Five Ways to Simplify Cloud Integration

Oracle Integration Cloud

WHITE PAPER / DECEMBER 2017

ORACLE

DISCLAIMER

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle software license and service agreement, which has been executed and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

This document is for informational purposes only and is intended solely to assist you in planning for the implementation and upgrade of the product features described. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

Due to the nature of the product architecture, it may not be possible to safely include all features described in this document without risking significant destabilization of the code.

TABLE OF CONTENTS

INTEGRATION CHALLENGES

The rapid shift from on-premise applications to a hybrid mix of Software-as-a-Service (SaaS) and on-premises applications has introduced big challenges for companies attempting to simplify enterprise application integration. One reason for this challenge is the ease in which Lines of Business (LOBs, such as marketing, sales, customer support, etc.) can subscribe to multiple disparate SaaS applications with little or no involvement from internal IT. Once the LOB starts using the SaaS application however, there is often a need to integrate with existing applications. Prior to Oracle Integration Cloud, integration platforms have been too complicated to easily include participation with LOB application users, resulting in a costly, time consuming, and error prone attempt at integration.

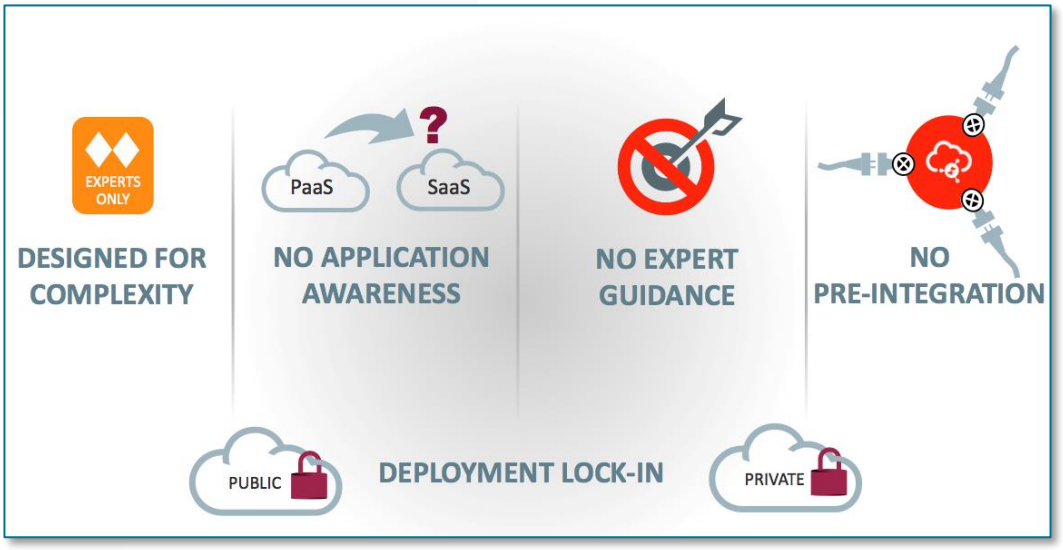

Figure 1. Five Integration challenges - Integration platforms have historically been too complex for LOB development collaboration, lack of awareness of installed SaaS application from the PaaS, lack of expert guidance, no pre-integration requiring even common integrations be developed from scratch and deployment lock-in resulting in the inability to transition based on changing business requirements.

Additional challenges include the isolation of the Platform as a Service (PaaS) from the SaaS applications resulting in potential for errors due to version number mismatch, additional upfront set-up and security work. A unified cloud containing both PaaS and SaaS presents significant opportunities to pre-populate and automatically associate SaaS applications into the integration platform. Next is embedded expert guidance and pre-integration are key opportunities that have been under

utilized within enterprise mission critical integration platforms to date. Gaining guidance from the many who have done similar integrations within the same integration platform provides further opportunities for error reduction and faster time to market. And finally, lack of ability to transition deployments between public and private clouds will likely increase in importance to respond to new business demands such as regulations that require pulling a cloud integration deployment back on-premise.

FIVE WAYS TO SIMPLIFY CLOUD INTEGRATION

Yesterday's integration approach of manually recreating all of your integrations from scratch is no longer fast enough to keep pace with the rapid growth in LOB acquired SaaS applications. A new approach to application integration is required.

This white paper describes five ways to simplify cloud integration as you transition from a complex, application integration architecture to a simple and agile integration platform. The first way to simplify is with the concept of prebuilt integration so you don't have to start your integrations from scratch. Next is the ability of the integration platform to learn best practices based on successful integrations done by other customers and incorporate that machine learning insight as guidance into an embedded mapping recommendation capability. Third is Oracle's unique ability as a provider of both PaaS and SaaS to leverage your tenant ID to pre-configure connectivity to your SaaS applications into the integration platform. A fourth way to simplify is to completely redefine the user experience so all user personas including LOB and Applications IT can collaborate with integration developers and architects. And finally, integration deployment flexibility to support dynamic business requirements such as increased business regulations requiring a rapid migration from cloud to on-premises is an important capability to have a "future ready" integration solution. Lets take a deeper look into each of these five key ways to simplify cloud integration.:

#1 – PREBUILT INTEGRATION

Until recently, all integrations needed to be created from the ground up, requiring integration architecture design, testing, debugging, redesigning due to lessons learned, pushing into production and then fine-tuning some more of the design. This time consuming and costly development cycle may be required for niche integrations that are not common to most businesses. But what about integrations that are used by a wide range of different industries…should these common integrations be re-invented by every company? For example, an integration that tracks the progress of sales leads that originated in a marketing application as they advance through the sales cycle within a CRM application should not have to be recreated from the ground up by every customer. A prebuilt integration should be available to jumpstart the integration for every future integration. Likewise, recruiting software that automatically updates human resources and security applications once a prospect is hired is not an uncommon request, so why should every company recreate the same integration?

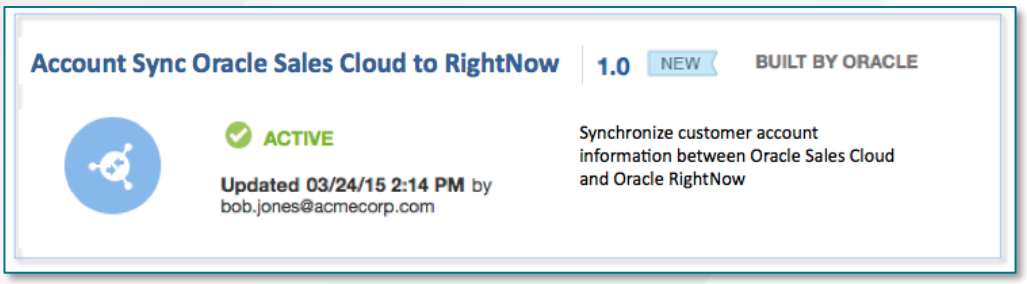

Figure 2. Example of a prebuilt integration sharing data between Oracle Sales Cloud and Oracle RightNow Cloud Service. Prebuilts developed by Oracle display the "Built by Oracle" text.

Another common example associated with integrating sales and customer service software would be when a customer has been contacting your customer support recently about critical issues causing serious business disruption of their business. Your customer support service software has fully captured these issues but the software has not communicated the level of dissatisfaction to the local account team. As weeks have gone by, your customer's problems have gotten worse. Some time later, the local account team visits the customer to sell a new product and is caught off guard when the customer explains the damage done by the product issues and the damage to the relationship is done. One simple integration could have saved a massive amount of current and potential future revenue.

To eliminate these types of problems, Oracle Integration Cloud has introduced prebuilt integrations to jumpstart your integration. Prebuilt integration transforms integration platforms from a blank palette upon which you build the integration from scratch into a run-ready integration solution that includes all of the set-up for how differently named but identical information (ex: AccountName and Account) is transformed and/or enriched from one application to another. For example, a prebuilt integration could update quote information from Oracle CPQ Cloud (Configure, Price and Quote) into Oracle Sales Cloud so the sales team has instantaneous visibility into the status and details of a quote. If you want to make custom modifications to the prebuilt, that's fine too. Oracle Integration Cloud lets you take advantage of a growing collection of prebuilt integrations, accessible from the Oracle Cloud Marketplace. Oracle SaaS and on-premise product teams as well as Oracle partners build these integrations. One of the features that elevates Oracle integration in the industry is the unique ability of Oracle, a provider of both applications and integration, to leverage its expertise in SaaS application development to deliver "Built by Oracle" prebuilt integrations directly inside Oracle Integration Cloud. Nobody knows Oracle applications better than Oracle itself. This approach reduces the likelihood of errors and gets you a big step closer to a fully integrated real-time digital business.

One of the features that elevates Oracle integration in the industry is the unique ability of Oracle, a provider of both applications and integration, to leverage its expertise in SaaS application development to deliver "Built by Oracle" prebuilt integrations directly inside Oracle Integration Cloud. Nobody knows Oracle applications better than Oracle itself. This approach reduces the likelihood of errors and gets you a big step closer to a fully integrated real-time digital business.

#2 – RECOMMENDATIONS

Imagine you are about to purchase a product on eBay.com from an unknown seller, with no reviewer ratings, based in a foreign country. If this is the only supplier, you need to begin extensive research about this seller before you risk it. What if instead there are 1,000 sales and the average rating is 99% satisfaction? Suddenly your understanding and confidence in the seller has changed dramatically.

Recommendations such as these are now indispensable on retails sites and is a key aspect of ratings sites such as Yelp. However, applying the recommendation concept to integrations inside a mission

critical integration platform is new. Within Oracle Integration Cloud, a recommendation can come from many sources including Oracle, customers, and partners. For the customer-based recommendations, guidance comes from the machine learning input of previous users of Oracle Integration Cloud. The more users that have matched and activated a data pair between two applications (ex: AccountIndentifier in one application and AccountID in the other application), the higher the recommendation (relevance) on a scale of 1-5 stars, 5 being the highest. When using the Oracle recommendation option, Oracle data pair match between two applications is sourced by Oracle. There is no need for the Recommend feature to access customer-specific metadata about the integration. Only the application-specific information is used for Recommendation guidance for future integrations.

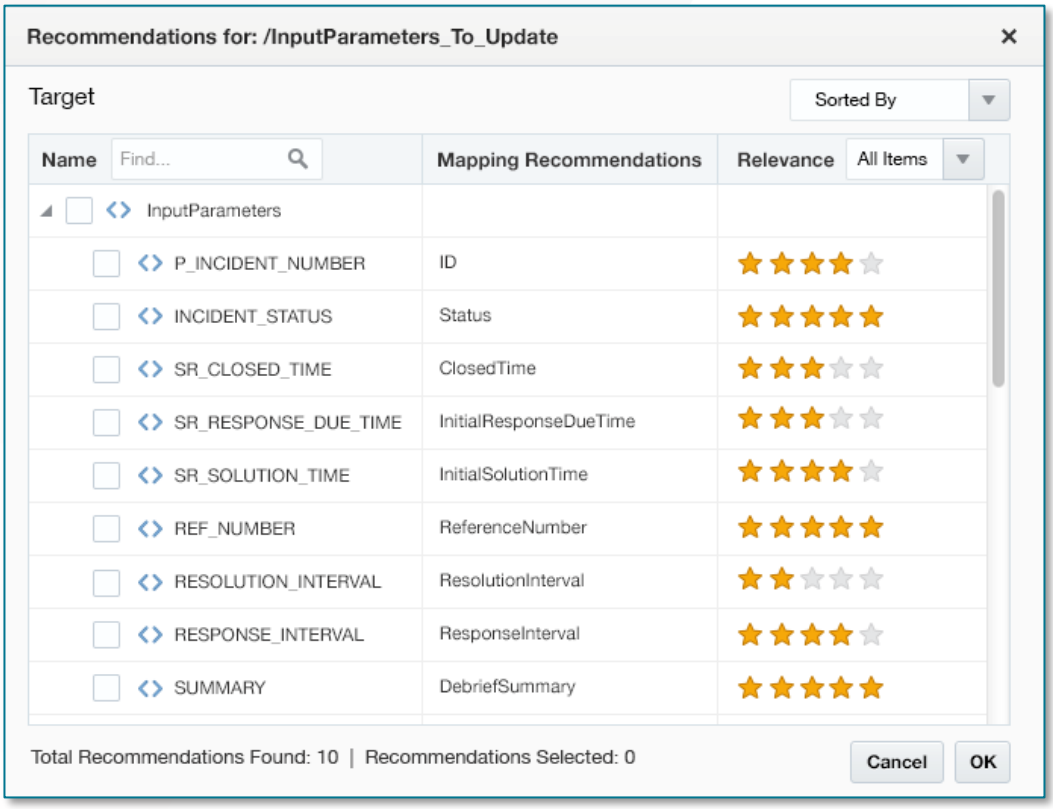

Figure 3. Oracle Recommendations showing mapping of equivalent fields between two applications with different names (ex: INCIDENT_STATUS to Status) and the relevance of how likely the mapping is correct

#3 – AUTO ASSOCIATION OF ORACLE SAAS APPLICATIONS

Cloud-based integration solutions, available in a Platform as a Service, have a time-to-market advantage over on-premise integration platforms by eliminating the need to install and to a large extent configure the platform for specific company needs. But setting up the platform to be ready to connect to applications is still as large a problem as ever. What security protocols does that application require? Do you have the application specific security credentials for the integration platform to create, read, update and/or delete the data? Is there just one instance of the application deployed or several? Which instance is the correct one to use for integration? As more cloud-based applications and services continue to be added to the integration platform, how can this process be streamlined or better yet automated to simplify cloud integration complexity?

Auto association of Oracle SaaS applications removes the time consuming and error prone step of having to configure your integration platform prior to integrating applications. As a customer of Oracle Cloud Applications such as Oracle Sales Cloud, Oracle Service Cloud, Oracle Marketing Cloud, Oracle CPQ Cloud, Oracle HCM Cloud or others, you have the ability to bypass the complexity of setting up the integration platform for these applications. By simply accessing Oracle Integration Cloud in Oracle Cloud, your tenant ID can automatically associate the applications your company uses into your instance, eliminating the opportunity for errors resulting from integration to incorrect application versions and minimize the potential for breaches in security protocol (ex: emailing passwords) by removing the need to pass application credentials between users and or administrators.

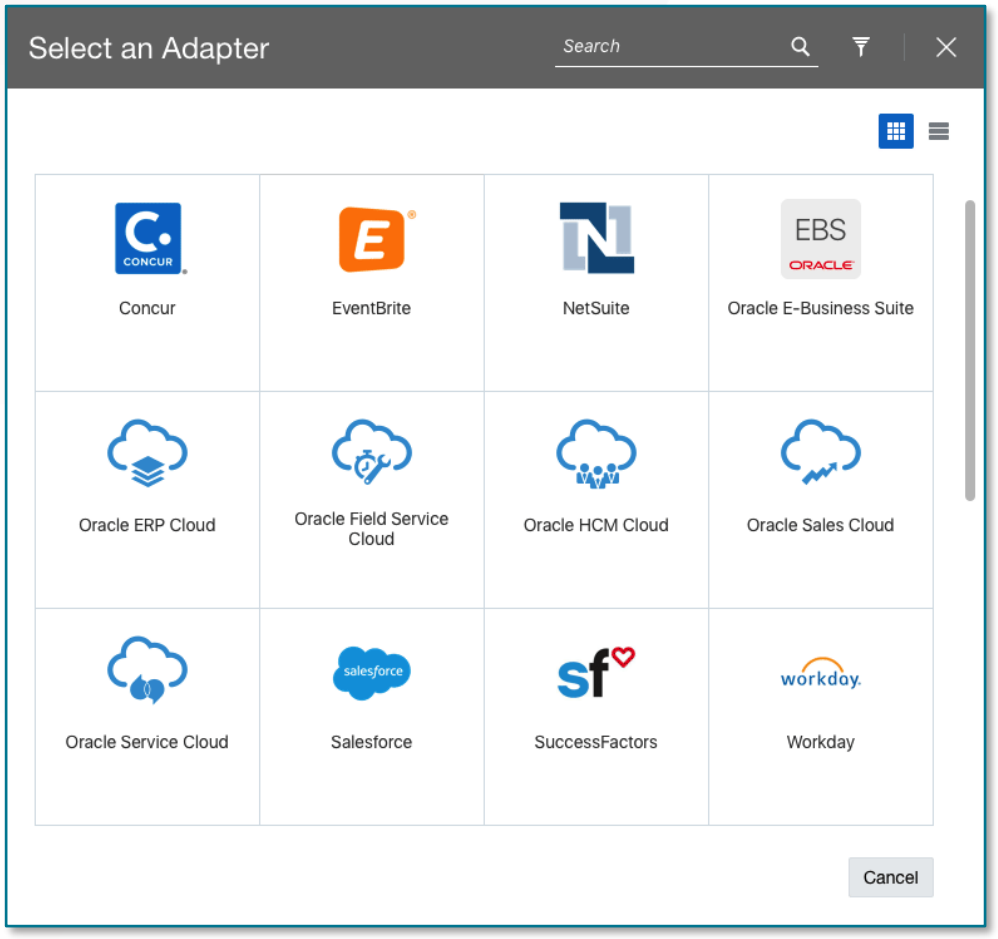

Figure 4. Auto association of Oracle Applications pre-populates the application connector select box and pre-configures Oracle Integration Cloud using secure credential access for faster integration. Shown in this image are some of the application connectors available.

#4 – INTUITIVE USER EXPERIENCE

Just before you drop down the most advanced ski slopes, a warning sign is usually posted with a "double black diamond" to alert skiers that these slopes are too difficult for most skiers. Although historical integration platforms don't post these signs, many of them should have. Only the most expert of integration developers were able to successfully use these highly advanced integration platforms to navigate the difficulties.

In contrast to these platforms, Oracle Integration Cloud uses a completely new paradigm to simplify integration relying only on knowledge of the application itself and not on complex deep-dive integration terminology.

As shown in Figure 6, a new user is guided through the “Start Here” interface to first select the “Connections” for accessing the applications (ex: Oracle Sales Cloud, Salesforce.com, etc.). Next, “Integration” is selected to map data from one application to the next. For example, a customer’s first name might be stored as FNAME in the first application, then FirstName in the second. This step maps the data between these two business objects. After simply “activating” the integration (no need for the more involved “deployment” process associated with traditional integration), a “Dashboard” can be viewed to see how many integrations are flowing, how these integration satisfy key performance indicators, and how to diagnose and fix any errors that might have occurred.

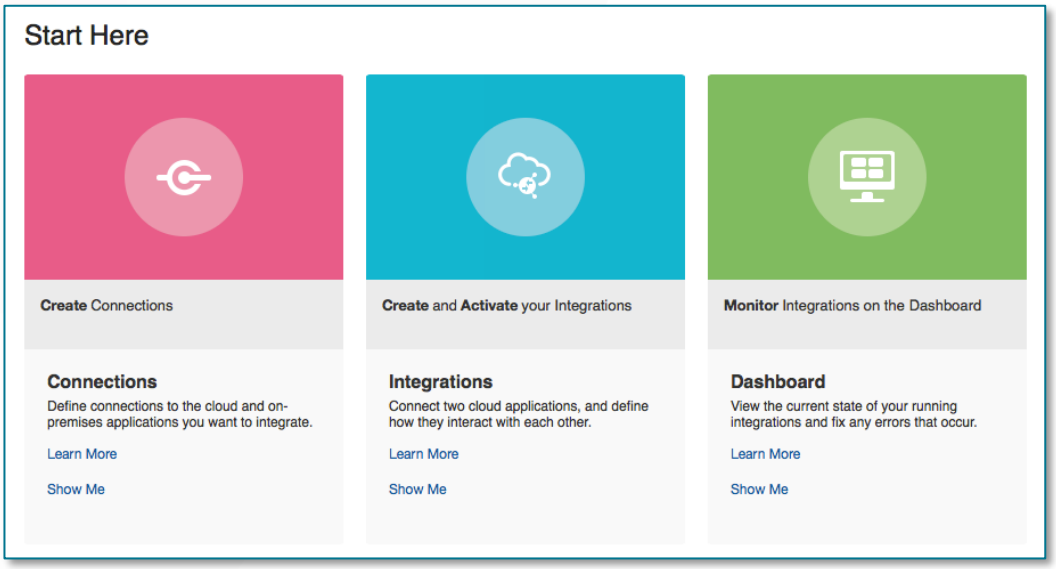

Figure 5. As you sign into Oracle Integration Cloud, a “Start Here” screen leads you through the simple steps of “Connections”, “Integrations”, and “Dashboard” to connect to the applications, transform data between the applications, and monitor flows between applications.

#5 – DEPLOYMENT FLEXIBILITY

As your business begins to put more of the application infrastructure into the public cloud, many of the objectives of lower costs, faster time to deploy, and better scalability (up and down) to respond to spikes in business demand are likely to be met. Over the next few years, this balance of integration infrastructure, for many companies, is likely to continue shifting to an increase in cloud-based integration relative to on-premise-based integration. For transnational companies however, it is unlikely that all instances of public cloud integration deployments will stay indefinitely in the public cloud and that all on-premise deployments will remain on-premise. For example, what if a country introduces regulations that require specific customer information (health records, security information, etc.) to remain within the boundaries of that country or company? In that case, the company would need to transition their integration platform that passes customer data from the public cloud to an alternate deployment strategy. What factors determine the level of difficulty in transitioning an integration platform from public to private or visa-versa?

There are three primary factors to consider when determining the difficulty in transitioning deployments. First off is the use of common integration components for public and private cloud-based models.

These components typically include application connectors, a transformation mapper, data enrichment, integration monitoring, and lookup tables. If the cloud-based integration platform uses entirely different tools than the on-premises equivalent, then migrating the integration can be exceedingly complicated. A second consideration is the use of common architecture between the on-premise integration and the cloud-based integration. And finally, the use of common standards simplifies integration portability. If the industry standard business process execution language (BPEL) for example is identical between your public cloud and on-premise deployments, this simplifies the re-use of components when a migration of the integration platform takes place.

Another example is the case where a transnational company with deployments in Europe, Asia-Pacific, and North America has a federated integration strategy to tightly focus on the specific needs of each geographical region. If this global integration solution consolidates in one geography from two countries down to one, its easy to imagine the complexity if the two platforms use different architecture, standards, and/or products. To eliminate this future concern, Oracle has developed integration solutions that share common architecture, standards, and products between cloud and on-premises solutions. This approach greatly simplifies migration of the integration platform when new business requirements require a shift to the public cloud or on-premises.

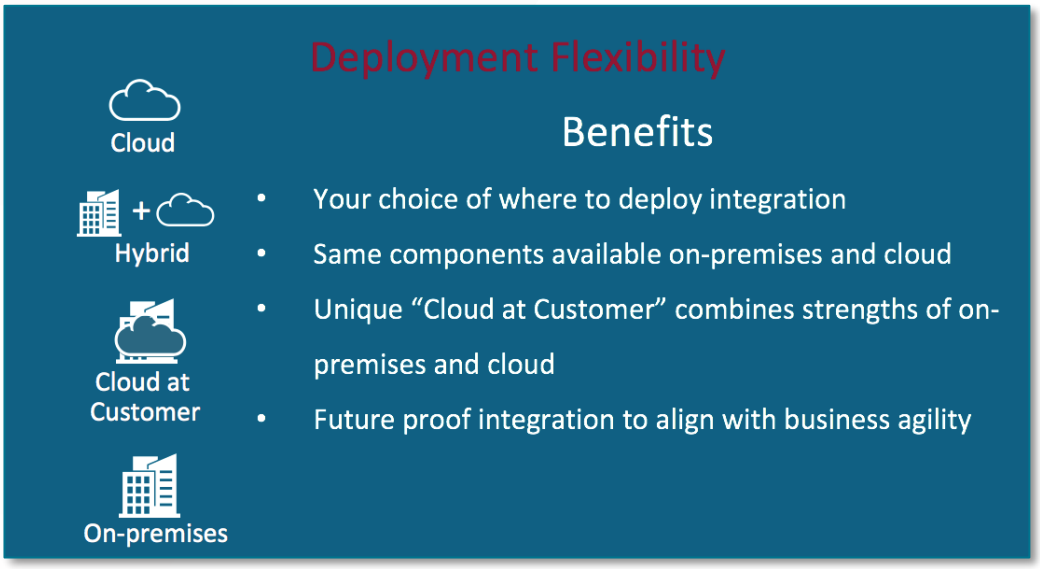

Figure 6. Deployment flexibility inherent to Oracle public and private cloud integration, which simplifies the portability of integration to better meet business needs such as conforming to new government regulations, lower costs, or gaining access to greater control of the integration platform for customization.

INTRODUCING ORACLE INTEGRATION CLOUD

The increasing demands on integration platforms to keep pace with rapid SaaS application adoption far exceed what existed in the pre-cloud era. Yesterday's approach of adding even more features into already feature-rich integration platforms further restricts the ability of LOB and Apps IT to participate in the increasingly complex integration process. To provide a significantly easier to use integration experience, the entire integration process needed a new approach was needed. Simply put, a rethinking of the integration platform was required resulting in the release of Oracle Integration Cloud Service in 2015. In 2017, built on the capabilities of Oracle Integration Cloud Service and combined these core integration capabilities with Oracle Process Cloud Service for human approvals and exception management. Furthermore, the integration analytics capabilities of Integration Insight and

Stream Analytics were combined as well into a unified user experience for all of your integration needs in a single offering.

To keep pace with rapid SaaS adoption as well as new requirements for mobile integration and eventually Internet of Things offerings requires embedded pre-integration, expert guidance, dramatically increased ease of use, a closer connectivity between the apps in your SaaS clouds and the integration platform in PaaS, and finally the ability to migrate your integration platforms between public, private, and on-premises to meet changing business and regulatory requirements.

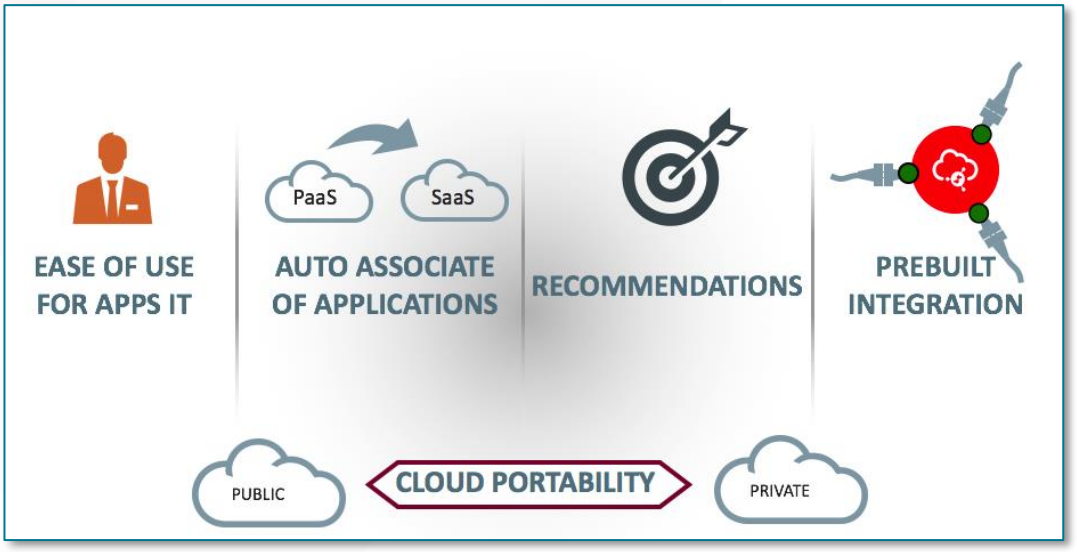

Figure 7. Summary of five ways to simplify cloud integration including a completely intuitive user experience, visibility of the integration platform into the SaaS applications in the cloud, built-in recommendations on how to correctly map date from one application to another, preintegration of common integrations and portability of integration platform.

Simply put, a rethinking of the integration platform was required. After many years of development, Oracle has re-invented the integration platform with the release of Oracle Integration Cloud. An entirely new user interface built on top of proven Oracle integration components provides the optimal mix of ease of use combined with mission critical performance and reliability of Oracle SOA Suite.

CONCLUSION

All of the five ways to simplify cloud integration, shown in Figure 7, are seamlessly integrated into a combination of Oracle Integration Cloud and Oracle SOA Cloud Service. Start on your path to simplify cloud integration by exploring further how these new products can work in conjunction with your existing integration platforms in a Hybrid Integration model or from the ground up as a purely cloud or on-premises based solution with the flexibility to migrate to a Hybrid Integration model when you need it.

ORACLE CORPORATION

Worldwide Headquarters
500 Oracle Parkway, Redwood Shores, CA 94065 USA

Worldwide Inquiries
TELE + 1.650.506.7000 + 1.800.ORACLE1
FAX + 1.650.506.7200
oracle.com

CONNECT WITH US

Call +1.800.ORACLE1 or visit oracle.com. Outside North America, find your local office at oracle.com/contact.

http://blogs.oracle.com/integration facebook.com/oracle twitter.com/oracleintegrate

Integrated Cloud Applications & Platform Services

White Paper Error! No text of specified style in document.Five Ways to Simplify Cloud Integration with Oracle Integration CloudFive Ways to Simplify Cloud IntegrationFive Ways To Simplify Cloud Integration
January 2019January 2019
Author: [OPTIONAL]
Contributing Authors: [OPTIONAL]

Oracle is committed to developing practices and products that help protect the environment