

UPFRONT PLANNING EASES THE TRANSITION TO THE CLOUD

By William Euler Jr., CPA

Define your integration requirements for your next cloud adventure

Software as a Service (SaaS), brings tremendous potential to transform hotel operations by providing access to software above property, with pay-as-you-go pricing. As you measure the metrics: scalability, availability, performance and cost-effectiveness, you will also uncover the impact that supporting services (such as integration) play in this new infrastructure and how crucial they are to a successful transition.

One recent trend identified by the *InformationWeek Analytics* "State of Cloud 2011" survey cited "a disturbing unwillingness of IT teams to fully take ownership of the cloud as a core part of the enterprise technology fabric. Only 29 percent of organizations using or planning to use the cloud have evaluated its impact on their architectures." Hospitality technology professionals have long taken on a strong sense of systems ownership, and employed creativity to meet growth and control requirements, could this apply to us?

This was further supported by a recent Gartner survey wherein 270 people were asked, "Why is your organization currently transitioning from a SaaS solution to an on-premises solution?" The number one reason 56 percent of respondents gave was "unexpectedly significant requirements of integration." Perhaps the challenge at hand implicates scope more than willingness.

The good news for hoteliers is that some upfront planning — understanding the characteristics of SaaS integration,



outlining data integration requirements and reviewing the enabling technologies — will set you on the right path and provide control of the unexpected. Now, let the adventure begin.

A Common View of SaaS

First, a common view of SaaS characteristics:

- Web-based access and management of applications.
- Multi-tenancy environment which enable multiple customers to access a single instance of an application.
- Centralized updating, which eliminates the need for customers to download patches and upgrades, maintenance provisioned in service agreements.

These characteristics highlight some important points related to integration:

- With Web-based environments, integration is likely required between cloud applications and on-premise systems and applications.
- Data delivery routes from source to destination systems become more complicated as more "failure points" are introduced.

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- In loosely coupled environments, messages do not always move in real time (queuing technology), and sometimes message processing may be intermittently unavailable.
- Data moves between ownership boundaries. The need to enforce security policies, protect data, and audit flow and change is critical.
- In multi-tenant environments the provider is likely to either restrict or entirely eliminate direct client access to databases and file systems.
- With centralized updating your provider also controls the frequency and timing with which application patches and enhancements are deployed. This may negatively impact existing integration services and result in unexpected and ongoing maintenance or customizations.

Next, chart your course by identifying your integration requirements. This consists of outlining all of the applications used, documenting what data elements are shared between applications and identifying translations between them. In other words, a data integration plan.

Data Integration

To illustrate this, let us look at a typical SaaS application — back office accounting. Accounting applications have many attributes that make them good candidates for SaaS models: they are not customer facing, nor mission critical and have a contained user set.

From a transactional data standpoint, back office accounting systems are the central “books of record,” registering all of the hotel’s financial activity. As such, transactions from virtually every revenue generating and expense capturing system must touch back office accounting: room revenue from PMS, food and beverage revenue from POS, and labor expenses from Payroll to name a few.

From a master data standpoint, back office accounting systems contain fields such as vendor names, addresses and item codes. This data needs to be harmonized and shared across multiple applications (such as requisition or purchasing systems).

It is important to note that different data types require different integration methods. Transactional data integration requires data to be joined together, which involves movement, mapping and audit trails. Master data requires consistency, which involves synchronization and control. The devil is in the details and your data integration plan must identify the data elements, methodologies, frequency, format, transformation requirements and all surrounding processes. It is also imperative to identify all possible “points of failure” between each source and destination system. This is essential to understanding the role that the enabling technology must play.

AIM Applications

Last, understand the technology landscape. To accomplish this, many hoteliers initially turn to their application vendors for advice and guidance. What many discover is that most

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application vendors concentrate solely on their own endpoints (that point which data actually touches their application) and often these endpoints are only compatible with applications that are provided as part of a vendor’s application suite. Web-based application programming interfaces (API) or service oriented architectures (SOA) are some of the common tools that vendors employ to interoperate with external systems. Also naturally, vendors tend to concentrate more on the data “shape” as it conforms to their import formats over preserving elements as they exist in the source systems. This creates an interface approach, taking you back to the days of paper maps and compasses.

In order to identify the appropriate enabling technologies, investigate the world of Application Infrastructure and Middleware (AIM). To emphasize the importance that AIM plays in SaaS environments here are some recent acquisitions made by major technology companies, such as IBM and Dell: IBM acquired Cast Iron Systems which “allows IBM to link SaaS with business process and software” and Dell acquired Boomi to “help businesses reap the full value of cloud computing.”

Every day new AIM applications emerge each with their own unique set of enabling technology which is often purpose-built, light-weight and easy to use. Enabling technologies that may guide you include:

- Web services which exchange XML-based messages in documented formats over standard transport protocols to exchange data.
- Process automation to facilitate the hands-free capture, prioritization, routing, escalation and notifications associated with every integration process or job.
- Transformation services which refers to the process of changing the format and content of data as extracted from a source before it is suitable to be loaded into a destination. Many refer to this as mapping.
- Administration services which typically refer to the interfaces needed to create, schedule and maintain integration jobs, produce necessary reports, and assist with reconciliation and audit trails.

Whether you are embarking on a single excursion, or charting a new course — proper packing, reliable direction and a solid understanding of the landscape will ensure that your journey is safe and sound. To get the most from cloud computing, and your technology and resources, plan for success and you will benefit now and down the road. ■