INFOMINEZ PRIVATE LIMITED

ISO 9001: 2015 Certified | DPIIT Certificate No.: DIPP165968

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Case Study

ATM Incident Management System

Background

An ATM is a sophisticated machine that provides essential services such as cash withdrawal, balance inquiry, PIN changes, and mini statements, among others. Since ATMs are geographically distributed across various locations, companies aiming to ensure smooth ATM operations must maintain back-office and field teams.

Given the usability of ATMs, several stakeholders are involved in various operations and use a centralized system which provide each detail about their ATMs and require real-time status of each ATM like Up or down, having cash or no cash, users are able perform designated operation or not?

ATM Incident Management System is a complete EPR system around ATM operations. Every stakeholder is having highest priority to make ATM up and running 24x7 and any outage or downtime need to be taken care on immediate basis.

In order make sure high availability of ATMs, operation team is divided into 3 parts.

- Backoffice operation team**:** take care of coordination of between field team and other stakeholders. A full featured web admin system required to help them to ease out the operations.
- Field team**:** is the first respondent who visit ATM location physically and check when any ATM incident happen to their assigned ATM. A full featured mobile application required to help them to ease out the field operation
- Specialist Vendors**:** When first respondent field user not able to resolve the incident, then it will be assigned to specialist vendor like ○ ATM Vendor ○ Cash Vendor ○ VSAT Vendor ○ UPS Vendor ○ AC Vendor ○ House Keeping Vendor etc.

Challenges

- Involvement of various stakeholders like Bank, ATM OEM, Operations etc.

  Separation of data for different sets of stakeholders are eligible to access only their designated ATMs.

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- Every stakeholder must see real-time status of their ATMs health and incident status if any.
- A user-friendly admin system specially for the operation's team to keep control of every open incident.
- Require dispatching incident details to respective ATM vendor system as they have their own inhouse incident management systems.
- Complete details of an incident must be provided to every next-level vendor to provide complete awareness about what happened in the past.
- Require extensive Reporting system for different stakeholders.
- Provide high-level overview to management about all ATMs managed by this system and status of current outage.

Solutions

- Developed a comprehensive role-based permission management from the admin system and a SaaS based separation of ATM access.
- Automated ticket generation of incidents and auto assignment based on which ATM it belongs to, and similarly automatic closure of incident based on switch feed.
- Developed a very complex incident listing based on almost all possible filter and sort option.
- Automatic incident detail dispatch to ATM vendors' system after a TAT and keep it up to date from fetching their progress from vendor system.
- Developed a sophisticated tracking system which collects every detail and activity performed on any incident by any stakeholder user.
- Developed a complex reporting engine which fulfils all reporting requirements for all stakeholder users and delivers reports in different formats.
- Developed a comprehensive Dashboard which shows real-time status of all ATMs and their incidents for all stakeholders in a user-friendly way.

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Technology Used:

- Backend
  - Microservices**:** Developed in Java Spring-Boot framework.
    - Database**:** MS SQL Server
    - Vendor Integration**:** SOAP, XML, WSDL, REST etc.
- Frontend
    - Web**:** AngularJS for a web admin system.
    - Mobile**:** Kotlin based native application for Android.
- Deployment
    - Web**:** EC2 of AWS.
    - Database**:** RDS of AWS

Benefits

- Achieved complete automation of ticket generation, closure, and dispatching to vendor.
- Operation's team can see a complete 360-degree view of all action/activity performed during ticket lifecycle
- All stakeholders can get their desired report about ATMs and their incidents as per their needs

All stakeholders and their user hierarchy can get real-time MIS reports and Dashboard to Management.

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