Examining the Reasons for a Full Cloud Implementation
Securing a Wide Range of Better Services at a Lower Cost

Should you operate your own data center, run software on external servers, or simply lease applications? The increasing diversity of cloud services can seem overwhelming, but the basic fact is that data center operations are not part of your core business. A specialized provider can offer IT services and standard applications – and the expertise to exploit them – more efficiently and affordably.

TAKEING A HISTORICAL PERSPECTIVE
The evolution of today’s data centers resembles that of power plants at the start of the industrialized age. In the early 19th century, almost all large industrial companies operated their own power plants because there was no uniform standard for power supply – and no power grid. Once both were available, companies were happy to forego generating their own power. Newly created utility companies delivered the required electricity as a core competency – and more cost-effectively because of economies of scale. Electricity became a commodity.

Cloud computing service providers can present a similar argument today. Operating hardware and software is not a core area of expertise for most companies. In contrast, a professional data center can offer services ranging from computing power and storage space all the way to complete applications, in a larger variety and for less money than its potential customers can. And it can offer a staff whose very expertise is running a secure data center at a quality level you would likely be hard pressed to achieve.

CHOOSING AMONG DELIVERY MODELS
Nowadays, you can choose from an entire portfolio of cloud-based IT services. There are three principal delivery models:

- Infrastructure as a service (IaaS), in which you lease hardware, computing power, and storage space in the cloud on a temporary or long-term basis
- Platform as a service (PaaS), in which you access a cloud platform equipped with a programming environment and tools to develop and operate your own applications
- Software as a service (SaaS), in which you access applications and services from a service provider and administer, operate, upgrade, and maintain them from the cloud

CALCULATING THE BENEFITS OF CLOUD COMPUTING
However you choose to implement it, the cloud computing paradigm can bring you several valuable benefits:

- Fast implementation time, so you can quickly deliver the features your users want
- Reduced workload, as the provider is responsible for operating and maintaining hardware and software
- Flexibility through contracts based on subscription and the pay-per-use principle rather than traditional licensing
- Scalability to support changing business requirements, operational innovation, and company expansion and diversification
## Comparing On-Premise, Hosted, and Cloud Implementations

The table below summarizes the accountabilities and contract models in on-premise, hosted, and cloud implementations.

<table>
<thead>
<tr>
<th>Service</th>
<th>On Premise</th>
<th>Hosted</th>
<th>Cloud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server room or data center</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hardware provisioning</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hardware maintenance</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Hardware upgrade</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Software provisioning</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Software maintenance and upgrade</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Software operation</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>License</td>
<td></td>
<td>Mostly</td>
<td></td>
</tr>
<tr>
<td>Subscription</td>
<td></td>
<td>Mostly</td>
<td></td>
</tr>
<tr>
<td>System access</td>
<td>In-house</td>
<td>Remote</td>
<td>Remote, as a service</td>
</tr>
</tbody>
</table>

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UNDERSTANDING THE DIFFERENCE BETWEEN HOSTING AND SAAS

The line between application hosting and SaaS delivery gets especially blurry at times. Application hosting has become part of the portfolio of many IT service providers in the last 20 years, and they often host systems running on SAP software. Hosting has continued to evolve, and today one of its primary objectives is offering “off-the-rack” software in addition to the more conventional outsourcing of hardware. From the customer’s perspective, this model comes very close to SaaS, which is the operation of applications as a cloud service. Sometimes host companies even use subscription models for billing purposes and hold the actual software licenses themselves.

If the quality is great and the price is right, you don’t need to bother with the distinction, especially when service levels remain high and you have secure access to your data. What the provider does behind the scenes is probably immaterial.

Worldwide spending on public cloud services and infrastructure is forecast to reach US$160 billion in 2018, an increase of 23.2% over 2017, according to the latest updates to the International Data Corporation (IDC) Worldwide Semiannual Public Cloud Services Spending Guide.1

Although annual spending growth is expected to slow somewhat over the 2016–2021 forecast period, the market is forecast to achieve a five-year compound annual growth rate of 21.9%, with public cloud services spending totaling $277 billion in 2021.

Highlighting the Cloud Strategy at SAP

SAP offers three types of cloud service:
• Public cloud, for ERP and applications for lines of business, including human resources, customer and sales management, finance, and procurement
• Private cloud, for SAP HANA® Enterprise Cloud, which is a managed cloud offering
• A marketplace where customers and SAP partners can purchase solutions to extend and scale innovation

We support each of these areas with a business-to-business network and tools for customer-to-customer and business-to-customer collaboration. The common foundation for all cloud solutions from SAP is SAP Cloud Platform.

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