Phase 9: Reporting, Dashboards & Security Review

Airline Management System

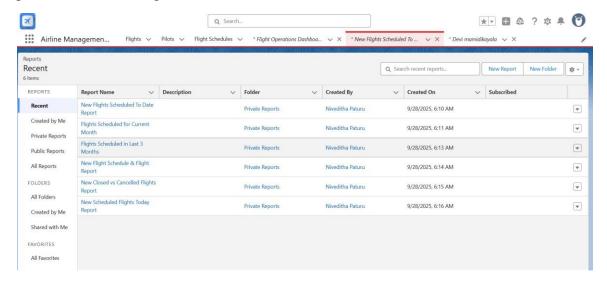
Salesforce-Based Passenger & Operations Management

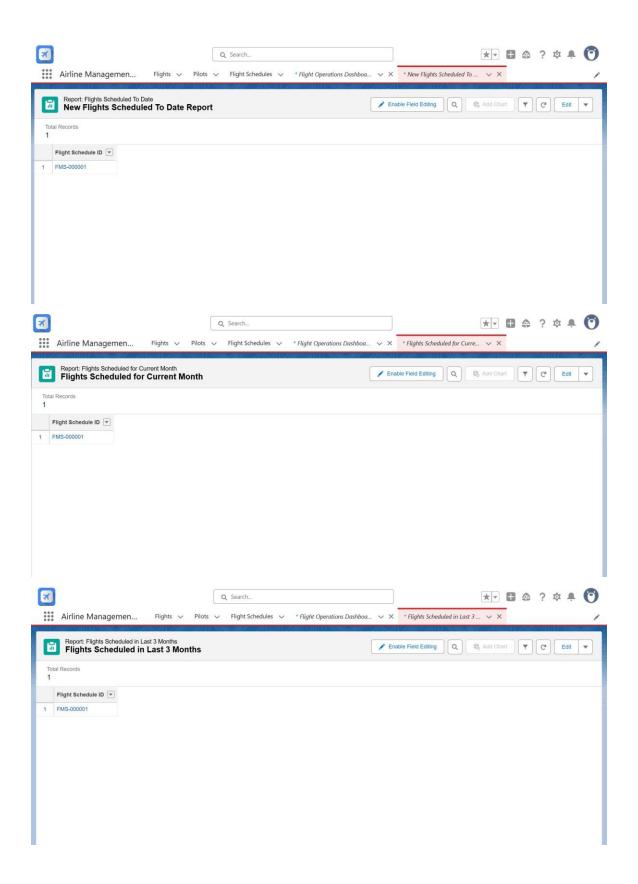
1. Reports (Tabular, Summary, Matrix, Joined)

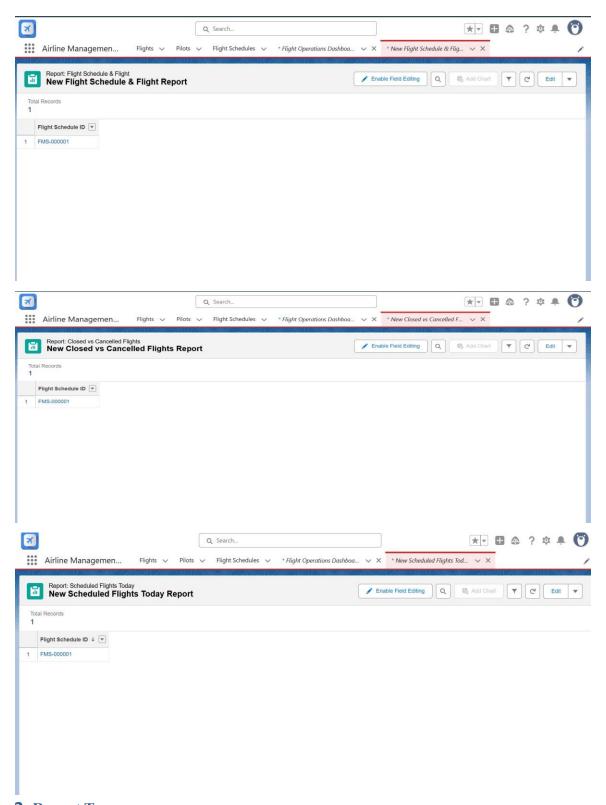
Reports provide actionable insights into the operations of the Airline Management System. Different report formats are created based on specific requirements:

- Scheduled Flights Today (Tabular Report): Displays all flights scheduled for the current day with fields such as Flight Name, Source, Destination, Departure Time, and Status.
- Closed vs Cancelled Flights (Summary/Pie Chart Report): Provides a graphical breakdown of successfully closed flights versus cancelled flights, helping management quickly identify operational challenges.
- Flights Scheduled To Date (Summary Report): Shows all flights scheduled until the current date, grouped by Company and Status, enabling trend analysis.
- Flights Scheduled for Current Month (Matrix Report): Presents flights within the ongoing month, organized by Company (rows) and Status (columns) to compare performance.
- Flights Scheduled in Last 3 Months (Trend/Joined Report): Highlights scheduling patterns and performance trends over the last quarter, useful for strategic planning.

These reports together provide comprehensive coverage of daily operations, monthly performance, and long-term trends.





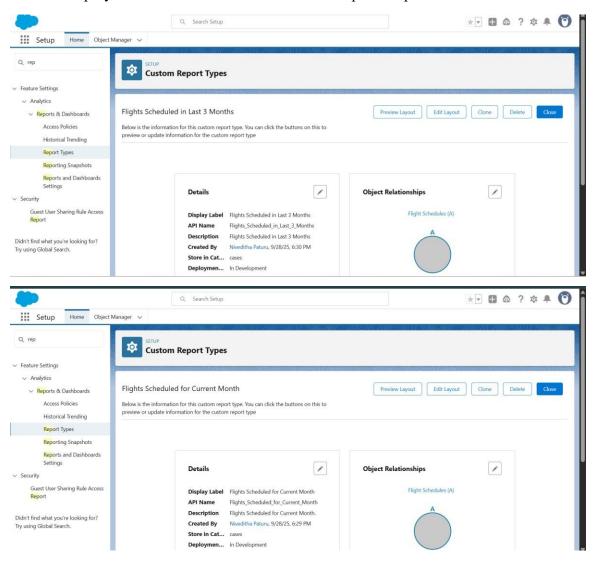


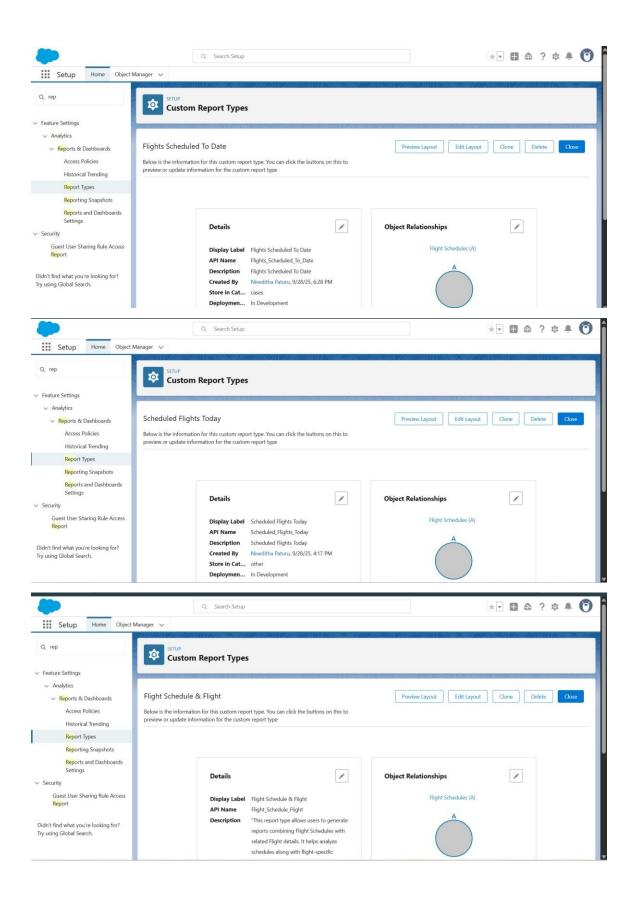
2. Report Types

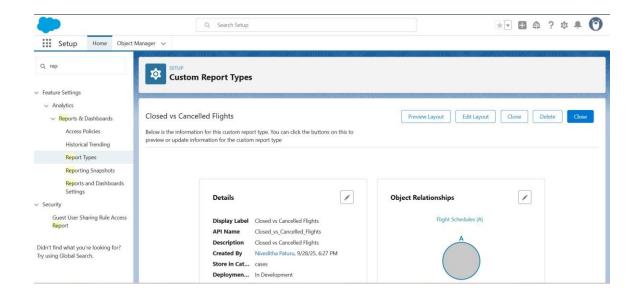
A custom report type was created to combine data from Flight Schedule and Flight objects:

- Primary Object: Flight Schedule
- Related Object: Flight (via lookup)
- Fields Included: Flight ID, Flight Name, Company, International/Domestic Type, along with schedule fields like Source, Destination, Departure, Arrival, Duration, and Status.

This report type allows users to generate detailed and combined reports. Deployment status is set to 'Deployed' so that end users can access the reports in production.





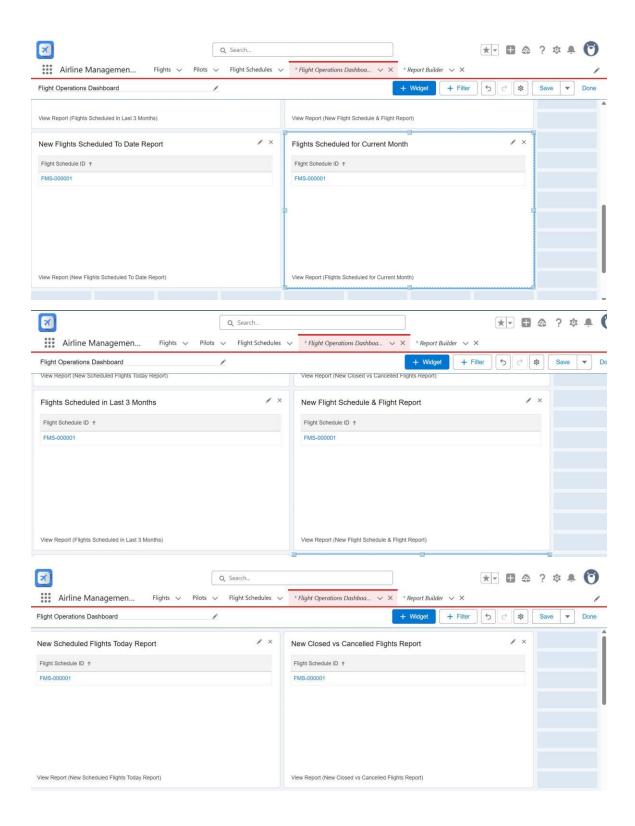


3. Dashboards

Dashboards provide a consolidated view of the reports through visual components, enabling managers and executives to make informed decisions at a glance. The following dashboard components were created:

- Scheduled Flights Today Bar chart displaying number of flights by status.
- Closed vs Cancelled Flights Pie chart showing distribution of completed versus cancelled flights.
- Flights Scheduled To Date Table with grouping by Flight Company.
- Current Month Schedules Line chart showing number of schedules created this month.
- Last 3 Months Schedules Trend chart showing flight scheduling patterns over the past quarter.

These dashboards provide a single-pane view of daily, monthly, and quarterly operational data.



4. Dynamic Dashboards

Dynamic dashboards ensure that users see data based on their role and access permissions.

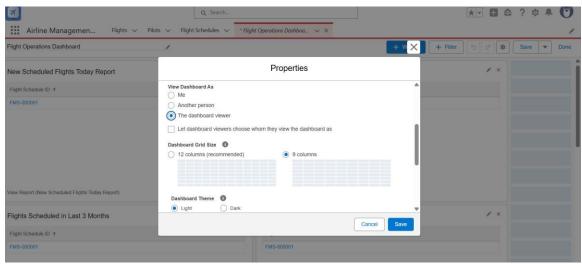
Instead of creating separate dashboards for each user group, a single dynamic dashboard serves all roles:

- CEO View: Sees all flights and schedules across the organization.
- Manager View: Sees only schedules created by operators reporting to them.
- Operator View: Sees only their own schedules.

Steps to configure dynamic dashboards:

- 1. Create a dashboard and add required components from reports.
- 2. Save the dashboard in a shared folder accessible to CEO, Manager, and Operators.
- 3. In 'View Dashboard As', select 'The dashboard viewer'.
- 4. Test by logging in as CEO, Manager, and Operator to confirm that visibility changes as per roles.

This approach eliminates redundancy and ensures users only see the data they are authorized to view.

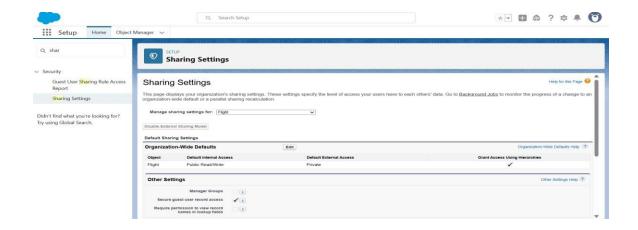


5. Sharing Settings

Sharing settings define record-level access in Salesforce:

- Flight Object: Public Read Only allows all users to view flight details while restricting edits.
- Flight Schedule Object: Controlled by Profile and Role hierarchy Operators can edit, CEO can only view.
- Pilot Object: Restricted Only Managers and Operators have access to pilot details.

This ensures that sensitive data is protected while maintaining operational transparency.

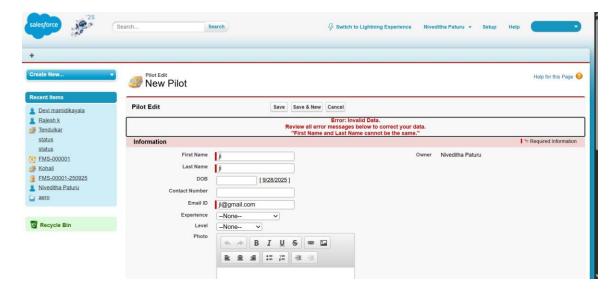


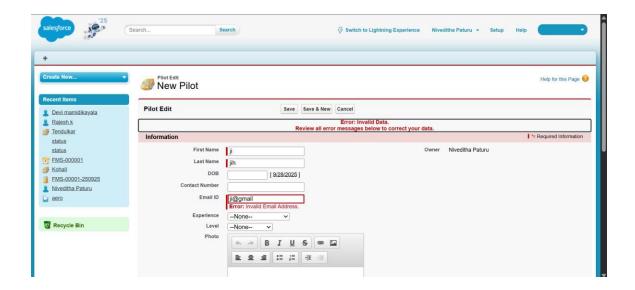
6. Field Level Security

Field-level security restricts access to sensitive fields depending on roles:

- Pilot Email Visible to Operators and Manager, hidden from CEO.
- Pilot Age Visible to Manager, restricted for Operators.
- Flight Company Editable for Manager, read-only for Operators.

This ensures sensitive or non-essential fields are hidden from unauthorized users.



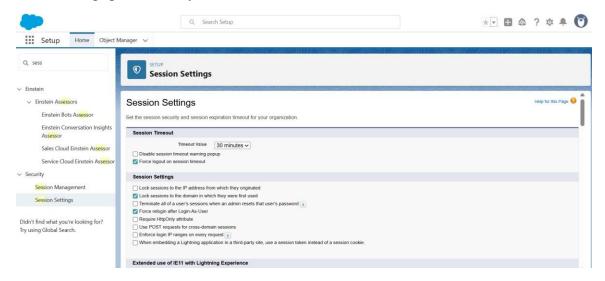


7. Session Settings

Session settings are configured to strengthen user login security:

- Session Timeout: 30 minutes of inactivity.
- Forced Logout: Users must re-authenticate after timeout.
- HTTPS Only: Ensures all communication is encrypted.

These settings protect the system from unauthorized access due to idle sessions.



8. Login IP Ranges

Login IP restrictions add another layer of security by limiting access from trusted networks only:

- Operators: Restricted to office IP ranges.
- Manager: Allowed from office and secure VPN.
- CEO: Allowed from all IPs for global access.

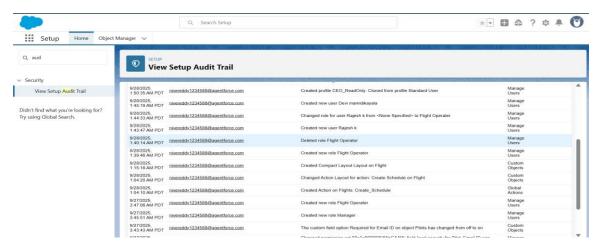
This prevents unauthorized logins from unknown networks.

9. Audit Trail

Audit Trail helps track administrative changes in Salesforce:

- Records changes such as creation of fields, validation rules, reports, and dashboards.
- Maintains history of up to 6 months.
- Provides details on what was changed, by whom, and when.

This ensures accountability and helps administrators troubleshoot unexpected changes.



10. Conclusion

Phase 9 focuses on reporting, dashboards, and security review. By creating multiple report formats and dashboards, management can gain insights into operational performance. Dynamic dashboards provide tailored views for each role, while security measures such as sharing settings, field-level security, session settings, login IP ranges, and audit trails ensure that the system remains secure and compliant. This phase enhances decision-making while safeguarding data integrity.

