Design scheme of New Media Management System (NMMS)

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Abstract. Multi-media asset management system, as the research focus in related fields in recent years, is the object of many researchers with its excellent application performance and scope of application. As the latest new media product developed by hive super integrated content platform, NMMS has many functions that traditional media platforms do not have. By analyzing the main advantages and principles of NMMS media asset management system, combined with the basic functions of the management system, this paper designs a new NMMS media asset management system with rich functions.

Keywords: Multi-media, NMMS media, System scheme design.

1 Introduction

With the increasingly diversified distribution channels of media content in the field of radio and television and Internet multimedia and the rising demand for its own consumption, the enterprise level comprehensive cloud service system based on hive content platform can realize the solutions of private cloud, public cloud and hybrid cloud.

With massive material storage and sharing as the center, NMMS provides multi system material management, archiving, interaction, sharing and publishing functions to realize more efficient, fast and humanized media content management. At the same time, cloud service solutions can greatly save operating costs and help users and face new challenges under the evolving media pattern.

2 Experiment and proposed method

2.1 System framework

The underlying layer of NMMS uses hive platform. Hive is a basic service platform based on PAAS. It provides data engine, computing engine, business engine and data access interface to meet the expanding data demand in the industry.

NMMS adopts the system deployment diagram shown in Fig. 1.

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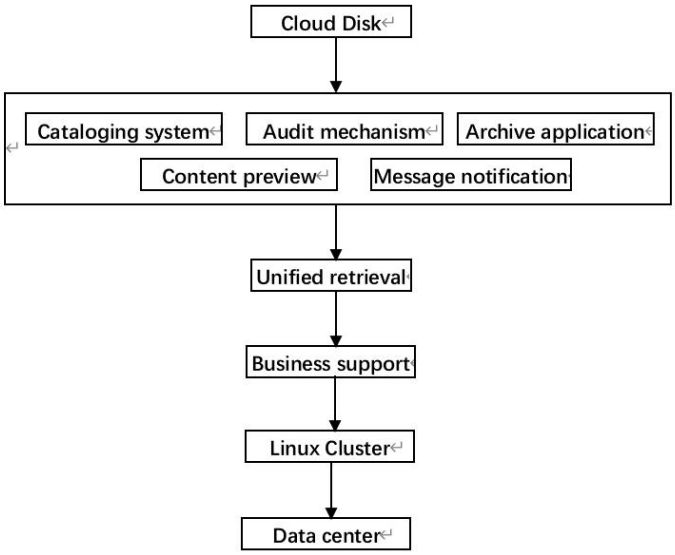

Fig. 1. NMMS media asset management system.

2.2 System advantages

NMMS is a new media product developed based on the latest hive super integrated content platform. Our method mainly achieves the following objectives:

- Decentralization, self scheduling, and automatic removal from the load balancing forwarding list to ensure high availability of the whole cluster;
- Horizontal scalability: distributed storage can support massive content;
- Data security: divide the file into several data blocks and distribute them on different server nodes, and design backup and fault tolerance mechanism;
- Flexible access to various tools;
- Cross platform, hybrid cloud support

2.3 Configuration settings of asset usage system

Hive node requirements.

- CPU: 16 core;
- Memory: 32GB;
- Local hard disk: 200GB;
- Number of Gigabit Network Cards: 2;
- OS: Centos 7.1 x64;
- Ports to be opened to the external network: 80, 86, 88

3 Result

The design concept of NMMS media funding management system is shown in Section 2. In this section, we focus on the design details and expected results of NMMS media funding management.

3.1 Portal display

The most direct of the management system is the design and conception of the interactive interface. We use the popular resources and reasonable structure to provide users with a clear and concise system user interface display on the home page. The interface is shown in Fig. 2.

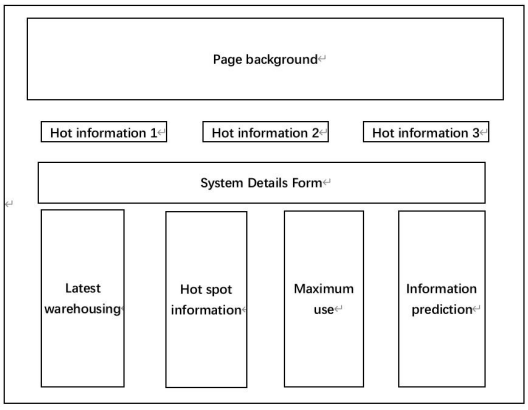

Fig. 2. System user interface display.

3.2 File review

File review is the characteristic content of our designed system, which greatly improves the performance of the system with clear regulations and complete design. The submitted part before file review is not an innovation of the design, so it is not displayed in this section.

Warehousing film review. The receipt review function can be enabled for the content received to the media library. In this way, you can audit the content and quality of the received content before warehousing. Quality audit includes black field, static frame, mute and other inspections. The results of background automatic technical audit will be displayed in the audit interface, and users can click directly to view; Content audit includes content legitimacy and other checks. Users can play and view it directly.

- Automatic technical review results assist manual review;
- Intelligent identification of pornography, violence and Politics;

- Manual audit

Issue approval. According to the configured issue policy, the documents that meet the policy will be issued according to the configured approval policy. When an issue application is initiated, a message will be sent to notify the relevant personnel. The reviewer will determine whether to agree to the issue application through the issue application description. After approval, the issue task can succeed and send the file to the target address.

- Outbound strategy configuration;
- Delivery approval notice;
- Issue approval

3.3 Online preview and editing

File editing. Different types of files can directly preview online streaming media files and other operations on the web page.

- Video and audio materials: various professional video and audio formats of radio and television can be transcoded to generate MP4 streaming media files for online preview;
- Pure audio material: all kinds of audio files can be transcoded. MP3 streaming media files can be auditioned online;
- Pure audio material: all kinds of audio files can be transcoded. MP3 streaming media files can be auditioned online;
- Document material: some document materials can be transcoded to generate streaming media files and preview the document content online

Metadata, marker points, labels, cataloging layer, file group and operation history are shown in Fig. 3.

Fig. 3. Edit preview Online.

In addition, the system we designed will be able to record the usage of content: browsing times, sharing times, downloading times and outbound times, which will be used for subsequent big data analysis and extraction of effective information.

Edit type description.

- Video and audio materials: various professional video and audio formats of radio and television can be transcoded to generate MP4 streaming media files for online preview;
- Metadata editing: different metadata fields can be configured for different types of materials;
- Label editing: intelligent label extraction, label classification;
- Cataloging layer editing: save and edit metadata for material management clips;
- Mark point editing: material frame extraction information is saved and description information is edited

3.4 Online editing and format transcoding

Video clipping.

- Video and audio materials can be dotted with clips;
- Save clip as new material;
- Segment direct delivery

Video transcoding.

- Transcoding of video material;
- Video material segment transcoding

The video clipping function is shown in Fig. 4.

Fig. 4. Video clipping function.

3.5 Batch editing.

For a large number of files with the same or similar metadata information in the system, we can enter the information through batch editing. Batch editing can greatly improve the efficiency of repetitive work. It is an essential function of video editing, so we introduce it into asset management system

4 Conclusion

According to the expected results, we can think that the NMMs system proposed in this paper is practical and universal, and has certain practical value.

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