FineReport 9.0 and 10.0 Version Updates

1. Introduction

If comparing FineReport to a tall tree, FineReport 10.0 (FR10) aims to root more deeply. From the perspective of availability, safety, and intelligence, we extend the business scenarios and provide a wider imagination space. We hope to make FineReport a dependable reporting center with the capability to support complex reporting business and ensure the safety of business data.

2. Platform

2.1 Appearance: The modern style of platform makes it interactive and easy-to-use.

2.2 Stability: Store log via Swift engine (developed by FanRuan Software Co., Ltd.) to improve the efficiency of log retrieval and analysis, prevent system crash and data loss due to too large log files, and realize the support for extreme large user volume with second level response.

2.3 Enhanced Functionalities

2.3.1. Text Message Platform: Construct a text message platform to support identity authentication, alarm of failed tasks and informing memory threshold.

2.3.2 Advanced User Management and Permission Settings: Increase user-assigned permissions and improve accessibility

2.3.3 System Message: Add message for the platform system to inform manager/users of failed timed scheduling tasks and memory threshold.

2.3.4 Single Logged-In: Support killing existing logging-in and prohibiting second logging-in. Provide message for last logging-in.

2.3.5 Optimized Directory Management: Support batch addition/deletion of reports, rearranging the order of reports, and tidying reports across directories.

2.3.6 Enhanced Timed Scheduling: Support alert for failed tasks, running tasks for once, copying tasks, and task ordering.

2.4 Data Connection in The Platform: Data connection is included in the directory. New data connection can be created on the platform.

3. Designer

3.1 Remote Design Template Permission Management: Support using the account of

system management to configure remote design users and allocate template permission for individual users. Remote design supports adding, deleting, and renaming files and folders.

3.2 Reconstruct Data Entry Function: Solve the problem of display lag and paves the way for subsequent style expansion.

3.3 Designer Optimization: Fix bugs related to memory leaks; add the function to limit the maximum number of cache templates; Remove the right-click frame to make the operation process smoother; Increase the report block zoom function, which is conducive to design the report from a global perspective.

3.4 Designer solves the 0kb problem (template temporary file storage): The new version solves this problem by saving to the temporary file and then renaming it to the source file and deleting the temporary file.

3.5 The "Encoding Conversion" configuration option is removed in Designer Data Connection Interface.

4. Charts and Big Screens

4.1 Internal Chart Types

Up to 26 types of internal chart are available after extension, including column chart, bar chart, line chart, area graph, pie chart, gauge dashboards, map, drill map, heat map, scatter plot, bubble diagram, word cloud, tree map, radar map, multi-layer pie chart, funnel plot, Gantt chart, structure diagram, combination chart and 7 extended charts (advanced chart modules with 3D dynamic effects).

4.2 Animation: Support 15 types of dynamic loading effects on the screen. The screen can change from static to dynamic after loading dynamic effects via modules.

4.3 Remote-Screen Control: Project is projected to mobile devices via media transmission, and screens can be controlled remotely through operations such as taping.

4.4 New Functionalities

Charts with rectangular coordinate systems support multiple category axes to display the category relationships in different hierarchies simultaneously.

When data are updated at the back end, the charts at the front end demonstrate the updated content dynamically.

One can modify the format of data sheet via conditional attributes for special data.

The column series interval setting supports negative values.

Combination chart axis with different values can set 0 value alignment.

Built-in map editing interface has changed.

The carousel arrow can be canceled to meet the large screen display effect.

When there is no data, add a chart prompt effect.

Overall optimization of the animation.

5. Cluster

5.1 Hot Deployment: No need to reboot cluster for node deletion. Node addition can be realized through copying node and start cluster.

5.2 High Availability: Support automatic shift to other nodes when one node crash, so the functionalities are still available for clients and users do not need to log in again.

5.3 Concurrence Performance: Optimize load balancing to enlarge the concurrency of single nodes.

5.4 Local Cache: To improve response speed and reduce read-write concurrence, the contents of document server, status server and external database are cached locally in time and written to the servers when saving or configuring.

5.5 Status Server: Add status server to store the information of cluster. The relationship between session id and node information are stored to prevent the problem of session asynchrony.

5.6 Document Server: Add document server to share templates and their attachments. The template and attachment visited by each node keep consistent in real time.

5.7 Storing Configuration Information in External Database: The configuration information of the platform is stored in external database to guarantee consistent configuration of the platform when being visited by multiple nodes.

5.8 Add a cluster's visual configuration interface to configure the status server and document server.

6. Safety

6.1 Fix Some Security Flaws: All passwords in the 10.0 platform are encrypted and stored, which reduces the risk of password leakage; Uses token authentication, solves the problem of HTTP response splitting, session identifier not updating and cross-site

request forgery; No longer returns the absolute path of the report, and fixes the vulnerability of the directory list pattern.

6.2 Active Defense: Add a series of security solutions including stronger cookie policies, file upload verification, security headers and access control to mitigate the threat from malicious file upload, cross-site scripts, CC attack and web crawling.

6.3 Password enhancement and preventing brute-force cracking

6.4 Watermarks: Improve the watermark feature: The setting interface is simplified, and the font size can be set now, which solves the problem that the density setting is not clear; Optimizes the support for formulas and line breaks, and displays in the form of top-level transparency, no longer occluded by content; Optimized printing and pdf export effect to increase security.

7. Intelligent Assistant

7.1 Alphafine Intelligent Search and Detection of Templates

AlphaFine is the entrance to all connections; specifically, the available functionalities, their usage and available demo templates are all accessible from this entrance.

Through constructing a cloud problem bank, when facing problems in the process of template design, users can figure out solutions quickly.

7.2 Intelligent Operation and Maintenance: The more comprehensive backup and restoration solution allows the platform configuration settings, templates, jar packages, logs and the whole project whose size is within certain thresholds to be backup and restored.

7.3 Common Parameter Combinations: The historical parameter combinations can be preserved.

8. Operation and Maintenance

By improving the anti-shutdown mechanism, 10.0 prevents the server from shutting down and ensures the availability of the system.

There will be forced garbage collection when the memory usage exceeds a threshold. It also allows the user to clean up expired sessions.

Delay queue is used for checking overdue sessions, so a user can manage the life cycle of a session by simple settings.

Automatically remind users to clean the logs when the files are too large.

9. Other Improvements

9.1 HTML Parsing: HTML is commonly used in reporting software, but few products can solve the problem of displaying, printing and export. 10.0 aims to change the situation and hope to thoroughly solve the problems.

9.2 Adaptive Logic Improvement: When the page is reloaded, it no longer requests calculation in the background, but instead changes to the foreground to optimize the experience. This includes dragging the browser window, performing full screen operations, etc.

9.3 Improve the Rollback Mechanism of Widget Verification Error: Keep the current edit content when verification fails after the widget is edited, the error message is prompted, and the widget retains current edited content. (only in new data entry function)

9.4 Displaying Email Body Using HTML: Use HTML to display reports in email body and make content clearer and support copying words.

9.5 Improved Self-Adaptation Logic: No longer send requests to the back end when reloading pages for changing screen size and full-screen mode, instead, zoom the front end directly to reduce computation cost and improve user experience.

9.6 Multiple actual value of the widget can correspond to the same display value.

9.7 Embedded Server: Embedded server change from Jett to Tomcat to enhance stability while enable users to build server quickly.

9.8 sapbw: available for bwcube and bwquery.

9.9 Private cloud authentication: A private cloud authentication server can be deployed locally, and the service server can authenticate on this server.