Ube Industries achieves 99.98% availability for 1100 SAP interfaces with Mule ESB

Founded in 1897 as a coal mining company in Ube City, Japan, Ube Industries now offers diversified products through 140+ group companies, two headquarters and multiple factories. Managing data from these companies and factories across disparate production, logistics and accounting systems requires a complex network of internal management portals, frequently delivered via SAP.

Challenge

Ube Industries adopted a commercial enterprise application integration (EAI) tool over a decade ago. When they first developed their ecosystem, stability and maintainability were not a problem. However, the volume and type of endpoints requiring integration increased dramatically over time and Ube's legacy EAI tool could not scale to meet growing business needs. By 2013, the number of endpoints had risen to over 100 and system failures happened often. Identifying the root cause became increasingly difficult and a single bug could impact large portions of the architecture. When system downtime did occur, transactions within the affected systems ground to a halt. Recovering from these system failures required manual intervention, which increased dependency on individual skills and lengthened resolution time.

With support of that EAI tool ending in January 2013, the mission critical nature of the SAP logistics and accounting systems, and business impacts associated with failed or delayed payments and distributions, Ube decided to move to a new architecture.

Solution

Ube's team decided to move to a new hub system that leveraged an enterprise service bus (ESB). The ESB would integrate business data between SAP ERP, Oracle, SQL Server, and over 100 homegrown and legacy applications.

To minimize migration time to market and resolve issues with the stability and maintainability of their existing architecture, Ube identified that the best integration solution should meet the following criteria:

- Ability to develop custom functions and logic with minimal system modifications
- Easy to use development tooling
- Availability of development resources
- Certified, out-of-the box connectivity with the SAP ECC ERP system
- High availability and scalability

Company Profile

- Industry: Manufacturing
- Geography: Japan & Worldwide
- Website: www.ube-ind.co.jp/english

Challenge

- Connect 1100+ SAP interfaces in a highly available ecosystem
- Provide error isolation and containment
- Reduce maintenance and operation costs

> **After implementing Mule ESB, system uptime has increased to 99.98% and downtime per each incident has been reduced by 80%."**
>
> - Hiroshi Tomokage,
> GM, Ube Industries, Information Systems

The result of Ube's evaluation on several candidate EAI and ESB products showed that only Mule ESB Enterprise met all five criteria. As an open source platform, MuleSoft delivers the world's largest integration developer community with over 150,000 members. The Mule Studio graphical design environment provided the Ube team with an easy on-ramp and powerful tooling for custom development. The SAP Certified MuleSoft Enterprise Gateway for SAP provided Ube with bi-directional communication to all of Ube's SAP solutions via BAPI.

Through collaboration with OGIS-RI (a Japanese system integrator and preferred Mule partner), Ube's team, Ube Industries and UIS (a Japanese system integrator and a group company of Ube Industries), SAP and 100 other enterprise systems with 1100 interfaces were connected in just 3 months on Mule ESB.

Results

With Mule ESB at the core, the new architecture achieved better maintainability, availability, and stability. The availability of the system increased from 99.7% to 99.98%. System downtime associated with required changes also decreased significantly, from one hour to ten minutes per planned migration. This improved maintainability, thus significantly reducing maintenance and operation cost.

According to Katsuya Ooba, OGIS-RI, "Mule ESB has proven itself to be highly available, stable, and scalable. Ube Industries sees massive potential in expanding the use of Mule ESB across the enterprise, with the goal of being that it will someday provide for all of Ube Industries integration needs.

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Benefits

- 80% reduction in system downtime

- Availability increased to 99.98%

- Developed and deployed 1100 interfaces in 3 months

- Reduced maintenance and operational costs

> **Mule ESB has proven itself to be highly available & stable, which has given Ube the confidence to expand use of it across the enterprise, with the goal being that it will someday provide for all of Ube Industries integration needs."**
>
> - Katsuya Ooba,
>
> OGIS-RI, Cloud Integration Service & Service Business Divisions