A Design Checklist for Availability

Allocation of Responsibilities:

Log the fault with error message, log timestamp, restart listener, force listener to stop and skip event, send error message to user, send notification to developer, fix or mask the fault, operate in normal mode, test database connection.

Coordination Model:

Rapla Api must be available, Calendar and Events must be available.
Create logs for easy Bugfixing, create error handling and alarm system.
Kill process if not working correctly and send error message to user and developer.
Make sure to be able to use Carbon copy of database.

Data Model:

Database and Notification system must be highly available. The database could crash or connection could get lost.
Make sure to have a carbon copy of the db to use or to save the timestamp for notification local.
Notification system could crash: exception handling, send error message to user and developer.

Mapping among Architectural Elements:

The artifact of the database may cause the failure like incorrect response or simply crash.
Try to restart connection to database.
Try to make a connectable cc of db
Save timestamp and trigger for notification local
Exception handling, update database as soon as connected.
Use Exception to enqueue the crashed database and to reenter the cc / to reconnect crashed database.

Resource Management:

The timestamp/trigger for the notification is crucial.
Save timestamp local on the device.
Set default value of notification “on”.
Notification minimum 5 min before event.
5 min buffer if exception happens.
1 min time to fix.
After one minute error notification (same sound as normal notification).