JIRA Ticket – AskBot

Internal GenAI Assistant for Enterprise Services

Project: Internal GenAI Platform – AskBot

Summary: Build a secure, role-aware, GenAI-powered internal assistant to handle HR, Payroll, Training, and Insurance queries via LLMs, scoped agents, and secure system APIs.

Owner: Security Architecture / LLM Applications Product Team

Created: June 2025

Maturity Level: MCP-Aware, Agentic-Controlled Execution, RBAC-Scoped Plugins

Objective

AskBot is a secure, GenAI-enabled enterprise assistant embedded into the employee portal. It empowers employees to self-serve through natural language interactions while enforcing security, observability, and permission boundaries using agentic control and task-scoped tool execution (MCP model).

Key Functional Modules

- LLM Orchestration
- Agent Router
- Scoped Plugins (Tools)
- Context Memory & Observability
- Guardrails + Redaction Layer
- Vault Integration
- RBAC Enforcement (MCP style)

Integrated Agents, Tools, and APIs

Includes API path, new vs. existing, purpose, and data handled. See table in workshop handout for full matrix.

Agent / Tool	API Invoked	New or Existing	Purpose / Functionality	Data Handled
Payslip Agent	/api/payroll/payslip/{month}	✅ Existing	Fetch PDF copy of payslip	Name, Salary, PAN, Bank Account
Salary Breakdown Tool	/api/payroll/breakdown	✅ Existing	Return earnings/deductions	Component-wise salary details
HR Policy Agent	/api/hr/policies/search	✅ Existing	Answer HR policy queries	Text-based responses, policy categories
Leave Balance Agent	/api/hr/leave/balance	✅ Existing	Show current leave balance	UserID, Leave counts
Training Agent	/api/training/courses/assigned	✅ Existing	List current trainings	UserID, CourseIDs
Insurance Agent	/api/insurance/summary	✅ Existing	Show insurance coverage	UserID, InsuranceID, Tiers
Claim Status Checker	/api/insurance/claim/{claimId}	✅ Existing	Track status of medical claims	ClaimID, PII, Medical Records
Routing Agent	/api/escalation/create	🆕 New	Raise unresolved issue to HR/Admin	UserID, Query Metadata
Agent Router (MCP)	internal/task_router/dispatch	🆕 New	Validates scope, dispatches tools	Agent Name, Role, Intent
PII Redaction Layer	Intercepts before LLM output	✅ Existing (lib)	Regex, ReLLM, LangChain filtering	Name, PAN, Email, Bank
Secrets Vault	vault/api/token/read	✅ Existing	Fetch API tokens securely	Plugin Tokens, Role Credentials

Security Architecture & Controls

- Prompt Injection: Guardrails + Regex Validation + Schema Enforcement
- Agent Misuse (MCP): Scoped tool access via Agent Router
- Sensitive Data Leakage: Real-time PII masking
- Over-Privilege: RBAC-scoped plugins only
- Token Exposure: Vault-only runtime access
- LLM Overreliance: Escalation to HR if confidence drops

Data Categories Handled

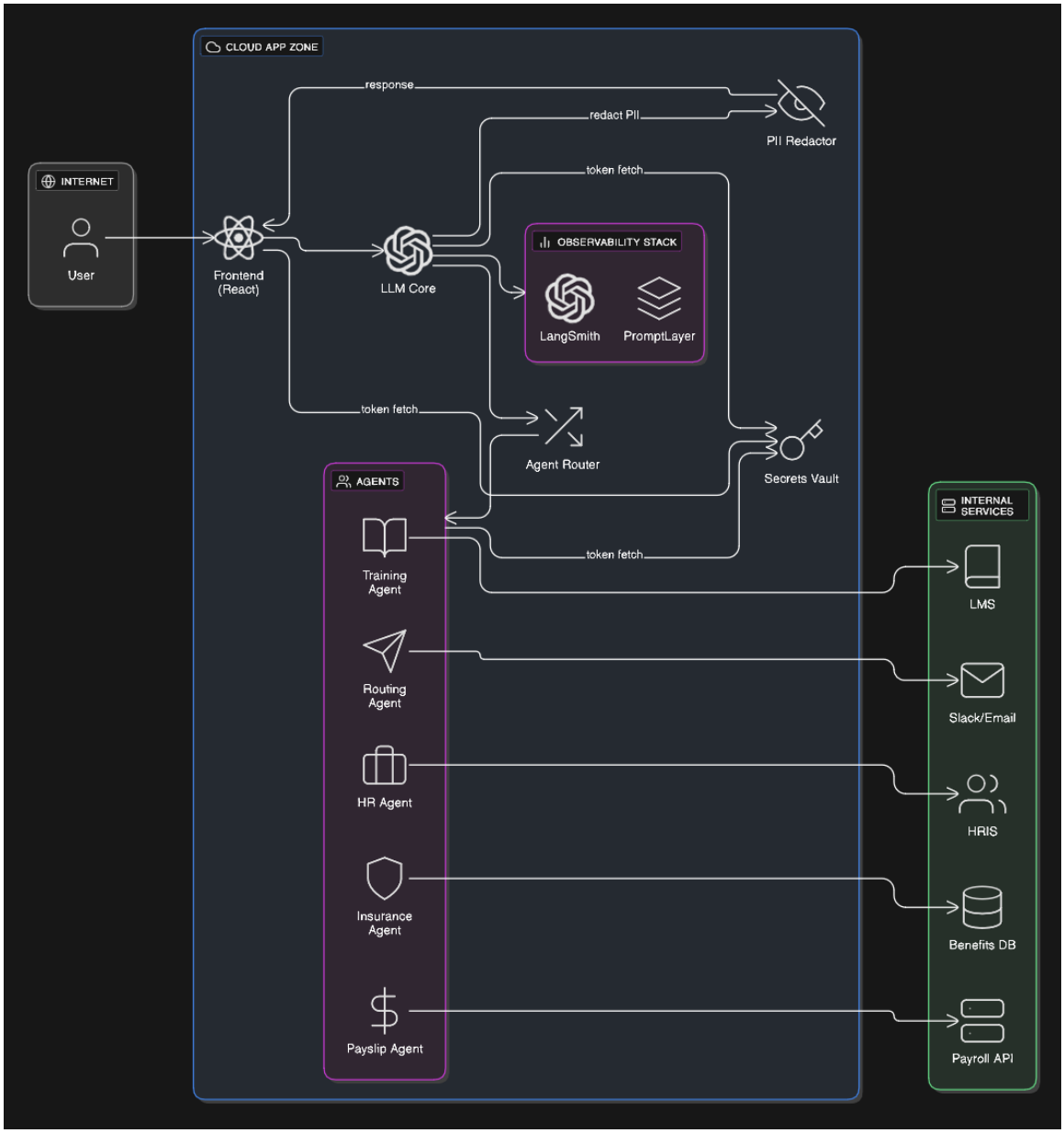
- PII: Name, Email, PAN, EmployeeID
- Salary & Compensation: HRA, Tax Components
- Health/Insurance: Claim ID, TPA Data
- Training: Assigned course metadata
- HR Policies: Internal knowledge base access

System Architecture Summary

1. User input → LLM
2. LLM → Agent Router
3. Agent → Internal API via Vault token
4. Output → Guardrails + Redaction
5. Response → Web UI

Acceptance Criteria

- Agent logs must include prompt history and trace ID
- Vault secrets are never cached or exposed
- Guardrails validated against test cases
- Escalation must work when confidence drops
- All plugin access must validate via MCP Router
- Threat Modeling artifact must be attached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Frontend (React)
LLM Core
OBSERVABILITY STACK
LangSmith
PromptLayer
token fetch
Agent Router
Secrets Vault
AGENTS
INTERNAL SERVICES
token fetch
Training Agent
LMS
Routing Agent
Slack/Email
HR Agent
HRIS
Insurance Agent
Benefits DB
Payslip Agent
Payroll API

☑ Functional Use Cases (Agile Format)

Payslip Download

- As an employee, I want to ask AskBot for my last 3 months' payslips so that I can download and review them easily.

Leave Balance Check

- As an employee, I want to know how many casual leaves I have left so I can plan my time off effectively.

Training Completion Status

- As an employee, I want to ask AskBot if I have any pending compliance trainings so I can stay compliant.

Insurance Claim Status

- As an employee, I want to know the status of my latest insurance claim so I can follow up with HR if needed.

Policy Reference

- As a new hire, I want to ask about the company’s travel reimbursement policy so I don’t miss eligible claims.