Case Study: Adoption of Dell Boomi AtomSphere iPaaS by Novartis

Simplifying integration and realizing TCO savings and faster time-to-value with iPaaS

SUMMARY

Catalyst

Novartis was looking for a suitable alternative to two on-premise middleware solutions that were expensive to maintain and lacked the required flexibility. For an organization interested in achieving greater agility at a lower total cost of ownership (TCO), the proposition of extending the use of traditional middleware solutions to cloud and mobile integration scenarios was not attractive. A shift to Dell Boomi AtomSphere integration PaaS (iPaaS) helped reduce development effort and delivered significant cost savings, thereby strengthening the business case for extending its use to a range of integration scenarios.

Ovum view

In the current operating environment, IT is under pressure to achieve integration in the shortest possible time and within the allocated budget. The expenditure and implementation times associated with traditional integration approaches including service-oriented architecture (SOA) are not always in line with the IT budgets and project plans of many organizations. Such time and budget constraints call for an integration approach that can reduce the implementation time for integration projects from months to weeks or even days, while also delivering desired TCO savings. iPaaS can meet these requirements.

Integration is rarely a core competency of IT and in many organizations development and maintenance work related to integration projects is outsourced to system integrators (SIs). In such cases, costs associated with professional/consulting services for integration projects using traditional middleware solutions could add up to an investment proposition that is difficult to sustain. It is therefore important that IT leaders focusing on integration projects understand ground realities and look for suitable

alternatives that provide the necessary flexibility and scalability at a lower TCO. Not every integration project needs the best possible solution with advanced capabilities. In most cases, pragmatic trade-offs between competing business and IT objectives can simplify the choice of integration approach.

Dell Boomi AtomSphere iPaaS caters for a range of integration needs, including software-as-a-service (SaaS), on-premise, and B2B integration. The solution provides an easy-to-use configuration interface for faster development (via a "drag-and-drop" approach) of integration flows. A range of pre-built connectors and processes offered with the solution help increase the productivity of development process.

Key messages

- The shift to Dell Boomi AtomSphere iPaaS was driven by the need to reduce development effort and achieve faster time-to-value. Novartis was interested in a flexible approach that delivers the requisite scalability and performance at a lower TCO.
- The deployment flexibility offered by AtomSphere iPaaS along with the provision of centralized control over distributed integration processes helped alleviate data security and privacy concerns.
- AtomSphere iPaaS helped reduce development effort, allowing deployment of twice the number of interfaces and processes in a sixth of the time than what was possible earlier.
- Organizations should ask for a proof-of-concept (POC) and check that the results are in line with expectations before initiating implementation.

RECOMMENDATIONS FOR ENTERPRISES

Key lessons learned

IT should develop a holistic application integration strategy and check if the existing integration infrastructure is capable of supporting current and imminent integration needs. Another point that should be considered is the expenditure associated with maintaining on-premise integration infrastructure, including that on middleware, hardware, and network upgrades. Based on this analysis, IT should select a suitable integration approach capable of delivering desired (and not necessarily, the "most advanced") integration capabilities on time and within the allocated budget. Novartis was able to understand the strategic misfit between operational aspects of existing on-premise integration solutions and the vision of a cloud-enabled agile enterprise, and accordingly decided to shift to a more flexible and simple approach with a smaller footprint.

POC should be a mandatory step in the vendor selection process. POC allows organizations to check if the particular solution is capable of meeting their specific integration requirements. In this case, results of a POC evaluation clearly differentiated AtomSphere iPaaS from the rest of the competing solutions and were sufficient to indicate that a potential shift to iPaaS will help in reducing development effort and deliver significant cost savings.

IT should follow a well-planned approach to infrastructure modernization and consolidation, and this process should not be confined to a few select initiatives. The second phase of the project involving

migration of interfaces associated with on-premise integration solutions to AtomSphere iPaaS was initiated earlier than planned once Novartis's integration services group realized the potential cost savings that could be achieved with this move. Novartis plans to extend the use of AtomSphere iPaaS to cover a wider range of integration scenarios, including cloud and mobile integration.

SOLUTION SELECTION

Background

Novartis International AG is a pharmaceutical company based in Basel, Switzerland. The company employs around 100,000 people in 140 countries and has core businesses in pharmaceuticals, vaccines and diagnostics, and consumer health. Prior to the adoption of Dell Boomi AtomSphere iPaaS, Novartis was using two on-premise middleware solutions. The first solution was being used for three years and, according to Novartis estimates, the TCO* per interface for this solution was around $50,000. With this solution, even smaller development changes required extensive effort and time, limiting the number of projects that could be delivered. Given that Novartis had outsourced development and maintenance work to SIs, it was important that development and maintenance related costs were kept in check. In addition, Novartis was not able to realize the true value of the SOA stack of which this solution was a constituent.

The second solution was a specialty middleware product. The TCO per interface for this solution was around $30,000. In this case, hardware and software upgrades were expensive and time consuming, and the overall value proposition did not align with the requirements of an enterprise interested in achieving greater IT flexibility by using cloud services. As integration capabilities delivered by this solution involved proprietary interfaces, the associated development work was outsourced to a specialized SI. Compliance risks with some of the projects were also apparent.

As most of the integration scenarios were not very complex, advanced features and functionality of the two on-premise integration solutions remained unused to a great extent. The lack of flexibility in extending the use of on-premise middleware to a wide range of application-to-application and B2B integration scenarios, including cloud and mobile integration, was a major concern.

*Note: TCO figures for on-premise middleware solutions estimated according to the following equation:

TCO (on-premise middleware) = middleware licensing costs + cost of maintaining underlying infrastructure + costs associated with customization and development including professional services

Selection criteria

Novartis was interested in shifting to an integration approach capable of delivering faster time-to-value, while ensuring the requisite scalability and performance at a lower TCO. In addition to TCO (which takes into account maintenance costs and effort), flexibility and ease of use were the two other key evaluation criteria. Six solutions offered by different vendors were evaluated against these criteria. Dell Boomi AtomSphere iPaaS was selected on the basis of a POC evaluation.

The integration scenario used for POC evaluation involved updating Salesforce.com user profile data with internal Novartis data and retiring accounts as required. With AtomSphere iPaaS, the task was

completed in 25 hours. The process involved modification of endpoint interfaces provided by Dell Boomi to meet the specific data mapping requirements of Novartis. According to Novartis estimates, AtomSphere delivered cost savings of around $18,250 or 73% when compared to existing on-premise middleware solutions.

In the case of on-premise-to-SaaS integration, AtomSphere provides a secure means of integration by enabling encryption of data sent outside the firewall. This is managed centrally and can be turned on or off by the user. In the case of on-premise-to-on-premise integration, no data is sent outside the firewall. A Boomi "Atom" (or runtime engine) can be deployed in the cloud for enabling SaaS-to-SaaS integration, or on-premise for enabling SaaS-to-on-premise and on-premise-to-on-premise integration. This deployment flexibility, along with the provision of centralized control over distributed integration processes, helped alleviate data security and privacy concerns.

SOLUTION ANALYSIS

Solution deployment

Dell Boomi AtomSphere iPaaS was selected as part of the strategy to reduce TCO and simplify development via consolidation and retirement of existing integration infrastructure. As per this plan, 31 integration processes associated with the two on-premise integration solutions were to be migrated to AtomSphere iPaaS.

The first phase of the project was undertaken and paid for by Novartis's integration services group, and involved the migration of interfaces associated with the first on-premise middleware solution to AtomSphere iPaaS. This phase of the project also involved server and process consolidation and was completed in around six months.

The second phase of the project involving migration of interfaces associated with the specialty middleware product to AtomSphere iPaaS is currently under way. Given the benefits realized by Novartis during the first phase of this project, the second phase was initiated earlier than planned. Novartis's existing SI relationships are able to support migration projects, reducing the overall effort.

Getting buy-in from internal stakeholders for the use of iPaaS was not easy, especially as Novartis is a multi-divisional and multinational organization, with several rounds of approvals and negotiations required for getting the go-ahead for any IT initiative with strategic implications. In this case, there were implications related to people and technical skill changes. The results of the first phase have strengthened confidence in the choice of AtomSphere iPaaS as an alternative to traditional on-premise integration solutions.

Outcomes

According to Novartis estimates, the first phase of the project delivered overall cost savings of around 30%, with a 50% reduction in server capacity requirement. AtomSphere iPaaS reduced the development time for new interfaces to two to three weeks. As as a result, Novartis was able to deploy twice the number of interfaces and processes in a sixth of the time than what was possible earlier. Pre-built connectors and processes offered by AtomSphere iPaaS significantly contributed to the

reduction in development effort. One of the main reasons behind TCO savings was the flexibility offered by AtomSphere iPaaS of increasing or decreasing IT capacity according to business requirements.

Novartis expects the second phase of this project to deliver TCO savings of 30–35%. Novartis plans to extend the use of AtomSphere iPaaS to mobile integration scenarios. More specifically, AtomSphere iPaaS will help expose clinical data via representational state transfer (REST) APIs for consumption by mobile applications. AtomSphere iPaaS is expected to play a key role in most of the upcoming integration projects, with cloud and mobile integration being the key use cases. In the long term, Novartis expects the shift to AtomSphere iPaaS to result in TCO savings of around 50%.

APPENDIX

Methodology

- Discussion with Thomas Barton, global enterprise architect and head of integration services at Novartis.
- Ongoing research into the integration middleware market that takes into account the opinions of integration vendors, industry consortiums, integration practitioners, developers, and solutions architects, including those expressed on public forums.

Further reading

- *Integration PaaS: A Unified and Pragmatic Approach to Cloud, On-premise, and B2B Integration*, IT016-001484 (May 2013)
- *Dell Boomi AtomSphere Summer 12 release*, IT017-003993 (July 2012)
- *Integration Middleware Global Market Forecast Model*, IT016-001505 (February 2013)

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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