Functional Requirement

1.1 Email Sending Function

Function Number: FR-01

Description: Users can compose and send emails through the system. The system sends the email to the target email server and records the sending information in the email flow.

Input: Email subject, email body, recipients (contacts or distribution groups), attachments (optional)

Output: Email successfully sent to the target mailbox, email sending information recorded in the email flow, system feedback on the email sending result

1.2 Email Receiving Function

Function Number: FR-02

Description: After detecting new emails, the system downloads and stores them in the user's inbox, while recording the email receiving information in the email flow.

Input: New email data pushed by the email server (including sender, subject, body, time, etc.)

Output: New email added to the inbox, email receiving information recorded in the email flow, system notification to the user of new email arrival

1.3 Email Formatting Function

Function Number: FR-03

Description: Users can format email content, such as font, font size, color, bold, italic, paragraph alignment, etc., and save the formatted email information.

Input: Email body content, formatting parameters (such as font, color, bold, etc.)

Output: Formatted email content, formatted information saved in the email flow, system feedback on successful formatting

1.4 Email Search Function

Function Number: FR-04

Description: Users can search for emails based on various conditions (such as sender, recipient, subject, date, keywords, etc.) and obtain a list of matching emails.

Input: Search conditions (such as sender, subject, date range, etc.)

Output: List of matching emails, retrieval status recorded in the email flow, system prompt for search results or no results

1.5 Email Folder Organization Function

Function Number: FR-05

Description: Users can create, rename, move, or delete email folders and organize emails into corresponding folders.

Input: Folder operation type (create, rename, move, delete), folder name, target folder path (if needed)

Output: Updated folder structure, folder operation information recorded in the email flow, system feedback on the operation result

1.6 Contact Creation Function

Function Number: FR-06

Description: Users can create new contact information and save it to the contact data entity.

Input: Contact name, email address, phone number, address, notes, etc.

Output: Contact information saved to the contact data entity, creation operation recorded in the recovery log, system feedback on successful contact creation

1.7 Contact Management Function

Function Number: FR-07

Description: Users can edit, delete, or view contact information, and the system records the changes to the contact data entity.

Input: Contact operation type (edit, delete, view), contact information (if needed)

Output: Updated contact list, contact data entity saves changes, system feedback on the operation result

1.8 Distribution Group Creation Function

Function Number: FR-08

Description: Users can create new distribution groups and add existing contacts as members of the distribution group.

Input: Distribution group name, list of member contacts

Output: Distribution group information saved to the distribution group data entity, system feedback on successful distribution group creation

1.9 Distribution Group Management Function

Function Number: FR-09

Description: Users can edit, delete, or view distribution group information and perform add or delete operations on members.

Input: Distribution group operation type (edit, delete, view), distribution group member information (if needed)

Output: Updated distribution group information, system feedback on the operation result, distribution group data entity saves changes

1.10 Calendar Event Creation Function

Function Number: FR-10

Description: Users can create new calendar events and can set whether to associate reminder tasks.

Input: Event title, start time, end time, location, participants, recurrence, notes, reminder task settings (if needed)

Output: Calendar event information saved to the calendar data entity, reminder task saved to the reminder task data entity (if needed), system feedback on successful calendar event creation

1.11 Calendar Event Modification Function

Function Number: FR-11

Description: Users can modify existing calendar event information (such as time, location, participants, etc.) and update the associated reminder task information.

Input: Calendar event operation type (modify), new calendar event information, reminder task modification information (if needed)

Output: Updated calendar event information, system feedback on the operation result, calendar data entity and reminder task data entity save changes

1.12 Calendar Event Search Function

Function Number: FR-12

Description: Users can search for calendar events based on various conditions (such as title, time, location, participants, etc.) and obtain a list of matching calendar events.

Input: Search conditions (such as title, time range, etc.)

Output: List of matching calendar events, system feedback on the operation result, search behavior recorded in the recovery log

1.13 Email Archiving Function

Function Number: FR-13

Description: Users can manually or the system can automatically archive emails to the specified location based on the archiving policy, and record the archiving operation in the email flow.

Input: Archiving operation type (manual archiving, automatic archiving), list of emails (if needed), archiving policy parameters (if needed)

Output: Emails archived to the specified folder, archiving operation recorded in the email flow, system feedback on the archiving result

1.14 Email Flow Creation Function

Function Number: FR-14

Description: Users can create email flows and add emails or distribution groups to the email flow, and the system records the email flow creation operation.

Input: Email flow name, description, list of email or distribution group members

Output: Email flow information saved to the email flow data entity, creation operation recorded in the recovery log, system feedback on the creation result

1.15 Email Flow Management Function

Function Number: FR-15

Description: Users can view, sort, filter, export, or delete emails in the email flow.

Input: Email flow operation type (view, sort, filter, export, delete), sorting or filtering conditions (if needed), export format (if needed)

Output: Updated email flow view, operation behavior recorded in the recovery log, system feedback on the operation result

1.16 Archiving Policy Formulation Function

Function Number: FR-16

Description: Users can formulate new archiving policies, including archiving conditions, archiving paths, and execution frequency.

Input: Archiving conditions (such as email type, time range), archiving path, execution frequency (such as immediate, daily, etc.)

Output: Archiving policy saved to the archiving policy data entity, system feedback on the policy formulation result, operation behavior recorded in the recovery log

1.17 Archiving Policy Modification Function

Function Number: FR-17

Description: Users can modify existing archiving policies, including archiving conditions, paths, and execution frequency.

Input: Archiving policy operation type (modify), new archiving conditions, path, or execution frequency

Output: Archiving policy updated to the archiving policy data entity, system feedback on the operation result, modification behavior recorded in the recovery log

1.18 Email Reminder Setting Function

Function Number: FR-18

Description: Users can set reminder tasks for specific emails, including reminder time and method.

Input: Email identifier, reminder time, reminder method (such as pop-up, sound, email, etc.)

Output: Reminder task saved to the reminder task data entity, system feedback on the setting result, setting behavior recorded in the recovery log

1.19 Reminder Task Management Function

Function Number: FR-19

Description: Users can create, edit, delete, or view reminder tasks, and the system saves the changes to the reminder task data entity.

Input: Reminder task operation type (create, edit, delete, view), reminder task information (if needed)

Output: Updated reminder task list, system feedback on the operation result, operation behavior recorded in the recovery log

1.20 Email Account Creation Function

Function Number: FR-20

Description: Users can create new email accounts and set initial configurations, such as storage capacity and default folder structure.

Input: Email name, email type (such as personal email, organizational email), initial storage capacity, associated contacts (if needed)

Output: Email account information saved to the email data entity, system feedback on the creation result, operation behavior recorded in the recovery log

1.21 Email Account Management Function

Function Number: FR-21

Description: Users or administrators can manage email accounts, including modifying attributes, resetting passwords, viewing usage statistics, and deleting emails.

Input: Email operation type (modify, reset password, view statistics, delete), email attribute or password information (if needed)

Output: Updated email account information, system feedback on the operation result, operation behavior recorded in the recovery log

1.22 Shared Account Creation Function

Function Number: FR-22

Description: Administrators can create shared accounts and set access permissions and associated email accounts.

Input: Shared account name, description, associated email account, access permission settings (such as read-only, editable)

Output: Shared account information saved to the shared account data entity, operation behavior recorded in the recovery log, system feedback on the creation result

1.23 Shared Account Management Function

Function Number: FR-23

Description: Administrators can edit shared account permissions, delete shared accounts, or view account details.

Input: Shared account operation type (edit, delete, view), shared account permissions or deletion request (if needed)

Output: Shared account information updated or deleted, system feedback on the operation result, operation behavior recorded in the recovery log

1.24 Backup Execution Function

Function Number: FR-24

Description: Administrators or users can execute backup operations and save specified data (such as emails, contacts, calendar events, etc.) to the backup data entity.

Input: Backup object (such as emails, contacts, calendar events, etc.), backup path, backup type (such as file-level, full-database)

Output: Backup data saved to the backup data entity, operation behavior recorded in the recovery log, system feedback on the backup result

1.25 Data Recovery Function

Function Number: FR-25

Description: Users or administrators can recover specified data (such as emails, contacts, calendar events, etc.) and load data from backups to the corresponding data entities.

Input: Recovery operation type (recover emails, recover contacts, recover calendar events, etc.), recovery source (backup file)

Output: Data recovered to the original data entity, operation behavior recorded in the recovery log, system feedback on the recovery result

1.26 Recovery Log Viewing Function

Function Number: FR-26

Description: Users or administrators can view recovery logs to understand the detailed records of backup and recovery operations.

Input: Recovery log filter conditions (such as time, operation type, operator)

Output: List of recovery logs, system feedback on the operation result, viewing behavior recorded in the recovery log

1.27 Administrator Permission Management Function

Function Number: FR-27

Description: Administrators can manage permissions of other users or administrators, including creating, editing, deleting, or viewing permission configurations.

Input: Permission operation type (create, edit, delete, view), permission configuration information (such as email, archiving policy, backup/recovery permissions)

Output: Updated permission configuration, system feedback on the operation result, operation behavior recorded in the recovery log

1.28 Expired Email Handling Function

Function Number: FR-28

Description: The system determines whether emails have expired based on the archiving policy and performs archiving, deletion, or move operations.

Input: Email identifier, archiving policy rules, handling method (archive/delete/move)

Output: Email status updated, handling behavior recorded in the recovery log, system feedback on the handling result

1.29 User Login Authentication Function

Function Number: FR-29

Description: Users or administrators must authenticate and log in to the system before performing any operations.

Input: Username, password

Output: Login success or failure prompt, system updates user login status, login behavior recorded in the recovery log

1.30 Data Integrity Check Function

Function Number: FR-30

Description: The system must perform data integrity checks when performing key operations (such as backup, recovery, archiving, etc.) to prevent data loss or corruption.

Input: Data to be operated on (such as emails, contacts, calendar events, etc.)

Output: Check result (success/failure), system feedback on the operation status, check behavior recorded in the recovery log