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CONTENT APPROVER

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Contents

Revision History

Version number	Primary Author(s)	Version date	Nature of change
1.0	Shalini N D	26/05/2020	Initial Document Draft
1.1	Shalini N D	03/06/2020	Feature Update – CA Properties, Email Notification
1.2	Manish Kumar	29/01/2021	Change Request – AD Integration, Separate IP, and non-IP workflow, Multiple approvers for each level, Approval flow as per workgroups in the CM, Media approval status, Email Notification flow change

Definitions / Abbreviations

Term	Description
CM	Scala Content Manager
CA	Scala Content Approver
AD	Active Directory
Media	File formats/contents like images, video, audio, Scala Script, HTML, Streaming.

1. Introduction

The document describes the functionality of the Content Approval Application.

Background

Initial Requirement:

The customer has the requirement to have 3 levels of Approval for any content uploaded to the CM. The Scala CM has one level of approval so far till the version 11.08.

<mark>Current Requirement:</mark>

<mark>**CR**</mark>

<mark>The customer has the requirement to have 1 or 3 levels of Approval (based on the category it belongs to i.e., either non-IP or IP) for any content uploaded to the CM.</mark> The Scala CM has one level of approval so far till the version 11.08.

Objective

Provide substantial value to the customer in the form of technical services to ensure successful business operations, maintenance, and enhancement of the signage system.

2. Scope of Service

Milestones

Submit Solution Design
Address customer 's functional requirement outlined under "4. Requirement" and create a solution design document.

Solution Development
Develop the Content Approver web application to cater to the requirement as per the solution mentioned on "5. Solution Design Overview".

Solution Deployment
The web application needs to be deployed on the server where CM is hosted or on a separate server as per customer's convenience. If it is a separate server then the system requirement is mentioned under "3. Prerequisite"

The delivery timeline for the above-mentioned milestones is mentioned in the proposal document.

Out of Scope

Any deliverable or service not explicitly mentioned in this document is considered out of scope

3. Prerequisite

- The Operating System requirement: Windows Server 2016, Windows Server 2012R2, Windows Server 2008R2, Windows 8.1, Windows 7 Pro (for all of these, only 64-bit versions are supported)
- The application platform is Java 11.0.2 or above.

- Webserver for the user interface to the application is Apache Tomcat 8.5.38

- The database can be PostgreSQL 10.4 OR Microsoft SQL Server 2008, 2012, 2014, 2016
- Wherever the Content Approver application is deployed, it should be able to communicate with the CM.

4. Requirement

Initial Requirement:

Any content uploaded to the CM, needs to be approved by three approvers (one approver at each level) before it plays on the player. Without the approval of all three approvers, the content should not reach the player. The approvers can belong to different departments hence, they should see only the data relevant to their department/group.

Email notification must be sent to approvers regarding the pending content approvals.

Dashboard to show the contents with their approval status or pending approvals.

Current Requirement:

CR

Any content uploaded to the CM, needs to be categorized into two categories

1. Non-IP – Content needs to be approved only by Level 1 approver before it plays on the player.
2. IP – Content needs to be approved by Level 1, Level 2, and Level 3 approver before it plays on the player.

Without the approval, the content should not reach the player. Each level to have multiple approvers and the step is approved if any one of those approvers has approved. The approvers can belong to different departments hence they should see only the data relevant to their department/group.

CR

Email notification must be sent to the approvers regarding the pending content approvals. Email must also be sent to the requestor if approval workflow is complete or if rejected.

Dashboard to show the contents with their approval status or pending approvals. It should also show the current status or approver flow of the contents.

5. Solution Design Overview

Solution Brief

To give a holistic offering, Stratacache proposes a custom CA application with below features.

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- User Management to be done from the AD.
- Assign the approvers to workgroups created on the CM.
- List media from the CM based on the category (IPTV or Non-IP) with the approval status.
- Send email notifications to respective approvers for any media uploaded into CM and assigned to workgroups.
- Send email notification to the requestor if the approval workflow is complete or if rejected.
- Show preview of the supported media formats.
- Enable approvers to approve the media.
- Unless contents are approved by Level 1 approver (for Non-IP) or Level 1, Level2, and Level 3 approvers (for IP), the content will not play on the player.
- Dashboard to show the list of media items and approval status of each, approved date, and time.
- Along with the approver role, there will be an administrator to handle the application settings.

Constraints

- There needs to be 2 roles created in the CM for Approver and Super Approver.

- For SSO Login to CA application, we will require more information such as CM roles for the user apart from the SSO username and password. We will have to do more research on how to leverage CM SSO login. Also, we will have to restructure the already developed code since in initial implementation the user management was done in CA application itself.

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Solution Architecture
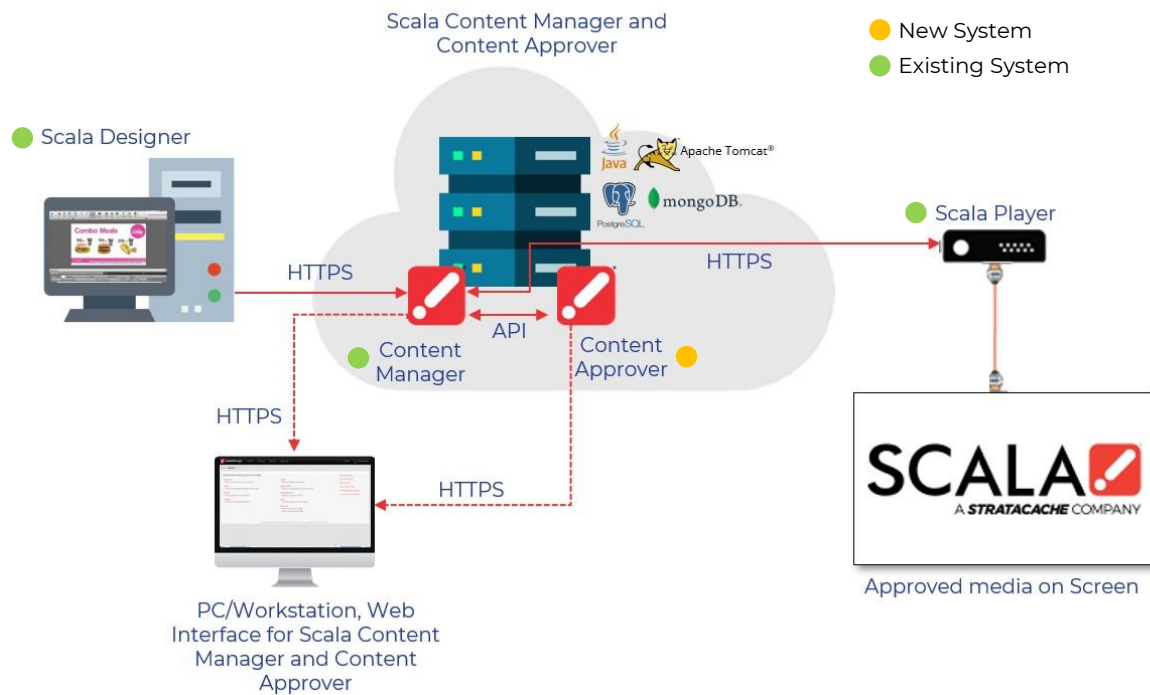
Content Approver Flow
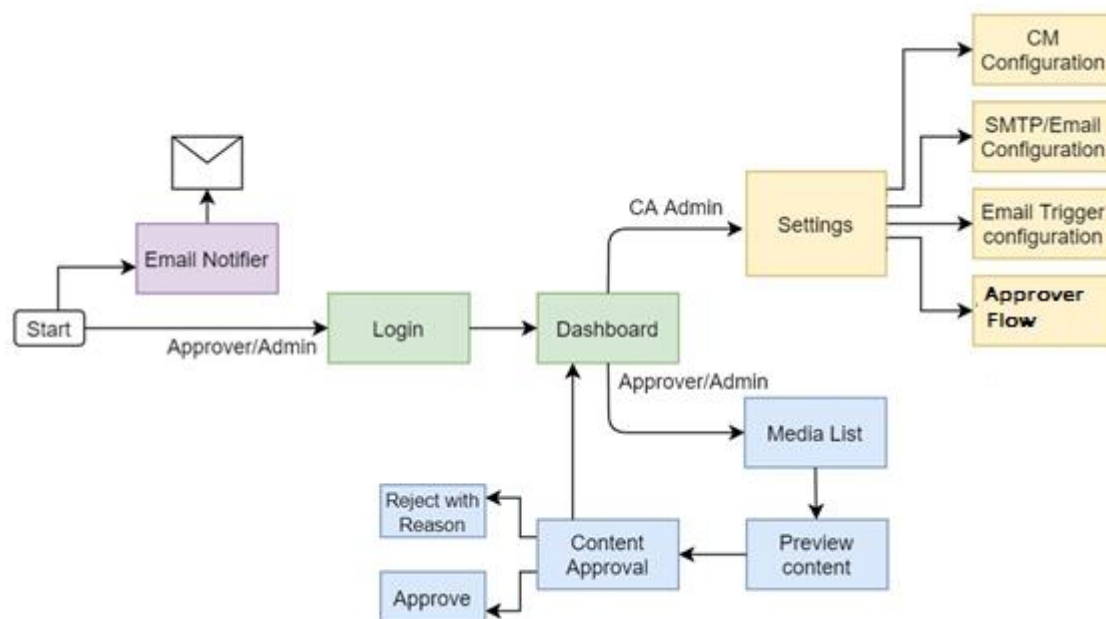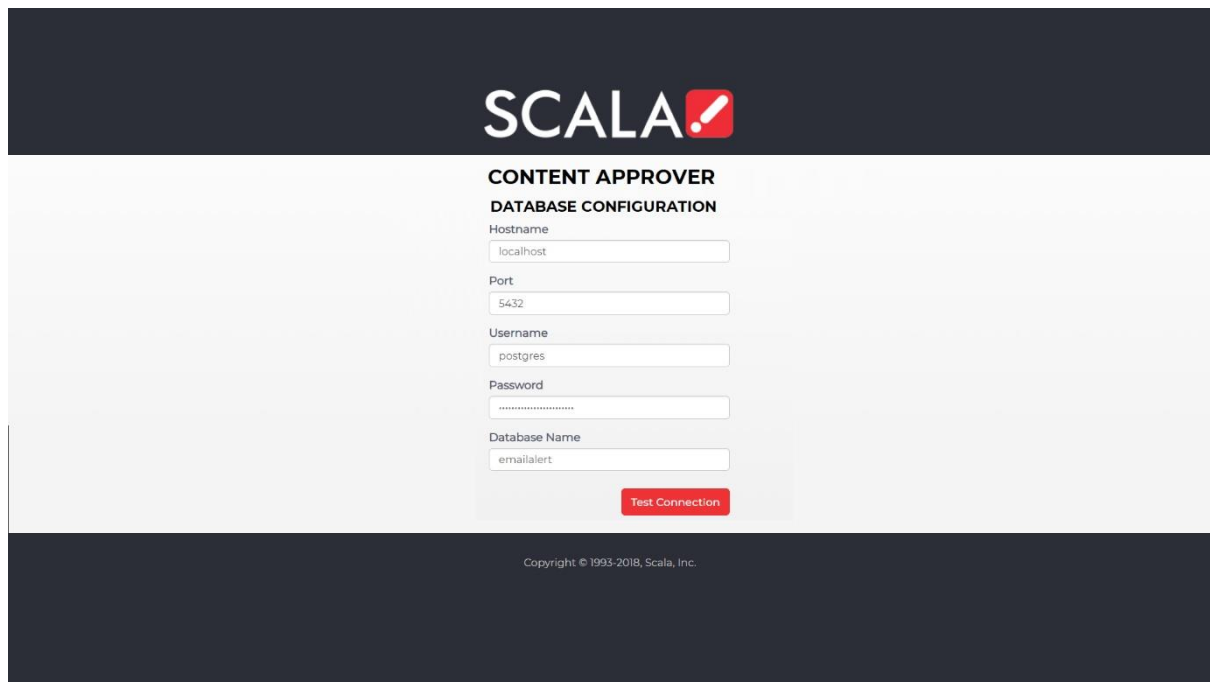
User Interface Experience (Sample only)

Database Configuration

To complete the application, install, the database must be configured. Enter the hostname, port, database authentication details and the database name. Test the connection by clicking Test. If the DB is reachable and the entered details are
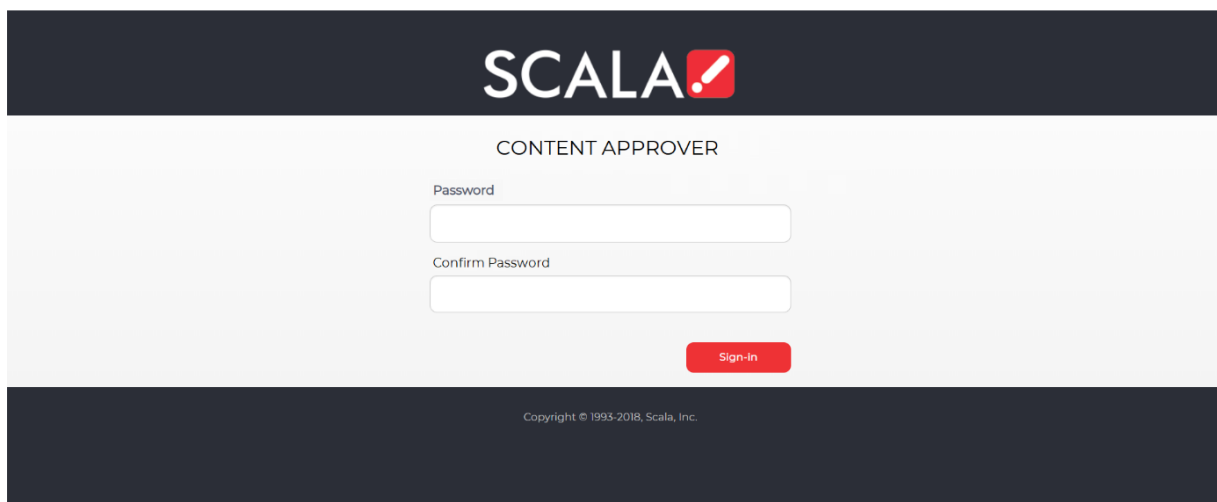
correct the connection will be successful. CA does not support the modification of the database schema which by default is ca.

Set Administrator password

After deploying the Content Approver application, the administrator password must be set for the first time.
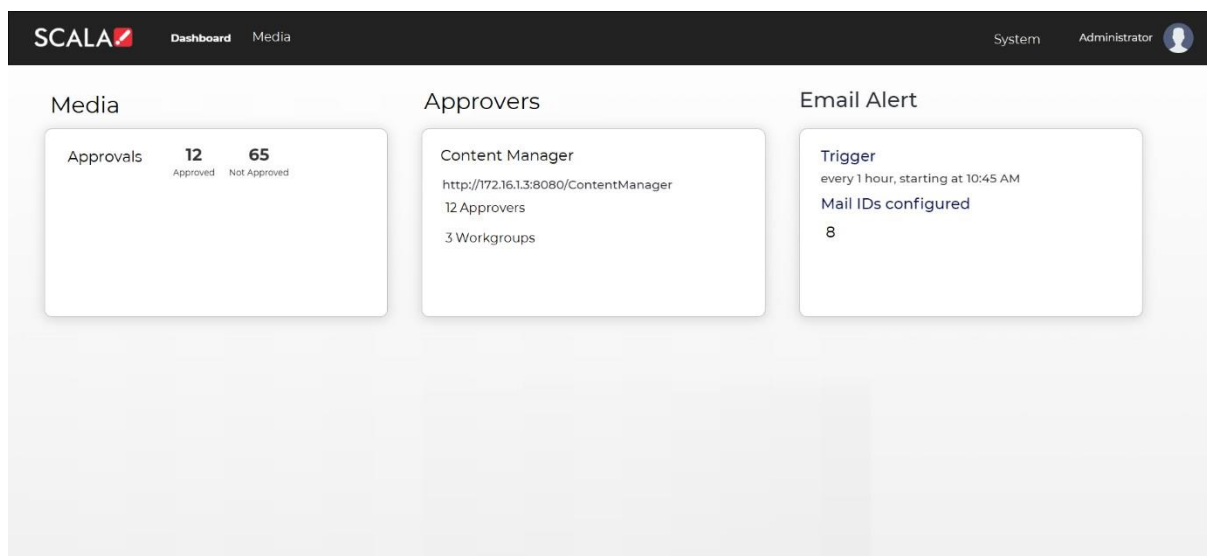
Login

Approver user account to be maintained in the CM. All the user logins to be validated via SSO, except for some special administrator account.

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Home Page

Depending on the user logged in, the menu items get filtered. If the admin logs in, the System menu and the email alert tab will be enabled but the same will be disabled for the approver role. The home page gives quick details of the count of media to be approved, the total approvers, workgroups, and the email trigger time.

Media

The media page shows the approval status of each media, basic details of the content like the workgroup, revision, last modified. On click of "more" under details will show the approval details.

The Approve/Reject button enables the approver to approve the content or reject the approved content. Multiple items cannot be approved at once and will have to be done for each item separately.

All the contents will further expand on click to show the workflow status of the content.

The content rejection will pop up a text box to provide the reason of rejection.

Media preview

Click on the media in the first column to preview the content before approving. The videos will play while the images get displayed. The Scala Script and the message also will display the preview of the slide selected to create the thumbnail on the designer.

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For any reason like unsupported media format, codec corrupted file, if there is no thumbnail generated for the media then the preview will be blank as shown below
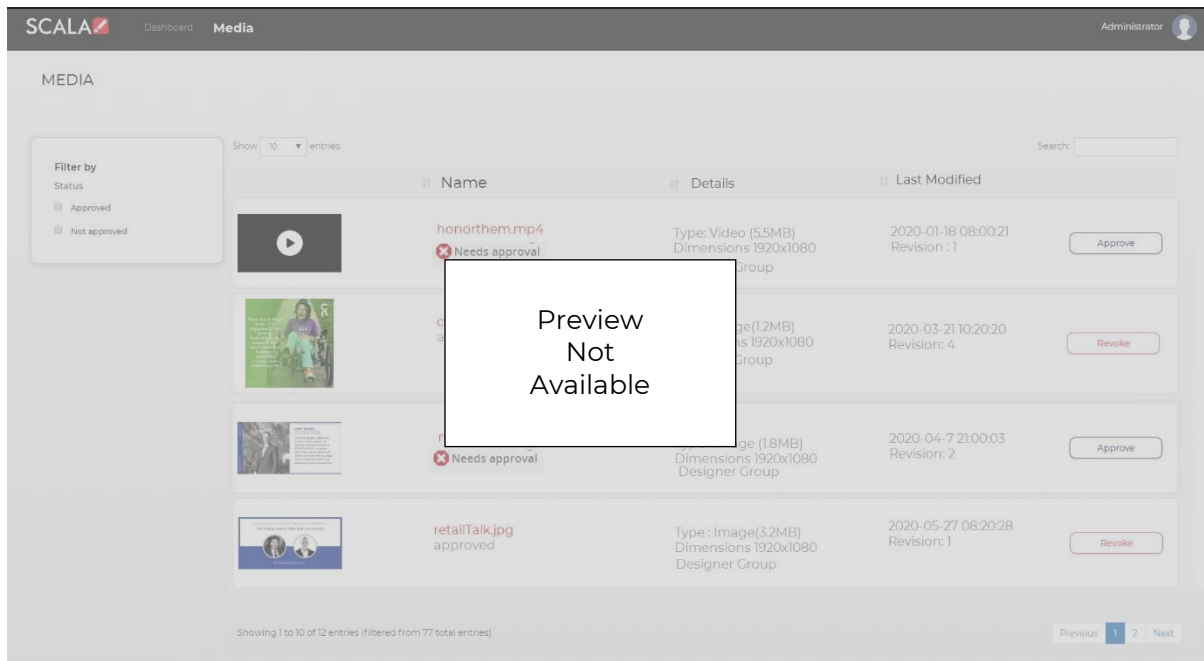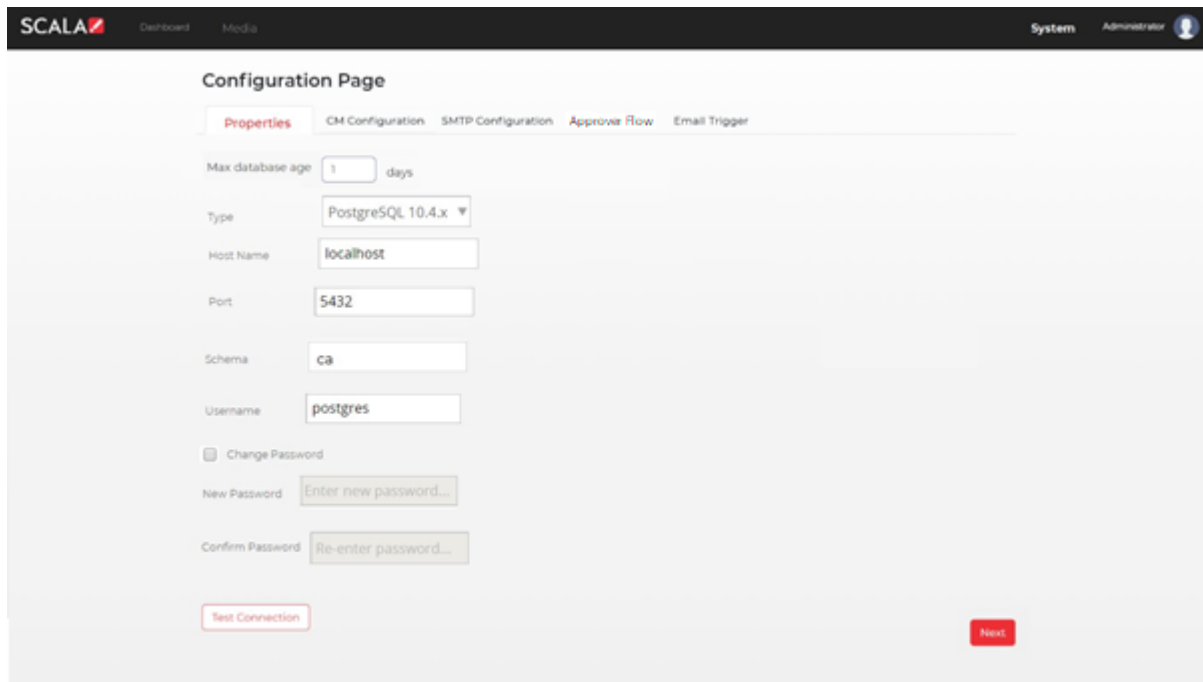

System Settings

Click on the "System" menu for the below configuration page. This consists of multiple tabs for configuration of below details.

CA Properties

Update the properties of the application like the Database details and the max database age. The maximum number of days the database records have to be stored is the max database age. After the set period, the details of the approved contents will be deleted from the database. However, the CM will have the details of the media last modified and approved details.
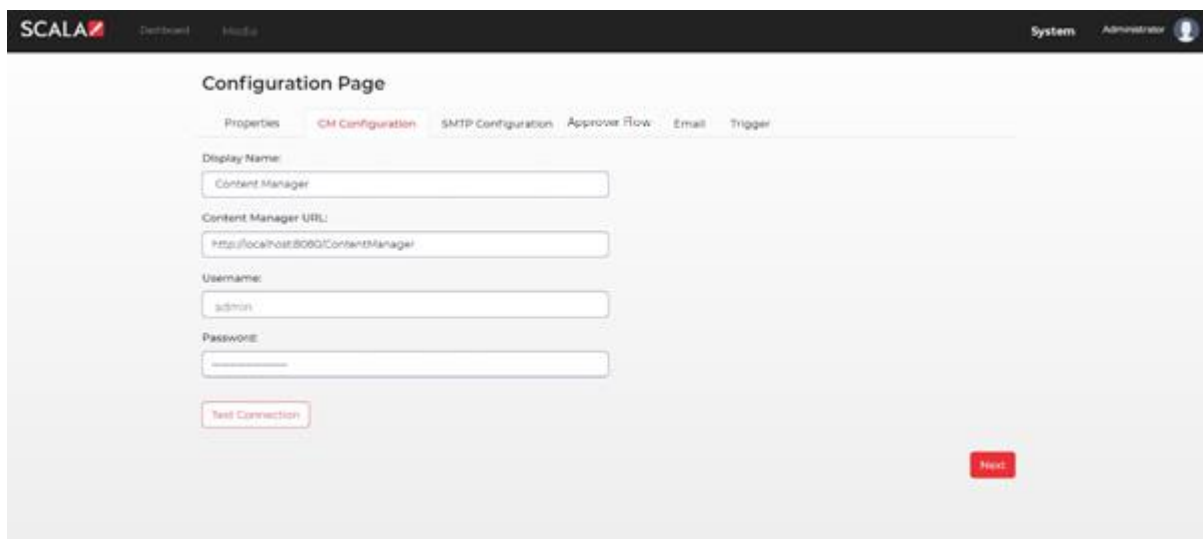
CM Configuration

This needs to be configured initially to pull the media items, workgroups and to approve contents on the Content Manager. After entering the details, click on "Test Connection" button to verify the connectivity. If the connection fails, cross check the details entered and try again. If the issue persists, check the connectivity to the CM by sending a ping.
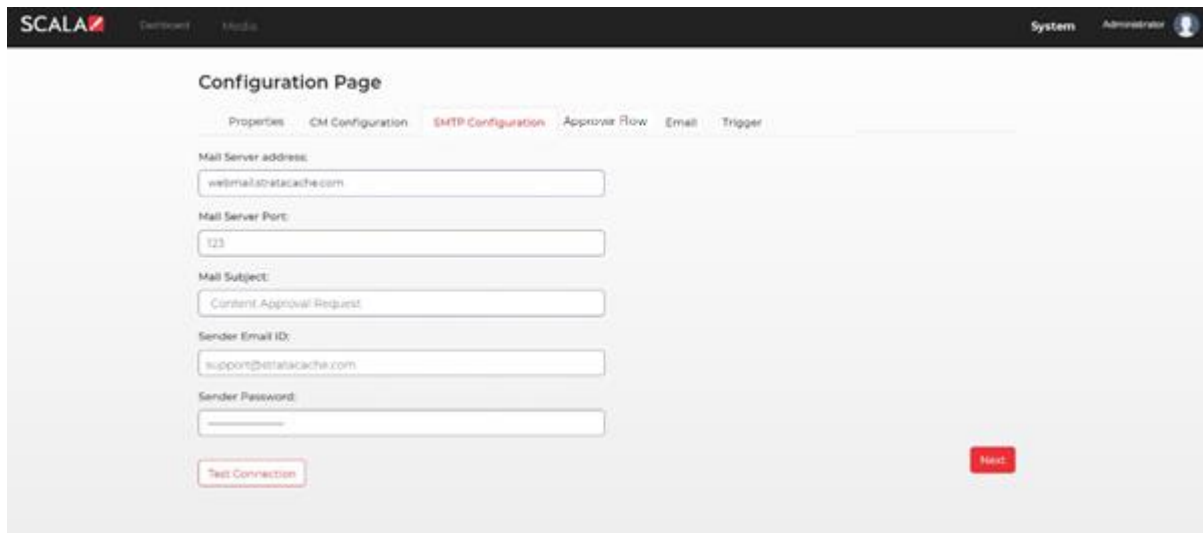

SMTP Configuration

To send emails, the below details mentioned in the screenshot needs to be filled. The emails will be sent to the approvers from the email id mentioned here.

Approver Flow

The approver flow determines if the content will go for one level or three levels of approvals. The administrator will have the capability to select the approver flow.
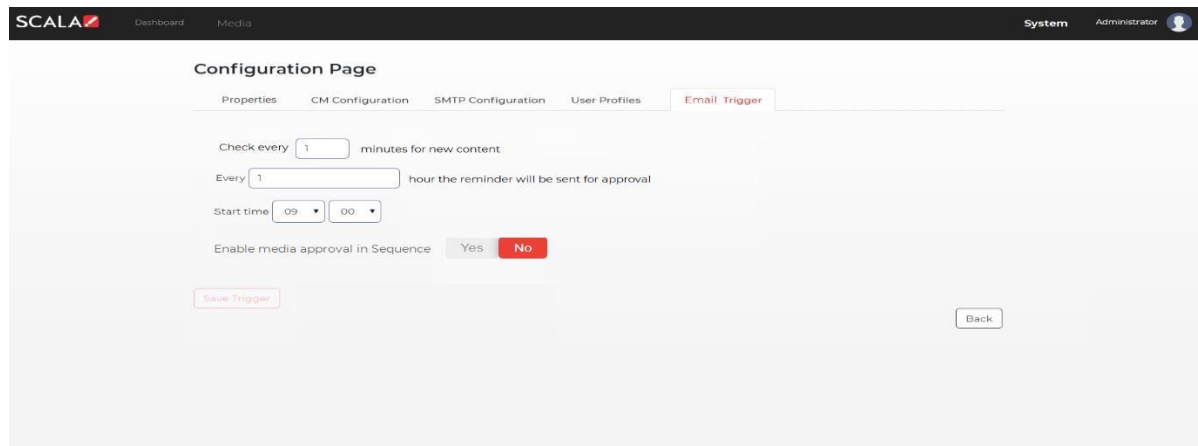
Email Trigger Configuration

The first parameter is to define the number in minutes to check the CM for new uploaded contents for approval. The CA will check the CM for new media by this frequency and sends out an email if there are new contents to be approved.

The second option determines how frequently the reminder mail has to send to the approvers to approve the content. The third option can be used to set the start time. Example: If the value is set to 2 hours and the start time to 09:00 am, then email will be sent every 2 hours from 09:00 am till the content is approved.

The last option is to set the content approval process in sequence or random. By default, it is set to "NO", which will send out email to all 4 approvers at once and can be approved in any order. Once all approvers approve, the content shall play on the player. In case even a single approver disapproves the content, the media will be rejected and will not play on the player.

 If this is set to "Yes", the email will be sent in the sequence of level. Meaning after approval of every level the email is sent to the next level approver. In case any approver in the sequence disapproves the content, the email will not be sent to the next level and the content will get rejected thus not playing on the player.

6. Test Validation Plan

User Acceptance Testing

TBD

7. Conclusion

The solution provided in the document is based on the requirement established after discussion with the customer. This is the initial draft of the solution document and may be updated after clarifications are provided.

The submission of the final solution document and confirmation from the customer will mark the end of Solution design phase which will provide the opportunity to move to the development phase. The timeline will be as per the proposal submitted.