

Session ID & Force Logout Implementation - Detailed Documentation

1. Objective

This document explains the implementation of Session ID based login tracking, exclusive login enforcement, force logout, polling-based detection, and automatic logout for Agents and Supervisors.

2. Database Table Used

Primary Table: login_logout

Column	Purpose
agent_name	Stores Agent/Supervisor username
agent_status	Login / Logout / FORCE_LOGOUT
login_timestamp	Login Time
logout_timestamp	Logout Time
duration	Session Duration
session_id	Unique Session Identifier
is_active	Session Active Flag

3. Files Modified (Full Change List)

- Backend: routes/Login.py
- Backend: main.py (router registration)
- Models: LoginLogout model
- Frontend: Welcome.tsx (Login Handling)
- Frontend: Dashboard.tsx (Polling + Auto Logout)
- Frontend: AuthContext.tsx (Session Storage)
- Config: backendConfig.ts

4. Login Flow (Agent & Supervisor)

- User submits username and password
- Backend verifies against DirectorySearch
- Session ID is generated using UUID4
- Session saved into login_logout table
- Session ID returned to frontend
- Frontend stores session_id in LocalStorage

5. Force Logout Flow

- Second login attempt detected
- Backend sets agent_status to FORCE_LOGOUT
- is_active flag set to False

- - Frontend polling detects FORCE_LOGOUT
- - User is forcefully redirected to login page

6. Polling Mechanism (Dashboard.tsx)

- - Polling interval every 3 seconds
- - session_id sent to /check-force-logout endpoint
- - If force_logout == true LocalStorage cleared
- - User redirected to /login instantly

7. Manual Logout Mechanism

- - /logout API updates logout_timestamp
- - agent_status updated to Logout
- - duration is calculated from login time
- - Session marked as inactive

8. Auto Logout on Browser Close

- - navigator.sendBeacon sends logout request
- - Session safely closed even if browser crashes
- - Prevents ghost login sessions

9. Security & Reliability Benefits

- - Prevents multiple logins with same account
- - Forces inactive users out automatically
- - Improves audit trail
- - Real-time session tracking
- - Supervisor and Agent both secured