

StarBus*

Integrated Bus Services and Booking Portal

Edited by RAJEEV JOSHI



StarBus* is a premier online portal dedicated to enhancing the bus travel experience for both Intra and Inter-State travelers across eight Indian states. It aims to provide a streamlined, user-friendly, and secure platform backed by resilient infrastructure and cutting-edge technology.

With a simple registration, travelers can easily register, plan, reschedule trips, and request refunds for canceled tickets on StarBus*. They can also apply for concessional bus passes, print/view tickets, and access a digital wallet for seamless transactions. Further, they can stay informed with real-time status inquiries and enjoy a range of additional services. However, even without registration, guest users can leverage all the above features.

StarBus* has also streamlined backend operations for State Transport Corporations/ Departments, enabling efficient fleet, crew, and inventory management. StarBus* caters to Common Service Centres (CSC), registered agents, and physical counters, facilitating hassle-free cash bookings.

National Informatics Centre (NIC) first successfully introduced StarBus* to the Uttarakhand Transport Corporation (UTC) as a pioneering portal for traveler bus bookings in 2013. Recognizing common challenges across various State Transport Corporations / Departments (STC/Ds), NIC conducted an extensive nationwide study. This study later paved the way for the visionary concept of One



StarBus* streamlines and enhances bus ticketing services across State Transport Corporations/ Departments. This comprehensive platform seamlessly manages the complete ticket life cycle, offering a wide array of functionalities. From initial search and booking to secure payment processing, effortless cancellation and rescheduling options, real-time status tracking, and a robust user feedback mechanism, StarBus* ensures a holistic and user-centric experience. Its intuitive user interface and standardized workflow contribute to operational efficiency, simplifying complex processes while optimizing the overall journey for travelers and transport providers alike.



there are state-level instances dedicated to each specific STC/D. The OIOB StarBus* instance operates within the cloud environment and incorporates web APIs, enabling seamless integration with the individual STC instances. This setup ensures that travelers have access to a unified booking platform across India. When travelers decide to book a ticket, they are redirected to the respective state instance of the

NIC Uttarakhand has been extending excellent support to Uttarakhand Transport Corporation Since 2013. The automation work which was started with just online booking of 6 number of Volvo buses has now been expanded to almost all areas of working of UTC.

We are happy to know that reach of this solution with name StarBus* is expanded to 7 other states. I appreciate the good work done by NIC. I look forward for creation of new synergy between NIC and Uttarakhand Transport Corporation for continued support and effective results.

I wish all the best to NIC in all its endeavor.



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India One Bus – StarBus* (OIOB – StarBus*), revolutionizing bus travel solutions across the nation.

NIC's approach to implementing the One India One Bus (OIOB) solution involves two integral aspects. The first aspect centres on the establishment of an integrated central portal, which serves as a hub for all STC/Ds to offer their bus-related services to travelers. Simultaneously,

STC, maintaining a localized experience.

The second critical component of StarBus* involves creating individual, state-specific instances for various transport corporations, with integration into the central instance through APIs. These instances are hosted within the respective state's data centres or an alternative data centre if needed.

StarBus* provides a versatile package of



StarBus* Timeline

2013
UTC 1.0

Booking portal for 6 No of Volvo Buses

2015
UTC 2.0

Full Fledged Booking portal

2019
UTC 3.0

Unified Portal Implemented in 2 States & International Service to Nepal

2021
StarBus

Software Product & Implemented in 8 States

2023-24
OIOB

One India One Bus Booking Portal Ready to replicate in entire Country

Features



Web portal

- Search & Book Ticket
- Ticket Cancellation
- Wallet
- Discounts
- Track My Bus
- Rating & Complaints
- Raise Alert
- Instant Refund Status



Mobile Apps

- Pathik for Travellers
- Device Independent ETM APP for Enroute Ticketing, Bus Inspection and Trip Chart
- Counter/Agent
- Booking



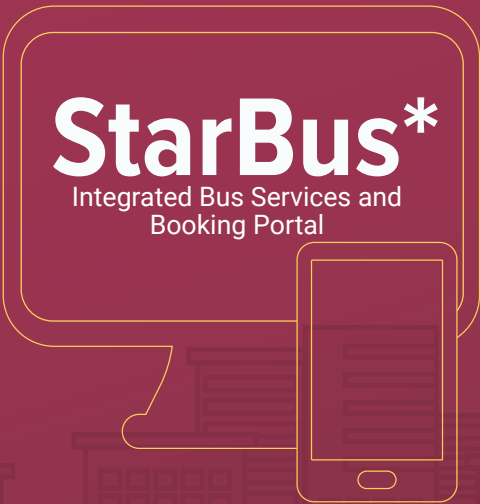
Agents

- Online/Current Booking
- Trip Chart Generation
- Online Topup
- Real-time revenue Sharing



CSC

- Online Booking
- Online Topup
- Trip Chart Generation



Key Components



Fleet Management

Deployment & Management of Bus, & EBTM



Crew Management

Human Resource Management, Duty Allotment & Many more functions



Work Shops, Stores & Inventory

Bus Repair & Workshop Management. Automation of Stores and Inventory Management



Bus Passes

Issuance of QR Code based concessional Passes. Integrated with EBTM



Bus Booking & Cancellations

Online, Current Seat and Chartered Bus Bookings. Cancellation & Timely Refund. Many more functions

OIOB StarBus*

Integrated Instance

Travellers



State Instances

- Uttarakhand
- Andaman & N
- Arunachal
- J & K
- Sikkim
- Tripura
- Chandigarh



Travellers





▲ Fig 8.5: Launch of StarBus* in (a) Chandigarh and (b) Andaman & Nicobar Islands

functionalities, which can be configured to suit the specific needs and preferences of each state's transport corporation or department. This comprehensive approach aims to streamline and enhance the bus travel experience for both travelers and the organizations managing transportation services.

Features

- **Effortless Booking:** Seamlessly search and book bus journeys based on departure and arrival stations, travel date, and preferred bus service type
- **Secure Transactions:** Ensure safe transactions with a secure payment option, safeguarding your financial information
- **Real-time Bus Information:** Track bus locations in real-time using GPS technology, enhancing your travel experience
- **Self-Service Dashboard:** Empower travelers with a user-friendly self-service dashboard, putting control at your fingertips
- **Bus Pass Management:** Streamline bus pass application, processing, and issuance through an efficient online system
- **Comprehensive Infrastructure Management:** Efficiently manage all aspects of your transport service, including vehicles, workforce, workshops, fuel pumps, booking counters, and authorized agents representing an STC/D
- **Data-Driven Decision Support:** Benefit from insightful dashboards and comprehensive Management Information Systems (MIS) reporting, supported by data interpretation, for informed decision-making
- **Mobile App Convenience:** Access the system conveniently through mobile apps designed for travelers, ticket inspectors, and conductors

Architecture

StarBus* is a cloud-based application boasts a secure three-layer architecture.

- **Application Layer:** Serves as the user interface, catering to travelers, crew members, and management
- **Business Layer:** Houses essential business rules for various services and maintains master data
- **Database Layer:** Ensures the back-end database's integrity with rigorous security measures

Each state operates within a separate instance, maintaining an exclusive and equally secure three-layer architecture tailored to its specific needs.

Technology Stack

- **Front end:** ASP.net
- **Database server:** PostgreSQL
- **Web server:** Microsoft IIS version 8.0 and above.
- **System software:** Operating system Microsoft Windows 2016 R2 or above
- **Mobile application:** Android and iOS

Impact

As of 2022-23, StarBus* has been actively operational across eight Indian states: and union territories viz. Uttarakhand, Arunachal Pradesh, Sikkim, Chandigarh, Andaman & Nicobar Islands, Jammu & Kashmir, and Tripura. Its influence on state bus services is as follows:

- **Digital Payments Promotion:** Embracing digital payment solutions, reducing reliance on cash transactions

- **Paperless Efficiency:** Streamlined workflows and digitized processes reduce paper usage, conserving resources
- **Effortless Resource Management:** Online resource management enhances coordination and real-time information flow
- **Data-Driven Decision-Making:** Actionable insights via Management Information Systems (MIS) reports
- **Standardized Operations:** Ensuring consistency in data, formats, and work methods
- **Strategic Oversight:** Senior STC/D management gains a comprehensive bird's-eye view of operations for informed decision-making

Way Forward

The future of StarBus* focuses on user-centric enhancements, streamlined integration, and STC/D customization.

The team is committed to expanding StarBus*' search functionality, ensuring API connectivity between central and state instances, and optimizing Single Sign-On for enhanced user convenience and security.

In addition, the team intends to adapt StarBus* to STC/D requirements and integrate third-party bus services to enhance the traveler experience and diversify revenue streams. These strategic moves propel StarBus* into a customer-focused and dynamic future.

Contact for more details

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Observing CYBER SECURITY Month

Information Security Tips

October 2023



Information security is paramount at all times



Never share passwords



Inform users about the Information Security Policies



Keep screen locked and desk cleaned



Strong passwords, stored in Keeper



Do not allow use of a private PC/laptop for business purposes



Classify Information according to its security levels



Report incidents



Destroy printed classified documents after use



Never exchange user data by mail (e.g. data migration)