

Problem

- Oftentimes, employee onboarding and offboarding workflows are fragmented across various systems, requiring IT and HR teams to manually coordinate approvals, tasks and communications.
- Organizations struggle to preserve visibility within employee progress all throughout the transition system, making it challenging to monitor important system access changes, equipment allocations, and overall workflow completion.
- Relying on manual processes to manage employee resources and access can make the transition process slower and create unnecessary security challenges affecting the overall experience of employees.
- Without a centralized workflow, IT and HR teams often face challenges reducing errors, maintaining accountability, and ensuring smooth employee transitions.

Stakeholders & Requirements

JourneyOne was developed around the needs of the teams involved in the employee lifecycle such as HR managers, IT managers, and auditors. HR managers use this system to manage the process of onboarding and offboarding, IT managers coordinate access responsibilities and equipment, and Auditors verify that each activity is completed and tracked correctly.

Functional Requirements

- Support the full onboarding and offboarding workflow.
- System tracks onboarding status
- Enforce role-based access control.
- Manage equipment assignment, employee access and task progress.
- Provide reporting and audit tracking for accountability.

Non-Functional Requirements

- Data protection and secure authentication
- Scalable and reliable system architecture
- User-friendly experience across multiple roles
- Version controlled via GitHub

Our Solution

JourneyOne, a centralized platform that manages the employee lifecycle, bringing the IT and HR workflow into a single platform. This system enhances the coordination between teams by tracking progress, organizing workflows, and providing managers with increased visibility throughout each step of the employee transition process.

Key Design Decisions:

- **Role-Based Access Control:** Ensures that the users only have access to the information and tools needed for their responsibility.
- **Immutable Audit Logging:** Logs each system activity to provide traceability, accountability and support compliance.
- **Workflow State Management:** Coordinates employee transition by recording the progress between IT and HR responsibilities, ensuring that each task is completed in the correct order and transferred to the appropriate management team.

Architecture

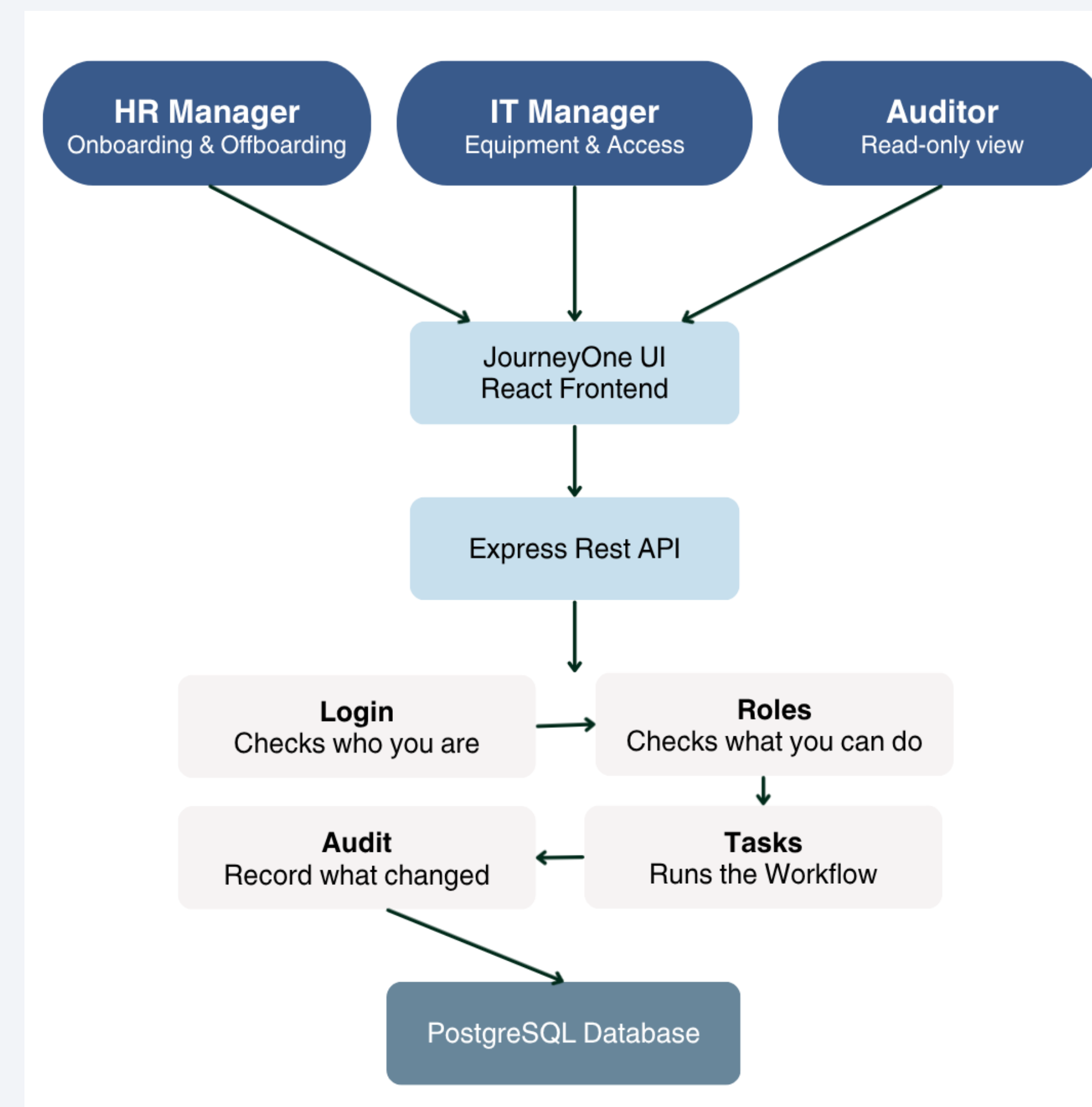


Figure 1. JourneyOne system architecture diagram

People & Acknowledgements

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Acknowledgments: Anthony Ayestas, and: "KFSCIS Capstone Program, Prof. Masoud Sadjadi."

Demo & Screenshots

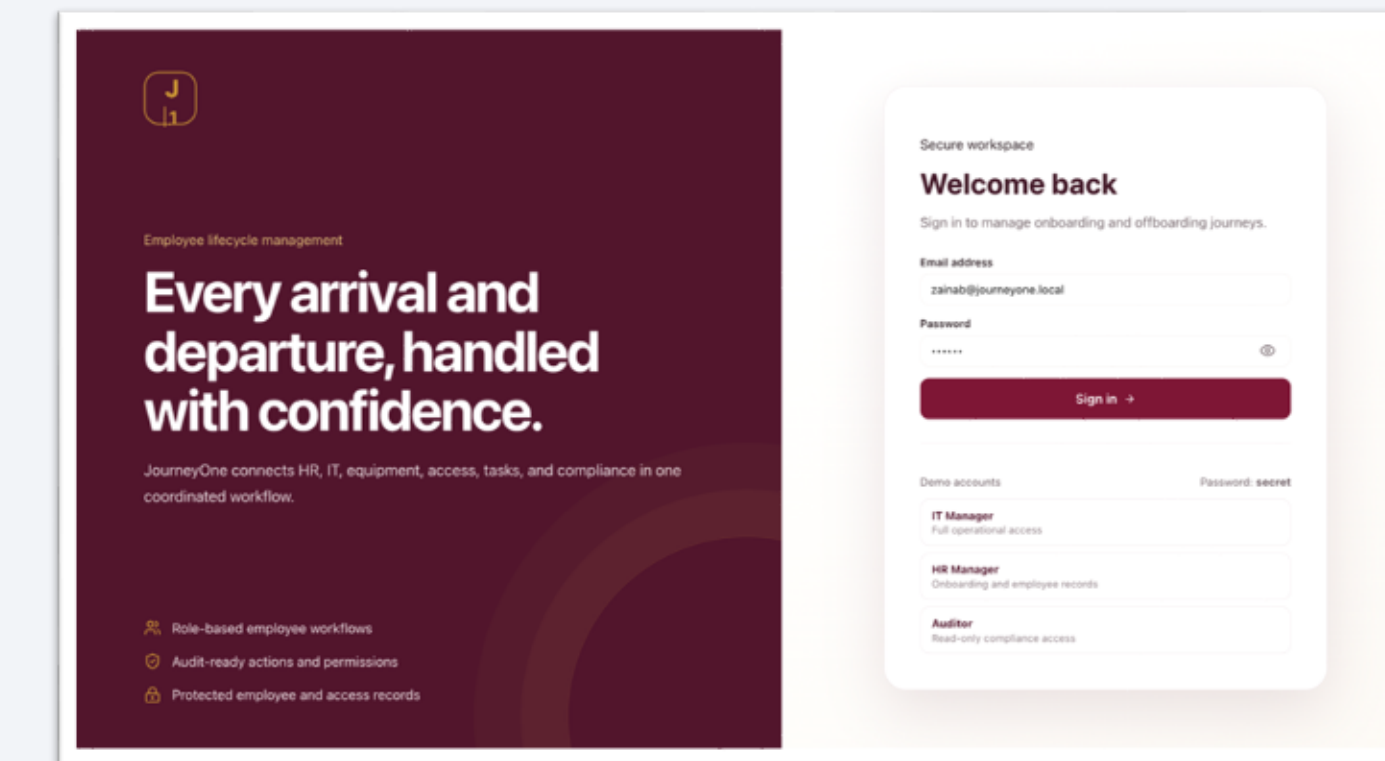


Figure 2. User authentication providing three secure role-based access intro JourneyOne.

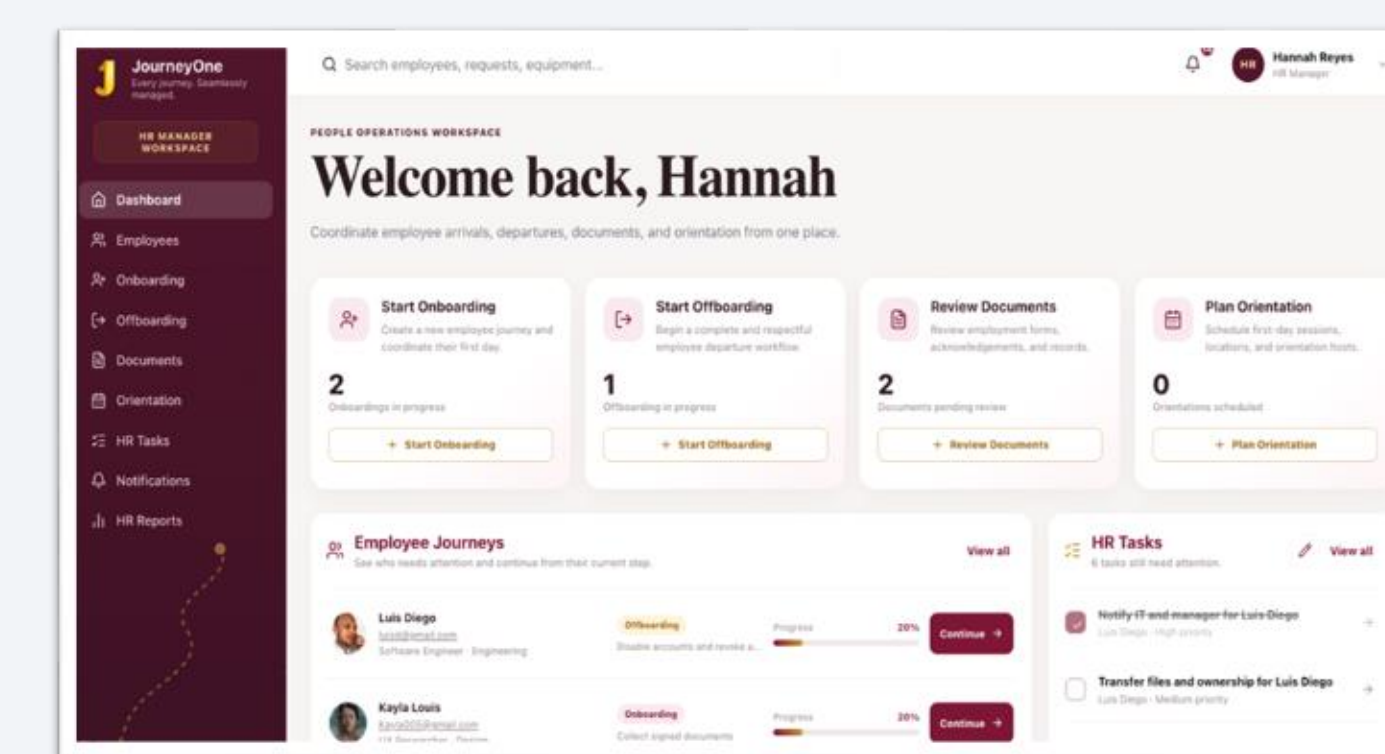


Figure 3. HR Manager dashboard displaying the tasks, employee lifecycle progress and activities.

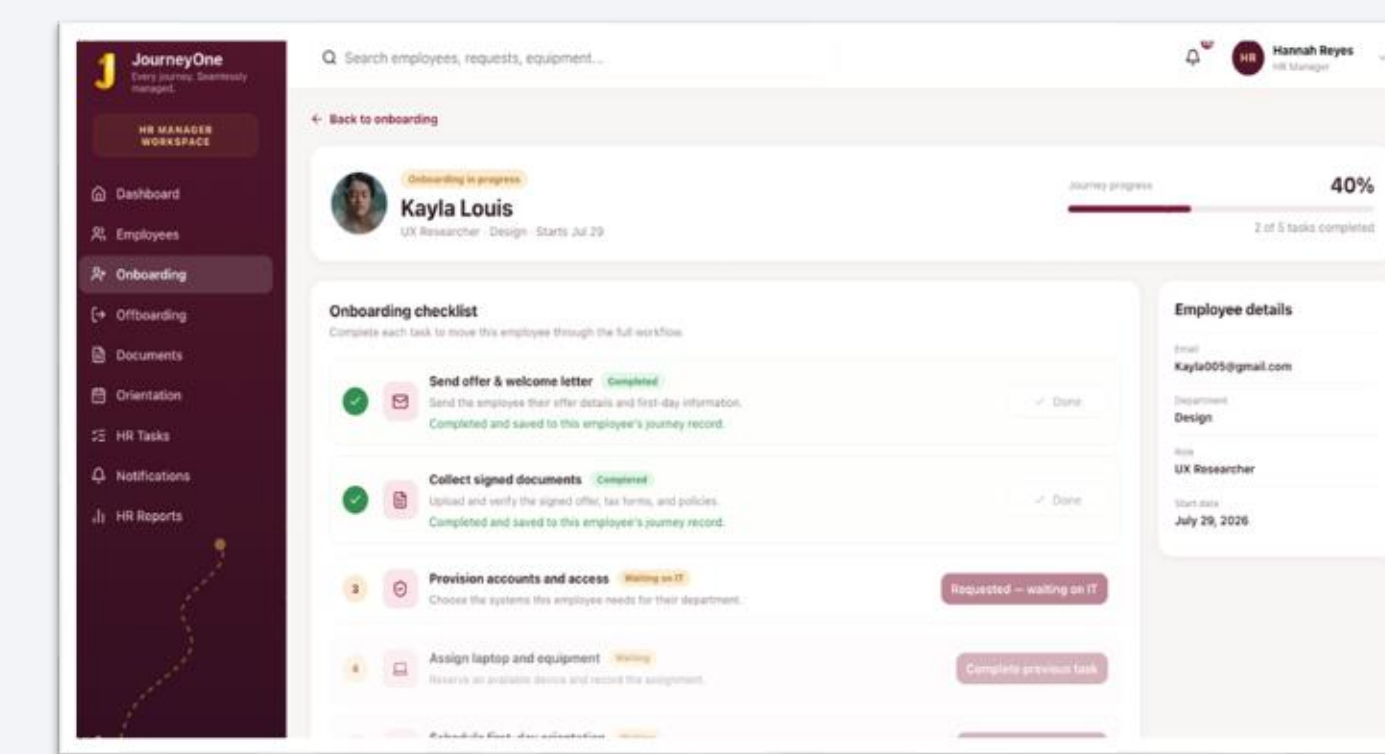


Figure 4. The employee onboarding workflow showing the coordination between IT and HR teams as well as step-by-step tasks.

Results & Evaluation

93%
Task Completion Rate

Users successfully completed the main components of the onboarding and offboarding workflow across the different dashboards by testing real scenarios such as equipment tracking, employee creation, and access management.

90/100
System Usability Scale

Five participants completed a SUS usability assessment, evaluating the navigation, visibility, and workflow clarity of JourneyOne.

100%
Role Access Accuracy

Role-based access testing confirmed each user could only perform the required actions aligned with their responsibility, ensuring secure separation between IT, HR and Auditor workflows.

Systems & Operations (SO6)

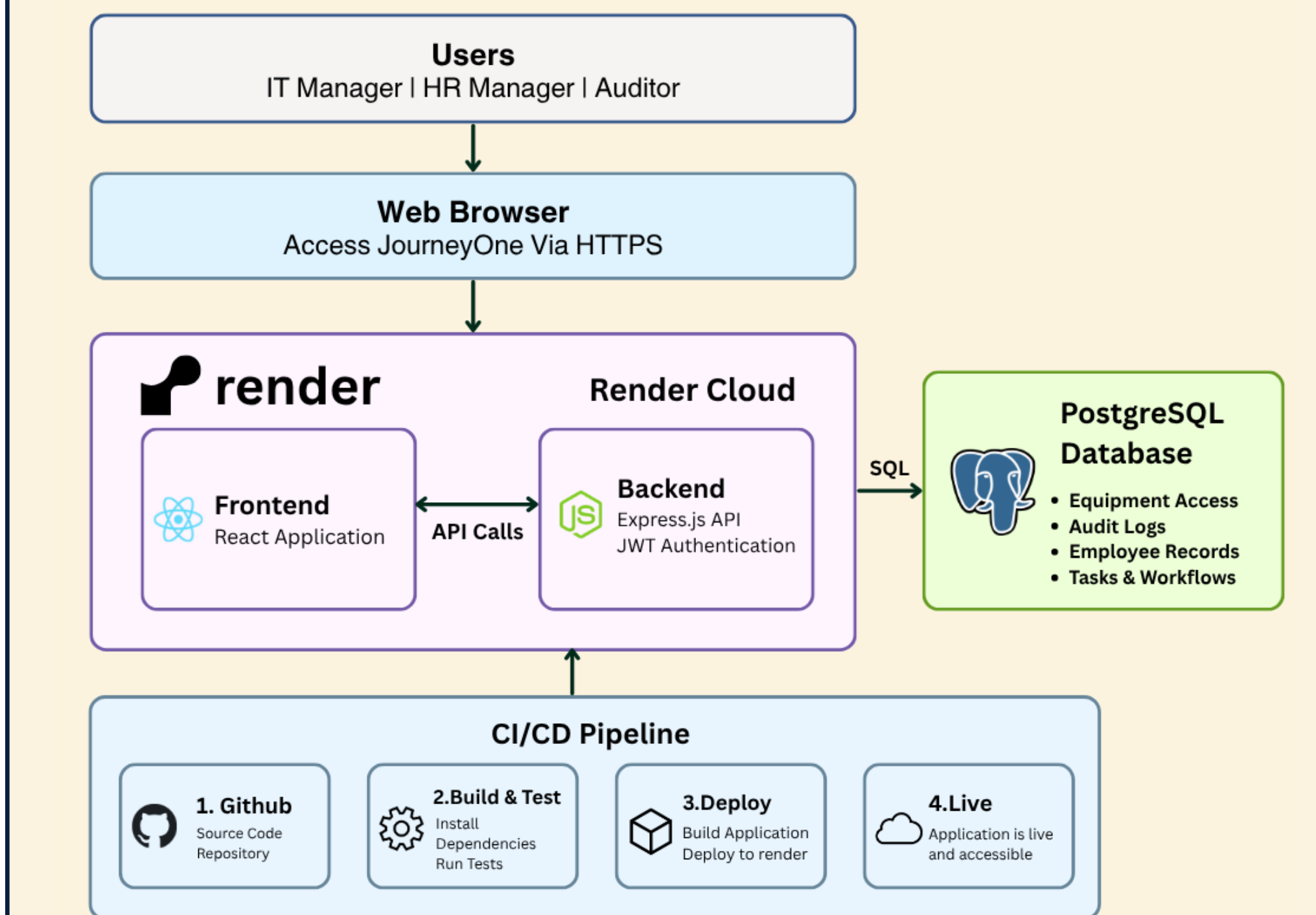


Figure 5. Deployment architecture diagram

CI/CD Highlights

- GitHub automatically starts a new deployment when there are pushed changes to the main branch.
- Render builds and deploys the Express API and React frontend.
- PostgreSQL provides persistent cloud storage for deployed application

Administration

- Role-based account management for IT, HR and Auditor users.
- User maintenance and guide documentation provided for system administration and deployment

What's Next

AI-Assisted Employee Provisioning

Utilize AI to recommend onboarding tasks, equipment, and access based on the departments and roles, reducing manual efforts for the IT and HR teams.

Security Monitoring Dashboard

Provide real-time monitoring into high-risk actions, permission changes and access attempts to improve awareness of security.

Identity System Automation

Implement identity providers to automate account removal, account creation, and access provisioning throughout the employee lifecycle.

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