

CASE STUDY 07 OF 07 | CONNECT APP

Scheduling Integration

Book appointments with any colleague directly from within Connect

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Overview

Connect is linked with the organization's scheduling platform, allowing users to book appointments with any colleague without ever leaving the communication tool. The integration surfaces the right scheduling action at the right moment: in a DM conversation, on a user's profile, or in a channel context. This case study covers how the scheduling integration was designed, what the user experience looks like, and how the two systems share data cleanly.

Project Snapshot

Project	Connect — Workplace Communication Platform
Feature Area	Integration with Scheduling Platform
Role	Senior Fullstack Engineer
Partner System	Organization's scheduling app (custom-built)
Entry Points	DM conversations, user profiles, channel member lists
Outcome	Friction-free appointment booking embedded in the communication flow

The Problem

Arranging a meeting through a messaging tool traditionally means one of two things. Either you go back and forth over several messages trying to find a mutually available time, which takes longer than it should and pollutes the message history with scheduling noise. Or you switch to a separate calendar or scheduling tool, generate a booking link, paste it back into the chat, and ask the other person to click through.

Both approaches are inefficient and break the communication flow. The integration between Connect and the scheduling platform was built to eliminate both problems by bringing appointment booking directly into the conversation context.

What Was Built

Book a Meeting Button in DMs

In any direct message conversation, a 'Schedule a Meeting' button appears in the conversation header. Clicking it opens an in-app modal that pulls the other person's available calendar slots directly from the scheduling platform. The user selects a time, optionally adds a note, and confirms the booking without leaving Connect. A booking confirmation message is automatically posted in the DM conversation for both parties.

Profile-Level Booking

Clicking on any user's profile anywhere in Connect shows a 'Book a Meeting' option alongside their contact details and presence status. This allows booking a meeting with a colleague without needing to start a DM first. The profile booking flow opens the same in-app modal showing that person's available slots.

Booking Confirmation in Conversation

When a booking is confirmed, a structured message card appears in the relevant conversation showing the meeting details: date, time, duration, and the conferencing link. Both parties can see this card, click the meeting link directly from it, or add it to their external calendar with one click. If the meeting is rescheduled or cancelled through the scheduling platform, the card in the conversation updates automatically.

Upcoming Meetings Widget

Each user has an upcoming meetings section in their Connect sidebar that shows the next three appointments booked through the platform. Each entry shows the meeting time, the other participant, and a quick-join link. The widget updates in real time as new bookings are made or existing ones are modified.

Technical Architecture

<p>Cross-Service Authentication</p> <p>Connect and the scheduling platform share an authentication layer. A user authenticated in Connect is also recognized by the scheduling API without a separate login. Service-to-service requests use scoped API keys with per-action permission grants.</p>	<p>Availability Fetching</p> <p>When a user opens the booking modal, Connect calls the scheduling platform's availability API with the target user's ID and a date range. The API returns available slots in the target user's configured timezone, which Connect converts to the requesting user's local timezone for display.</p>
<p>Booking Confirmation Webhook</p> <p>When a booking is confirmed in the scheduling platform, a webhook fires to Connect with the booking details. Connect uses this to post the structured booking card in the correct conversation and update the upcoming meetings widget for both participants.</p>	<p>Booking Card Message Type</p> <p>Booking confirmations are a structured message type with a defined schema: participant IDs, meeting time (UTC), duration, conferencing link, and booking ID. This schema allows the card to be updated (rescheduled, cancelled) by reference to the booking ID without searching through message history.</p>
<p>Cancellation and Reschedule Propagation</p>	<p>Deep Link Navigation</p>

Changes made in the scheduling platform (cancellations, time changes) propagate to Connect via the same webhook channel. The relevant booking card in the conversation is updated in-place, and both participants receive a notification about the change.

Every booking card includes a deep link back to the scheduling platform for users who need to manage the appointment in more detail than Connect exposes. The deep link opens the specific booking in the scheduling app's management interface.

Key Challenges

Keeping Availability Data Fresh Without Hammering the API

Available time slots change frequently: other bookings come in, users update their availability settings, calendar events block off time. Showing stale availability in the booking modal leads to failed bookings. The solution was to fetch availability fresh each time the booking modal is opened (rather than caching aggressively) but to implement a short in-flight cache to handle rapid successive opens of the same modal without duplicate API calls.

Timezone Presentation in a Mixed-Timezone Conversation

A DM between a user in London and a user in New York means the booking modal needs to show times in a way that is unambiguous for both. The modal shows the available slots in the requesting user's local timezone by default, with a secondary label showing the same time in the target user's timezone. This lets both parties confirm they are agreeing on the same actual time without any mental conversion.

Keeping Booking Cards Synchronized After Changes

A booking card posted in a DM three weeks ago needs to reflect the current state of that appointment: confirmed, rescheduled, or cancelled. Updating old messages in a conversation required a message update API that could modify a specific message by its ID and propagate the update to all connected clients via the real-time layer. This is the same mechanism used for message edits, reused for booking card state updates.

Outcome

The scheduling integration removed the scheduling coordination overhead that had previously lived in conversations as noise. Users stopped pasting booking links into chats and stopped going back and forth on availability. Meetings were booked in under thirty seconds from inside the DM where the need for a meeting was first raised. The booking confirmation card kept both parties aligned on meeting details without any additional messaging. The integration became a clear demonstration that Connect and the scheduling platform are stronger together than either is independently.

Integration Highlights

- Shared authentication layer eliminating separate login for cross-platform actions
- Webhook-driven booking card updates keeping conversation history accurate in real time
- Dual-timezone display in the booking modal eliminating meeting time confusion
- Upcoming meetings widget surfacing relevant appointments directly in the communication hub

Broader Platform Impact

The scheduling integration demonstrated a pattern that can extend to other cross-platform features in the Connect ecosystem. The webhook-based update model, the structured message card schema, and the shared authentication layer are all reusable primitives for connecting additional organization tools to Connect. Future integrations, whether with task management systems, document platforms, or HR tools, can follow the same architecture with lower implementation cost each time.