

EventEase – Phase 4: Process Automation (Admin)

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Project: EventEase – AI-Powered Event Registration System (B2C Salesforce CRM)

Executive Summary

Objective:

Enforce data quality and automate core event registration processes so organizers can prevent overbooking, block past-event registrations, and prepare for automated confirmations, reminders, and AI-driven recommendations.

Phase 4 Outcomes:

- Implemented robust **Validation Rules** and **data model enhancements** to enforce business rules.
 - Converted **Attendee_Count__c** to a **Roll-Up Summary** for reliable capacity checks.
 - Updated **Event__c** page layouts to surface critical operational fields (dates, capacity, attendee count).
 - Designed (and ready to configure) **Screen Flow**, **Record-Triggered Flow**, **Scheduled Flows**, and an **Approval Process** to complete end-to-end automation.
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Scope Covered in Phase 4

1. Data Quality & Business Rules (Implemented)

- Overbooking prevention
- Past-event registration block
- Capacity guardrails when confirming registrations
- Duplicate prevention design via unique composite key

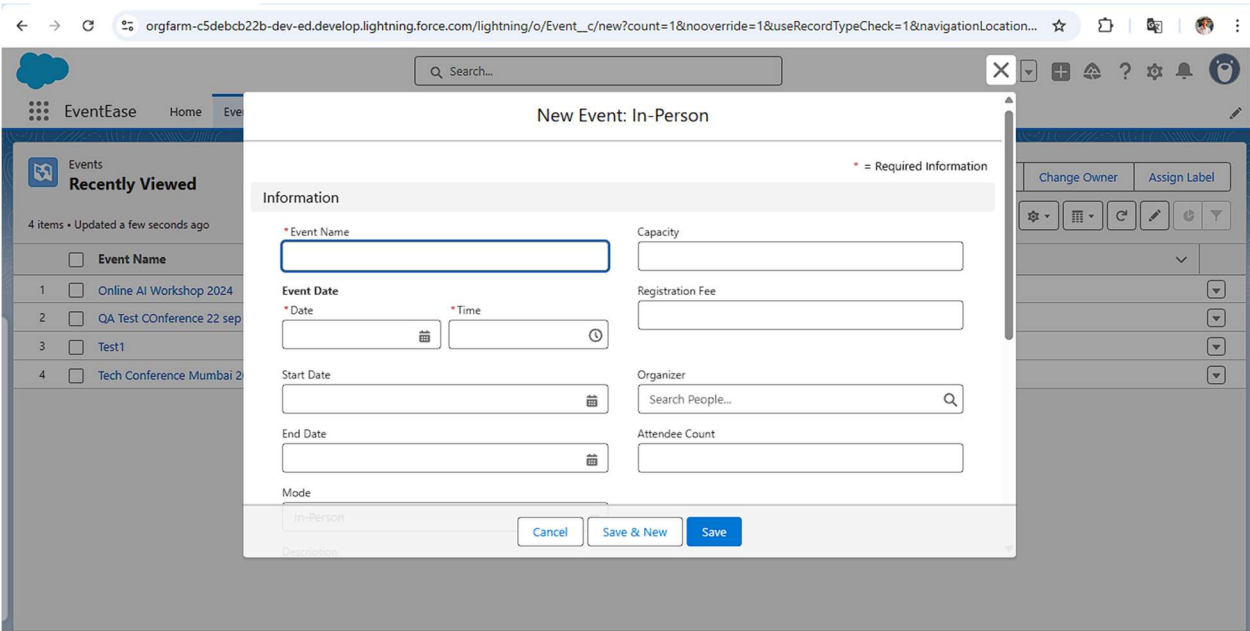
2. Process Automation (Planned)

- Attendee Registration **Screen Flow**
- **Record-Triggered Flow** for confirmations and recommendations
- **Scheduled Flows** for reminders and feedback
- **Approval Process** for VIP/discounted registrations

Implemented Configuration Details

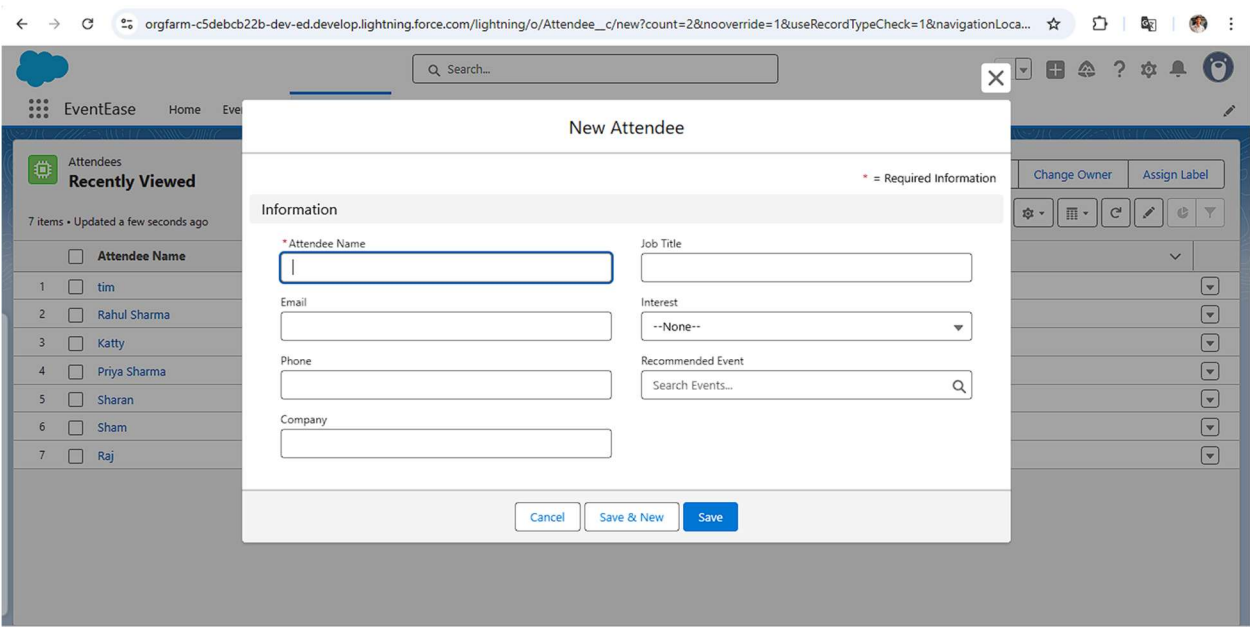
3.1 Data Model Enhancements

Event__c :



Field	Type	Details / Path
Start_Date__c	Date	force-app/main/default/objects/Event__c/fields/Start_Date__c.field-meta.xml
End_Date__c	Date	force-app/main/default/objects/Event__c/fields/End_Date__c.field-meta.xml
Attendee_Count__c	Roll-Up Summary	Count of child Registration__c where Status__c = "Confirmed"; Path: force-app/main/default/objects/Event__c/fields/Attendee_Count__c.field-meta.xml

Attendee__c :



Field	Type	Details / Path
Email__c	Email	force-app/main/default/objects/Attendee__c/fields/Email__c.field-meta.xml
Phone__c	Phone	force-app/main/default/objects/Attendee__c/fields/Phone__c.field-meta.xml
Interest__c	Picklist (Technology, Business)	force-app/main/default/objects/Attendee__c/fields/Interest__c.field-meta.xml
Recommended_Event__c	Lookup (Event__c)	force-app/main/default/objects/Attendee__c/fields/Recommended_Event__c.field-meta.xml

Registration__c :

The screenshot shows the 'New Registration' form in the EventEase application. The form is titled 'New Registration' and includes fields for Registration Number, Payment Status (dropdown), Amount, Discount, Event (dropdown), Status (dropdown), Registration Date (date and time), and Attendee-Event Key. There are also search fields for Attendees and Events. The form is overlaid on a sidebar showing 'Recently Viewed' registrations and a top navigation bar with 'EventEase' and 'Home' links.

Field	Type	Details / Path
VIP__c	Checkbox	force-app/main/default/objects/Registration__c/fields/VIP__c.field-meta.xml
Discount__c	Percent	force-app/main/default/objects/Registration__c/fields/Discount__c.field-meta.xml
Attendee_Event_Key__c	Text (Unique)	force-app/main/default/objects/Registration__c/fields/Attendee_Event_Key__c.field-meta.xml
Status__c	Picklist (Confirmed, Pending, Approved, Rejected)	force-app/main/default/objects/Registration__c/fields/Status__c.field-meta.xml

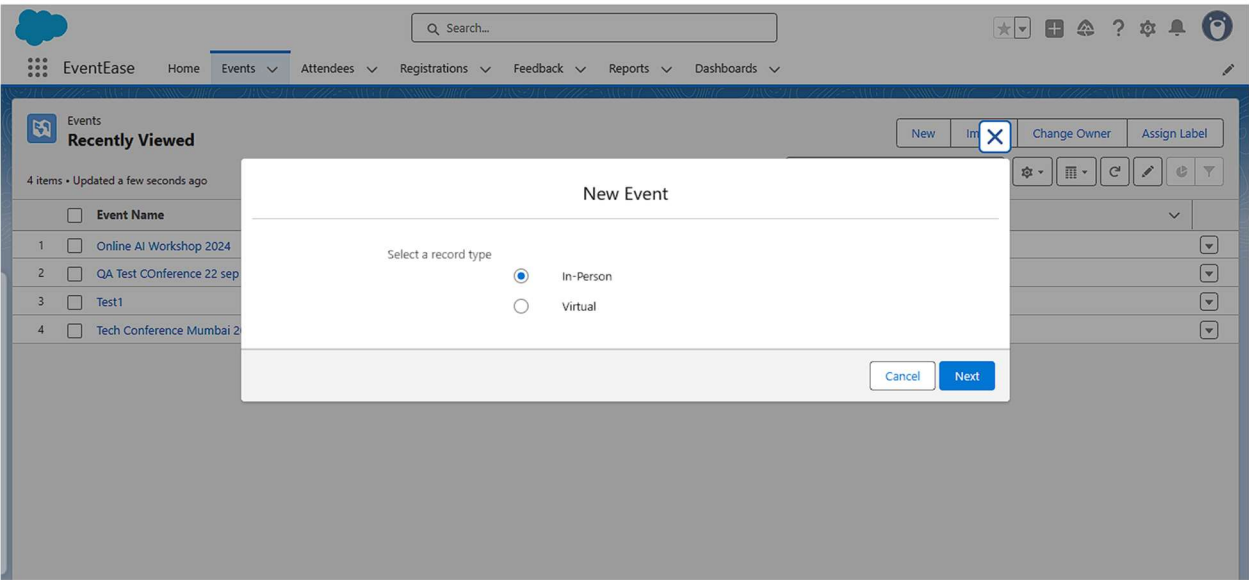
3.2 Validation Rules (Implemented) :

Rule	Object	Formula	Message	Path
Overbooking	Event__c	Attendee_Count__c > Capacity__c	"Event capacity exceeded. No more registrations allowed."	force-app/main/default/objects/Event__c/validationRules/Overbooking.validationRule-meta.xml
Past Event Registration Block	Registration__c	AND(ISNEW(), NOT(ISBLANK(Event__r.Start_Date__c < TODAY()))	"You cannot register for past events."	force-app/main/default/objects/Registration__c/validationRules/Past_Event_Registration_Block.validationRule-meta.xml
Capacity Check when Status =	Registration__c	AND(ISPICKVAL(Status__c, "Confirmed"), NOT(ISBLANK(Event__r.Attendee_Count__c >=	"Event capacity exceeded. No more	force-app/main/default/objects/Registration__c/validationRules/Overcapacity_On_Confirmed.validationRule-meta.xml

Rule	Object	Formula	Message	Path
Confirmed		Event__r.Capacity__c)	registrations allowed."	

3.3 Page Layout Updates (Implemented)

Event__c – Virtual and In-Person layouts updated:



- Show Start_Date__c, End_Date__c
- Show Attendee_Count__c as read-only

Layout	Path
Virtual Layout	force-app/main/default/layouts/Event__c-Virtual Layout.layout-meta.xml
In-Person Layout	force-app/main/default/layouts/Event__c-In_Person Layout.layout-meta.xml

4. Designed Automations (To be Implemented)

4.1 Screen Flow: Attendee Registration

Goal: Capture attendee details and event choice (online/on-site), enforce capacity, create registration.

Steps:

1. Screen: Attendee Name, Email, Phone; Event lookup filtered to upcoming events with capacity left (`Start_Date__c >= TODAY()` and `Attendee_Count__c < Capacity__c`)
 2. Decision: If full → Message; Else → proceed
 3. Create Records: `Registration__c` with `Attendee__c` and `Event__c`; `Status__c` = Pending/Confirmed
 4. Confirmation Screen: Thank-you message
 5. Launch: Quick Action on `Event__c` ("Register Attendee")
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4.2 Record-Triggered Flow: `Registration__c` (After Create)

Actions:

- Send Email: Registration Confirmation including Attendee Name, Event Name, Date
 - AI Recommendation: Update `Attendee__c.Recommended_Event__c` based on `Interest__c`
 - Create Task for Event Manager: "New Attendee Registered"
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4.3 Scheduled Flows (Daily at 8:00 AM)

- **T-1 Reminder:** Event__r.Start_Date__c = TODAY() + 1 → Send reminder email
- **Post-Event Feedback:** Event__r.End_Date__c = TODAY() - 1 → Send feedback survey link

4.4 Approval Process: Registration__c :

- Entry Criteria: VIP__c = TRUE OR Discount__c > 20
- Approver: Role = Event Manager
- Outcomes:
 - On Approval → Status__c = "Approved"
 - On Rejection → Status__c = "Rejected"

4.5 Duplicate Registration Strategy

- Field: Attendee_Event_Key__c (Unique Text)
- Population: Before-save Record-Triggered Flow → Attendee_Event_Key__c = TEXT(Attendee__c) & '|' & TEXT(Event__c)

- Optional Validation Rule: When Status__c = "Confirmed", require Attendee_Event_Key__c
- **Benefit:** Blocks same attendee registering for same event without complex VLOOKUP

5. Test Plan

Scenario	Given	Action	Expected Outcome
Overbooking prevention	Event__c Capacity__c = 2, 2 Confirmed registrations	Create another Confirmed registration	Validation error "Event capacity exceeded..."
Past-event block	Event__c Start_Date__c = TODAY() - 1	Create new registration	Validation error "You cannot register for past events."
Layout visibility	Open Event layouts	Verify fields	Start/End Date visible, Attendee_Count__c read-only
Roll-up summary	New Confirmed Registration__c	Check Event__c.Attendee_Count__c	Count increments correctly, recalculates on delete/status change

6. Deployment & Retrieval Steps

1. Deploy implemented metadata:

```
sfdx force:source:deploy -p force-app/main/default/objects,force-app/main/default/layouts
```

2. Build flows and approval process in Setup (recommended), then retrieve:

```
sfdx force:source:retrieve -m Flow,ApprovalProcess
```

3. After retrieval, commit updated metadata:

- force-app/main/default/flows/
 - force-app/main/default/approvalProcesses/
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7. Risks & Considerations

- Roll-up summary requires Master-Detail → satisfied (Registration__c → Event__c)
- Summary filter relies on Status__c = “Confirmed” → ensure picklist values consistent
- Duplicate prevention requires before-save flow → implement before enabling strict validation
- Email templates → create proper HTML templates for confirmations and reminders