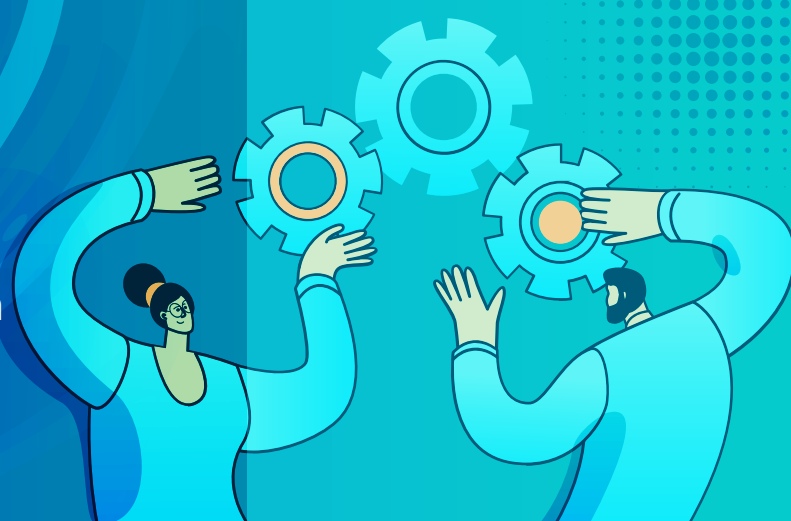# CollabFiles

Suite of Office Products towards an enhanced work place experience

Edited by **NISSY GEORGE**

India's digital transformation, spearheaded by initiatives like Atmanirbhar Bharat and Digital India, aims to create a self-reliant and digitally empowered nation. At the heart of this transformation is CollabFiles, a versatile, cloud-based platform designed to streamline document creation, collaboration, and management for government enterprises. Developed by NIC, it supports seamless cooperation across departments, offering a state-of-the-art solution to enhance workplace efficiency.

In alignment with India's push for self-reliance, CollabFiles is one of the flagship platforms developed to enable government organizations to create, collaborate, and manage office documents in a secure and efficient manner. With the ever-growing demand for secure digital platforms, CollabFiles offers a unified solution for document processing and real-time collaboration, accessible from anywhere on web and mobile devices. Its flexibility and high scalability make it a valuable tool for modern governance, enabling officials to work across ministries and states without technological barriers.

Objectives

The objectives of CollabFiles are clear and targeted at addressing the specific needs of government enterprises:

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CollabFiles is a secure, cloud-based platform developed by NIC to streamline document creation, collaboration, and management for government enterprises. Offering real-time collaboration, integration with government systems, and robust security features, it enables efficient workflows across ministries and states. Designed with scalability in mind, CollabFiles plays a crucial role in modernizing India's government operations under the Digital India initiative.

- To provide a centralized, web-based platform for document creation, management, and collaboration.
- To enable seamless, real-time collaboration on office documents, with role-based access controls to ensure secure sharing.
- To support portability by offering compatibility with industry-standard formats like DOCX, XLSX and PDF.
- To integrate with other government platforms such as NICEmail, SMS, Sandes, and eOffice, ensuring a cohesive and interoperable digital environment.
- To ensure high availability through a robust disaster recovery and business continuity plan, minimizing downtime.

Architecture

The architecture of CollabFiles is built with a layered approach, designed for scalability, security, and interoperability. Users can access the platform from a variety of devices, and the architecture emphasizes security at every level, using features such as Single Sign-On (SSO), data encryption, and secure cloud storage. As illustrated in Figure 7.1, this architecture integrates key components such as access channels, services offered, functional modules, and ICT infrastructure.

> CollabFiles demonstrates commendable performance. Its wide range of features for report drafting, presentation creation, and spreadsheet development has significantly boosted user efficiency. It functions as an all-encompassing solution for both the creation and collaboration on Office documents.
>
> **Vindhya Pratap Singh**
> Addl. GM (IT), DMRC, MoHUA

The platform is designed following the principles of Open API and microservices-based architecture, which allows it to easily integrate with other government platforms. It also supports a high level of scalability, making it capable of handling large volumes of user traffic, which is crucial for government operations.

Features

CollabFiles offers a rich suite of features designed to facilitate seamless document management and collaboration for government users. The platform's key features include:

- **Web-Based, Cloud-Enabled Platform:** The platform is accessible from anywhere, making it easier for government officials to collaborate, regardless of their location.
- **Document Creation and Management:** Users can create, edit, and manage documents, spreadsheets, and presentations with support for industry-standard file formats.
- **Real-Time and Asynchronous Collaboration:** CollabFiles allows multiple users to collaborate on documents simultaneously, whether in real time or asynchronously, supporting remote work and inter-departmental cooperation.
- **File Sharing and Access Controls:** The platform enables secure file sharing, with options for read-only or editable access, and the ability to
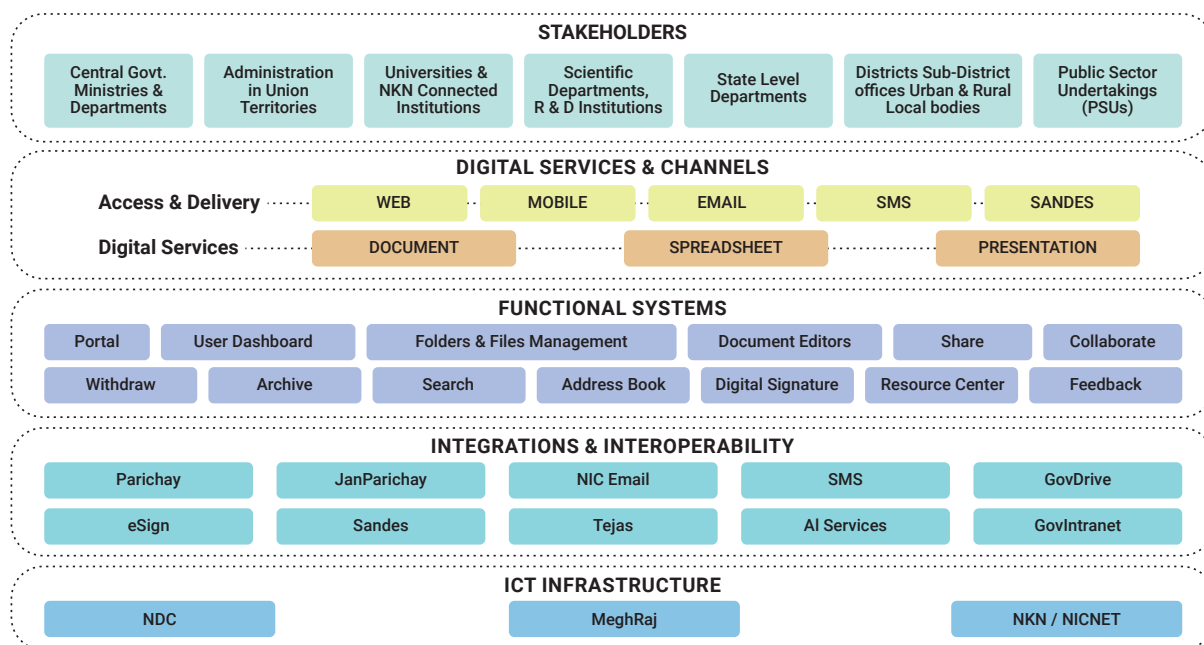
▲ Fig 7.1 Layered Architecture of CollabFiles

share files for a limited time or publicly.

• **Integrated Messaging and Notifications:** Integrated with NICEmail, SMS, and Sandes, CollabFiles sends automatic notifications for file sharing and updates, ensuring users stay informed.

• **Advanced File Management:** Features such as file versioning, renaming, and search enhance efficiency and streamline document management.

• **Dashboards for Monitoring:** Both personalized and admin dashboards provide users with detailed insights into document activity, collaboration statistics, and system usage.

• **Security and Privacy:** The platform is built with strong encryption, access control, and secure cloud storage to protect sensitive government data.

Technologies Used

CollabFiles is built using following technology stack:

• **Development Stack:** It uses ASP.NET Core 8.0, as development framework; Bootstrap 5.3 for responsive design, and PostgreSQL 16 as RDBMS.

• **Deployment Stack:** The platform is deployed on Windows 2019 with IIS 10.0 and leverages third-party office-suite tools. It uses RabbitMQ for message brokering, Redis for caching, and PostgreSQL replication for disaster recovery.

Status

Since its launch, CollabFiles has been adopted by following organizations:

• **Top States:** Delhi (2500+ users), Uttar Pradesh (800+ users), Telangana, Maharashtra, and Karnataka.

• **Top Ministries:** MeitY (3000+ users), Ministry of Communications (1400+ users), and MoHUA.

This broad adoption demonstrates the platform's utility and effectiveness in facilitating collaborative work across government bodies.

Way Forward

CollabFiles, despite its success, faces challenges in tailoring its user interface to diverse needs,
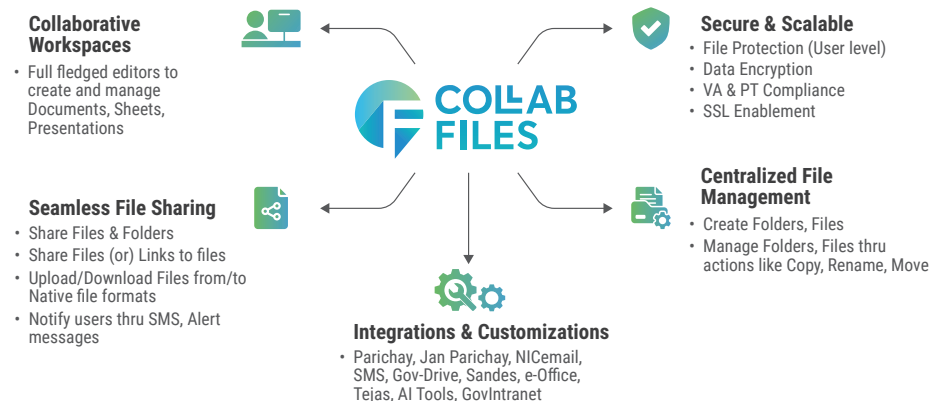
As a long-time user since its inception, I can confidently say that CollabFiles has been invaluable for our team's data and document needs (Share/Receive). Its seamless functionality makes it the ideal choice for collecting and sharing files across different states, even with multiple users accessing them simultaneously. It has truly streamlined our workflow and enhanced collaboration within our organization.

Arvind Kumar Shrivas
Technical Director, Office of The Registrar General & Census Commissioner, MHA

ensuring robust security against cyber threats, and complying with the Digital Personal Data Protection Act (DPDPA) - 2023. Success hinges on secure development, user training, adaptability to technological changes, and performance monitoring. By addressing these and fostering continuous improvement, CollabFiles can remain indispensable for secure and scalable government collaboration.

Contact for more details

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▼ Fig 7.2 Features of CollabFiles

Collaborative Workspaces
• Full fledged editors to create and manage Documents, Sheets, Presentations

Seamless File Sharing
• Share Files & Folders
• Share Files (or) Links to files
• Upload/Download Files from/to Native file formats
• Notify users thru SMS, Alert messages

Secure & Scalable
• File Protection (User level)
• Data Encryption
• VA & PT Compliance
• SSL Enablement

Centralized File Management
• Create Folders, Files
• Manage Folders, Files thru actions like Copy, Rename, Move

Integrations & Customizations
• Parichay, Jan Parichay, NICemail, SMS, Gov-Drive, Sandes, e-Office, Tejas, AI Tools, GovIntranet