly to Content Manager
- Communicating over HTTP/HTTPS
- Status
- Heartbeats and problem reports
- Player status and inventory reports.
- Diagnostic logging.
- Nightly reboots
- Built-in watchdog.

Limitations/Unsupported Functions

- ScalaScript support is not available. Dynamic content will be done by HTML5
- Flash media content is not supported
- Java is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported

- Proof-of-play logging
- Maintenance jobs are not supported
    - On demand reboot & software/firmware updates *must* be done via Google's management console
    - Google Management Console nightly reboots, which are on by default, should be disabled, as the reboot occurs at a random time daily, and some users could find that problematic.
- Single screen only
- .wgt files are not supported. Users must use app cache.

Installation

Overview

Before you can setup a Scala Enterprise Player for use with Scala Enterprise, there are a few basic requirements:

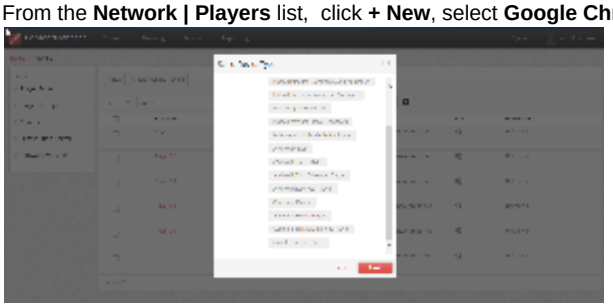
- Scala Enterprise Content Manager Release 11.01 or better
- Scala Enterprise Content Manager must be licensed for Scala Enterprise Player
- Scala Enterprise Player for Chrome must be set up in Content Manager prior to pairing
- Search the Chrome Webstore, then download the Scala Enterprise Player application

Setting Up Content Manager for Chrome Devices

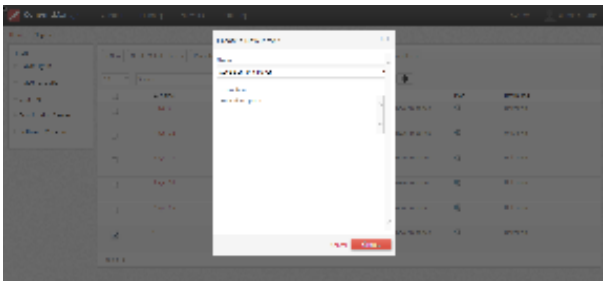
As part of the installation of Content Manager - the playback software required for a Chrome Player is loaded automatically. There is no need to send updated software to these players via maintenance jobs, as the players always check for the latest version of the playback software.

1. Content Manager - Player Setup

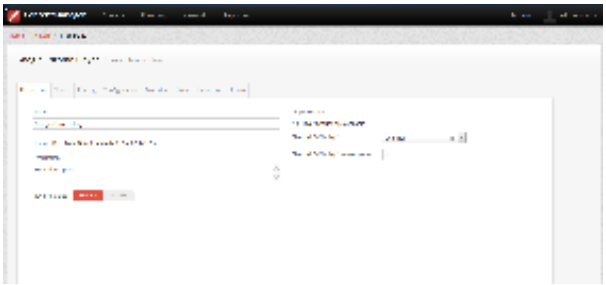
- From the **Network | Players** list, click **+ New**, select **Google Chrome Player** and click **Next.**



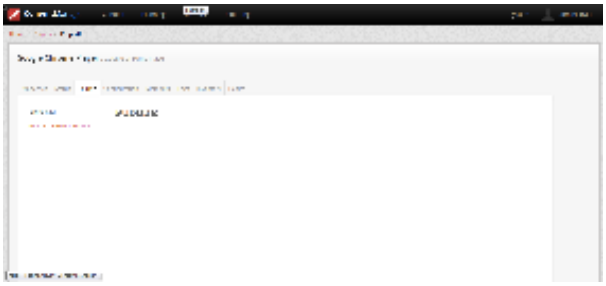
- Create a New Player Name and click **Create.**



- Edit the Player Properties and assign a channel to it.



- Make a note of the Pairing Code found on the **Pairing** tab.



- Return to the Player list, select the Player and then choose **Generate Plan**.

Setting Up and Pairing the Chromebox

Setting Up the Full Solution: Chromebox + Content Manager + CDM

Why CDM Enhances the Signage Solution Offering

Available CDM Licenses

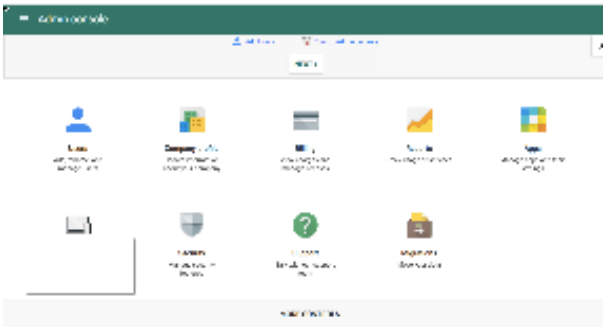
To manage Chrome signage devices remotely, a license is required for each device. The license grants access to device settings in an admin console. Two types of license are recommended for purchase dependent on the end user's need. Chrome device management console licenses are available directly from Google or from an authorized Google reseller.

	Perpetual CDM	Annual Single-App Kiosk CDM	Features
User policies	X		• Manage and deploy policies at user level
Device policies	X	X	• Manage policies at device level (ex: automatic system updates, health reporting)
Public sessions	X		• Chrome device sharing without sign-on
Network configurations	X	X	• Deploy network configurations (Wi-Fi and Ethernet)
Push apps and extensions	X	X	• Deploy apps • Deploy app configurations to control first-run experience
PC workstation	X		• Use device as workstation • Access to web and virtualized desktop applications

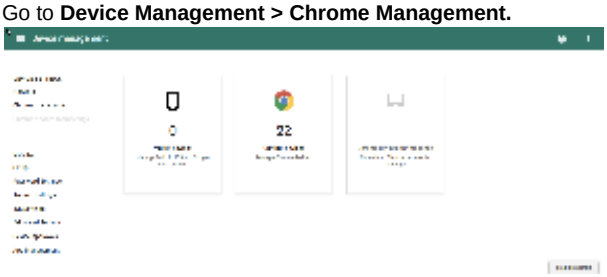
Setting Up CDM

CDM is the key to a seamless deployment and ongoing maintenance of a successful Digital Signage and/or Kiosk solution. Aside from the details outlined above, using CDM allows users to change Wi-fi settings, receive system logs at the time of system crash, and more. To set up your device using CDM, do the following:

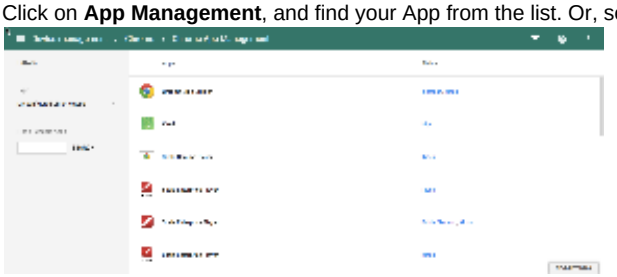
1. Turn on your device and follow the onscreen prompts. Begin the process of enrolling your device, which is described in detail in Enroll Chrome devices.
2. Make sure that your Google Chrome device has connectivity to the Internet, either via Wi-Fi or an Ethernet connection. If you are using a wired Ethernet connection, Google recommends using either a wired Ethernet connection to a Chromebox device or a USB-to-Ethernet adapter.
3. Use the Google Admin console to sign in to the Admin panel of your Player.



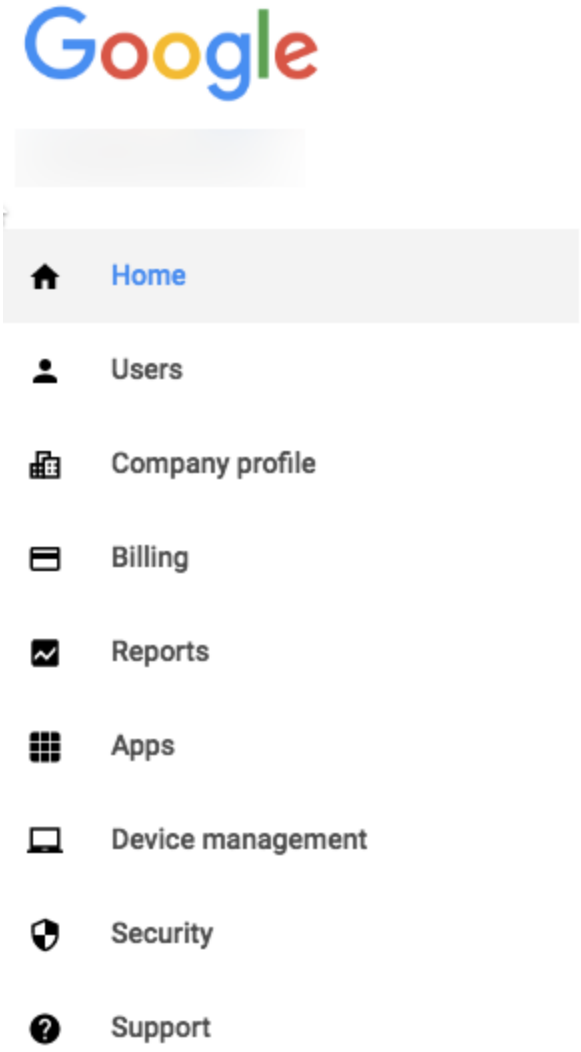
4. Go to **Device Management > Chrome Management.**



5. Click on **App Management**, and find your App from the list. Or, select **Kiosk** if you wish to use Kiosk Mode.



6. Make whatever changes you need to, and return to the Admin console by selecting the **Menu** option () and selecting **Home**.

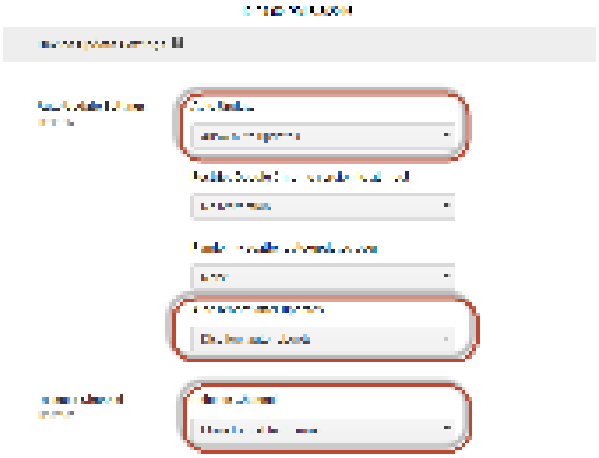


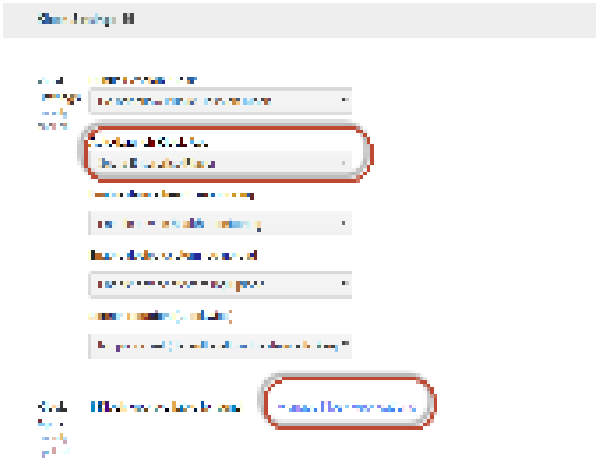
Setting Kiosk Mode

To set your device up to run in Kiosk Mode, you must do the following:

1. Go to **Device Management > Chrome Management > Device Settings**.
2. Make sure the following settings are enabled under **Device Update Settings**:
    a. **Auto Update**: Set to allow auto-updates.
    b. **Auto Reboot After Updates**: Set to disallow auto-reboot.
    c. **Release Channel**: Move to Stable Channel.
3. Make sure the following settings are enabled under Kiosk Settings:
    a. **Auto-Launch Kiosk App**: Set to Scala Enterprise Player.
4. To launch your app, go to **Manage Kiosk Applications**.

Click on the image below to see a larger version of the settings screens described above.





Pairing the Scala Enterprise Player for Chrome

On the screen that appears when you start up the device, use a USB keyboard to enter the URL of your Content Manager and your device's pairing code. Once you've done that, click on **Pair**. A mouse can be helpful in doing this, but it is not required. The USB keyboard can be unplugged once this step has been completed.

The first time you run and pair the Scala Enterprise, please **do not** remove the power cord for at least 10 minutes. Doing so may result in an ungraceful shutdown, and may cause the kiosk app to hang for subsequent startup. Scala is currently working with Google to resolve this issue.

Troubleshooting the Player

Kryptonite! Message

If you see a system message that says "Kryptonite! The cryptohome for the kiosk application could not be mounted" when using Kiosk Mode, the Google Chrome issue can often be resolved by rebooting the device. If rebooting the device is not successful in resolving this issue, you may need to wipe the device and re-pair it with your Content Manager.

Scroll Bars are Visible

Scrollbars are set to **off** in Content Manager by default by code injected into it. Setting them to "on" will skip this code. Scala recommends that your HTML content be designed to hide or fit the scrollbars on its own.

Transparent Webclips

On earlier versions of Chrome prior to Version 50.x, transparent web pages could show some artifacting on screen.

Understanding the Startup Spinners

These spinners are for the use of Technical Support, who will be able to better identify the issue with your Player by using them. They include:

- **White**: The Player has started up and is running successfully
- **Green**: Running properly and connected to Content Manager properly as well.
- **Red**: Running properly, but not getting a response from Content Manager. The Player will start offline, but try to connect to the server in the background. This can be fixed by checking all the things normally associated with network connectivity (cables working properly, network reachable, etc.)
- **Yellow**: Running properly and connected to Content Manager, but waiting for a Plan to be generated. This can be fixed by generating a plan for the Player in Content Manager. Please be aware it can take around a minute for the Player to detect that a plan has been generated and, as a result, it must start to download content before playback starts.

WebGL

WebGL content does not work well with Chrome version 46. Users should wait to upgrade to a version that resolves the playback issues exposed in that release before upgrading.

Problem Codes

Code	Error Text	Consequence	Explanation	Alarmable?	Alert or Warning?
0	Unknown problem	Unknown problem	No specific problem code was available.	Yes	Alert
4000	Internal Problem	Internal Problem. Software is not functioning properly. Restarting the device is suggested. Please contact Technical Support.	Internal problem in the software.	Yes	Alert
4003	Media Played incorrectly	Media played incorrectly	A media item played incorrectly. See the associated error message for details.	Yes	Alert
4004	Plan unreadable	The Scala Enterprise Player may not have the latest plan, because the plan file is corrupt or incomplete. This problem is not necessarily serious, and may resolve itself on a future retry.	Player cannot receive plans because the plan appears to be corrupt. This problem may resolve itself on a future retry.	Yes	Alert
4005	Invalid license	The player is not playing content, because the Playback Module does not have a valid license, or the license has expired.	Problem with the license the file received from the server, or the license has expired. See the associated error message for more details.	Yes	Alert

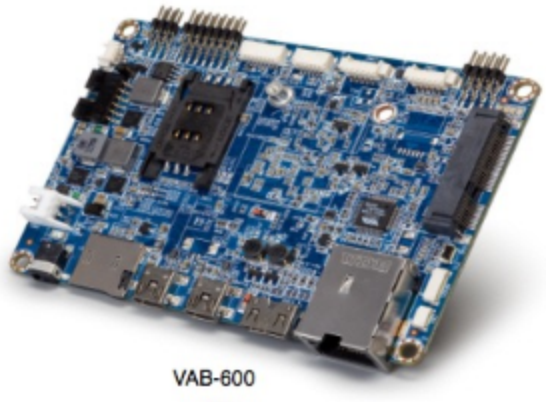
4007	Media download failed (disk space below reserve)	The player is not playing the current plan because there is insufficient disk space available to download required media (the remaining free space on the partition is below the reserve level.) Remove files to increase the free space on the disk so that media may be downloaded.	Player will not store newly downloaded media because there is not enough free disk space. The content playing will be out of date.	Yes	Alert
4009	Media file missing, download failed	A media item is missing on the server and could not be downloaded. Re-uploading the file is suggested.	A media item is missing from the source and could not be downloaded. This problem may be solved by re-uploading the file or publishing the ScalaScript.	Yes	Alert

VIA ALTA DS Android Player

The following legacy player is certified for use with **Scala Android Player 11.03**. This device may operate with Scala Enterprise release 11.05, however, no further regression testing will be done.

Jump Directly To:

Introduction



Developed for the Android operating system, the VIA ALTA Digital Signage (ALTA DS) system is an all-in-one system-ready solution for managing dynamic displays for cost sensitive high volume segments where high performance video and connectivity are paramount. Applications range from kiosks, POS systems, video walls, menu boards and Out of Home Advertising across a broad spectrum of retail, hospitality, education, and entertainment environments.

Android is quickly gaining prominence in the digital signage market and offers a number of advantages for a wide range of applications. In addition to the standard Android image which comes with the VIA ALTA DS, a board support package is available enabling customers to develop their own proprietary value-adds.

Combined with Scala's Player for Android makes this an ideal solution for digital signage.

The VIA ALTA DS system is a sleek, energy-efficient system with an ergonomic space-saving design that measures just 17.5 cm x 11.8 cm x 2.5 cm. The VIA ALTA DS system is backed by VIA’s worldwide software support.

Why Choose VIA?

These units:

- Comes with all in-one system–ready to load software
- Are designed for the Android OS (comes with Android 4.0.3)
- Industry standard ARM Cortex-A9 SoC
- Reflects a simple ergonomic design - Energy Star
- Has hardware acceleration of the most demanding video formats for resolutions up to 1080p
- Features:
    - HDMI and VGA (optional) ports
    - Four USB 2.0 ports
    - One 10/100 Ethernet port
    - Audio-out/ Mic-in
    - 4GB eMMC flash onboard (up to 16GB)
    - 1GB DDR3 SDRAM onboard
    - Auto power on when plugin
    - Optional Wi-Fi is available

Available Scala Player Licenses for Use with VIA ALTA DS Android Players

The VIA ALTA DS Android Player uses the Scala Android HTML Enhanced Player license.

VIA ALTA DS Models

Media Players

Model	Type/Screen Size	Resolution	Firmware Version

VT60780013001-T	Media Player	1920 x 1080	VT6078-4.0.3_rl_08_160330.1757
VT60780013003-T	Media Player with WiFi	1920 x 1080	VT6078-4.0.3_rl_08_160330.1757

Board

Model	Type/Screen Size	Resolution
VAB-600	PICO-ITX Form Factor	1920 x 1080

Customization

For the Alta DS, a VESA mount cradle is available.

The VAB-600 is suitable for Systems Integrators who want to fabricate custom solutions.

Features

Note:
Transitions on this device may not function properly. Increases in file resolution, quantity of framesets, and quantity of special transitions will only continue to perform well if your underlying hardware specifications can support this.

Highlights

- Android player certified by Scala for single and multi-frame content.
- Support of full screen media for images, html, videos and widgets.

Playback Functionality

Please Note:
To ensure content plays as expected on this player we recommend that you run the content you wish to play for 24 hours in a test environment before using it in a production environment. This is especially important with HTML content, due to its fluid nature. For a more detailed discussion of Scala's support of HTML, please see Using Media Formats Supported by Scala Enterprise and HTML Programming Guidelines pages.

Scala Android Enhanced HTML Player License

- Single Channel
- Multi Zone – up to 1080p - Device Dependent
- JPEG and PNG images
- H.264 Video – content can be 1080p
- Scala Messages converted to images
- HTML5 content from a web URL or pre-packages HTML 5 widgets

Note:
Multiple videos cannot be displayed at the same time. However, you can play one video in any zone at any particular time.

Playlist & Scheduling in Content Manager

- Media Playlists Types
  - Sequential playlists
  - Shuffle playlists
  - Pick N playlists
  - Conditional playback based on Player metadata
- Scheduling
  - Time table – day parting
  - Macro Scheduling individual playlist items

Player Monitoring and Maintenance

The VIA ALTA DS has these monitoring capabilities:

- Status
- Heartbeats
- Inventory
- Logs are available for: proof-of-play, player health or player logs. As running these logs more frequently can impact your system performance, Scala recommends having these logs run only on a daily basis.
- Error reporting is based on a simplified set of error
- Maintenance jobs can be performed for software updates, and retrieval of system logs

Scala has also created an APK tool (look for this image on your Apps screen:) that allows you to remove all Scala software and return the device to its factory settings, should the need arise. This tool can also be used for daily reboots as well. If the number of reboots is set to 0, the Player will not attempt to reboot should the Player's network be down.

CTRL + D can be used to stop your Player if necessary.

Limitations / Unsupported Functions

There are a number of features that are not available:

- Flash media is not supported
- Audio playlists are not supported
- Time and Event triggers are not supported
- ScalaScript support will not be available
- HD Video. Playing some HD video with a 1920 x 1080 resolution may cause a black screen and may cause the player to crash. Please play your content in a test environment to determine whether or not your content will be impacted by this issue.
- The following audio-related options:
  - Audio visual= OFF
  - The Volume option
  - Audio ducking on media with audio

When using Autoscale, "Fill Frame Exactly" is the only Scala supported mode.

Installation

Overview

Before you can setup an VIA ALTA DS player for use with Scala Enterprise, there are a few basic requirements:

- Scala Enterprise Content Manager Release 10.4 or better.
- Scala Enterprise Content Manager must be licensed for VIA ALTA DS Android Players
- Have the approved APK or Scala add-on package installed.

Create a Test Channel that can be Assigned to your VIA ALTA DS Player

For ease of configuration, we recommend creating a simple channel that consists of a simple playlist that is scheduled and applied to your VIA ALTA DS Player.

Content Manager

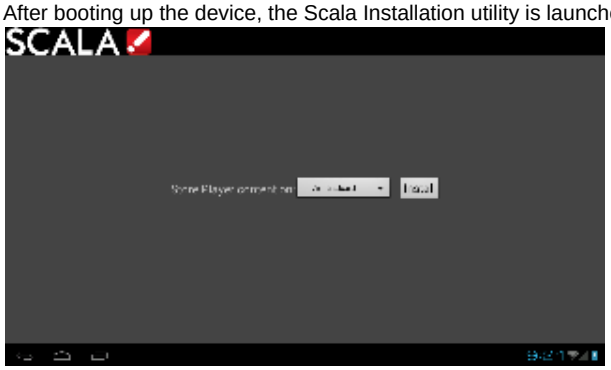
Content Manager - Player Setup

- From the **Network | Players** list. Click **+ New**, select **Scala Android Player**, **Scala Android HTML Player** or **Scala Android Enhanced HTML Player** and click **Next**

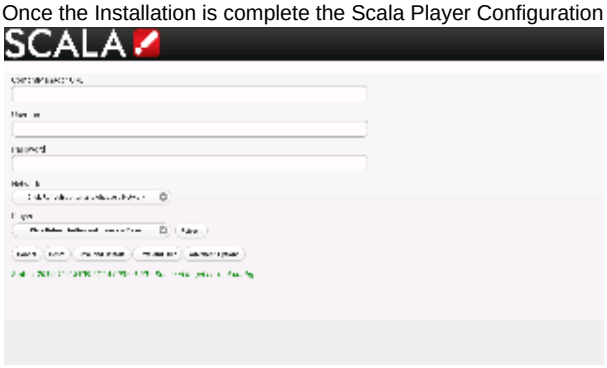
- Create a New Player Name and click **Create**

- Edit the Player Properties and assign the "test channel" you created earlier.
- Return to the Player list, select the Player and then choose **Generate Plan**.

Configuring the VIA ALTA DS Player

1. After booting up the device, the Scala Installation utility is launched.


2. Click Install button to start installation. Use the default installation folder as shown above.


3. Once the Installation is complete the Scala Player Configuration menu appears.


4. Enter the **Content Manager URL**. This same URL that you would use to access Content Manager.
5. Enter the **Username**. This is the player account.
6. Enter the **Password**. This is the password for the player account.
7. Click the **Refresh** button. The Network Name is filled in. By default, the first available player is selected. Click the Player Name drop down button if you need to select another Player.
8. Click the **Advanced** options button to show additional Player options. Edit any advanced options as you see fit.
9. Click **Save and Restart** to exit the Configuration menu.

Your Player is now configured and will start to download any content scheduled for that player.

Adding More Storage via the SD Slot

The main sdcard is split into several partitions, which can have a different filesystem and behave differently.

Scala uses the /sdcard partition for Content and the /data partition to store our internal files and logs. The write load is put on /data (logs are responsible for most of the load).

At installation, there are two options:

- Choose a partition where to install the Content (/sdcard by default). If you have an external (physical) sdcard you can choose it. Such a mount point can be /mnt/external or /mnt/extsd (there is no standard). The installer tries to guess the mount points available and propose a list.
- Select the Option "store logs in same location" (unchecked by default) which will put the logs into the same partition defined for Content.

Note:
When your install is done, if you want to change the install path there is only one way. The previous install must be cleaned using the A PK Uninstaller, which will clean the previous install. After the reboot, the install screen will show again to allow you to chose a new install path.

Updating Your Player

The APK file for this Player can be updated, should a new version become available. This can be done via a Maintenance Job in Content Manager. The procedure for this update can be found in Updating Your Network.

Caution:
Scala strongly urges you not to remove the APK manually, as the manual re-installation of it requires specialized knowledge in order to complete successfully.

Problem Codes

If your Player has an issue, it will generate a problem code. An explanation of the general Player codes can found in Monitoring Player Health, while codes specific to this player can be found on the Player Software for Android page.

List of Scala Certified Players

Scala documentation provides a list of Scala Certified Third-Party PC Players and Example PC Hardware Specifications. Information from these pages taken into account when selecting your device.

Scala highly recommends the use of an in-house player as Scala will no longer develop software to run with third-party players. However, customers that currently use a third-party player can continue using the recommended third-party players until an end of life date is announced.

See Scala Media Players for more information on Scala's in-house players.

The digital signage players listed below are the models that Scala has certified for use with Scala Enterprise software

Scala Player Licenses

Player Type	Classic Licenses	Feature-Based Licenses
Scala PC Player	SW-PLAD	SW-PLT-HD01 SW-PST-HD01 SW-PST-HD02 SW-PST-HD04 SW-PAV-4K01 SW-PAV-4K02
IAdea Kit Kat Players	SW-ADP-MFH	SW-PLT-HD01 SW-PST-HD01 SW-PAV-4K01 SW-PAV-4K01 is only compatible with the XMP-7300 IAdea Player
Legacy Players		
IAdea Ice Cream Sandwich Players VIA Alta DS Android Players	SW-ADP-MFH	SW-PLT-HD01

Instorescreen-Avnet Android Player		SW-PST-HD01
NEC Display OPS-ORD Digital Player		
Panasonic Android Player		

IAdea Players

Kit Kat (Android 4.4) Version

Product Name	Brief Description	Firmware Version
XDS-1078	10" digital signage player	1.2.81.457
MBR-1100	Entry level media player supporting up to 1080p via the HDMI port	1.2.79.451
XMP-6200	Media player supporting up to 1080p via the HDMI port	1.2.79.451
XMP-6250	Media player supporting up to 1080p via the HDMI port	1.2.80.450
XMP-6400	Media player supporting up to 1080p via the HDMI port	1.2.80.450
XDS-2170	21" All-in-one smart signboard	1.2.83.468
XMP-7300	4K device ⚠ AU Optronics Corporation manufactures two XMP-7300-integrated Android displays, available in 46" and 55" diagonal screen sizes. While the integrated products have not been certified, they should be compatible for use with Scala software.	1.0.8.296