Cloud Solution Recommendation Paper

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**Introduction**

Cloud computing provides a platform for delivering various services through the internet, including data storage, databases, servers, software, and networking. Notably, different cloud deployment models define how cloud services are made available to users. Such cloud deployment models include public cloud, private cloud, hybrid cloud, and community cloud (Winkler, 2011). As CIO of ABC Corp, the ideal solution is deploying a private cloud that provides Infrastructure used by a single organization. This paper aims to describe the ideal cloud computing solution for ABC Corp.

**Appropriate Cloud Service**

Cloud services are Infrastructure, software, and Infrastructure as provided and made available by the cloud providers over the internet. Before identifying the appropriate cloud service for ABC Corp, it is essential to understand the criteria or factors to consider when selecting such services. Such factors include security offered, compliance standards, manageability, the support offered, and costs. Since the organization's goal is to move resources to the cloud, the appropriate cloud service for this organization is Platform as a service (PaaS). According to Youssef (2012), this cloud service model provides a web-based environment for developers to build cloud apps. This service also provides an environment where the organization can host such resources. Additionally, the application of Infrastructure as a Service (IaaS) by ABC is also appropriate in providing processing, storage, network, and other fundamental computing resources.

The rationale behind selecting PaaS is that this service is essential in helping the developers and business users primarily focus on building top-notch apps without worrying about the infrastructure and operating systems. Additionally, there is existence development tools and programming environment that can be easily accessed via the cloud. Similarly, with the adoption of IaaS, ABC can benefit when handling the unpredictable and growing needs of the organization. This cloud service model is also paramount in providing the necessary infrastructure for supporting web applications, storage, and application servers.

**Cloud Deployment Model**

The cloud deployment model provides specific configuration parameters, including accessibility and proprietorship of deployment storage space and Infrastructure. As mentioned earlier, there are four cloud deployment models available for use. In the case of ABC Corp, the selected cloud deployment model is the private cloud. With a private cloud model, it is considered to offer computing services over the internet (Rajan, 2013). The appropriateness of this cloud deployment includes enhanced security and privacy, improved reliability, enhanced performance, improved flexibility, and total control. With all these features, it is important to note that most of the benefits offered by this model are derived from the virtualization technology that underlies different types of cloud.

**Pros and Cons of PaaS and PaaS**

**Pros of PaaS and IaaS**

1. Reduced costs: with the application of PaaS and IaaS, organizations can reduce both direct, indirect, and hidden costs linked to building and managing their own platforms.
2. Scalability: The cloud service models support growth and expansion depending on the needs of the business. On the other hand, to scale its own platform and Infrastructure might be expensive as compared to the two cloud service models.
3. Faster development: Speed development and deployment of the cloud service is an important aspect of cloud computing. Both PaaS and IaaS can be implemented with great ease hence facilitating the quick development of apps.
4. Easier Collaboration: With the hosting of the development environment, it is easier to deploy various services despite various physical restrictions such as virtualization and remote connections.

**Cons of PaaS and IaaS**

1. Optimization challenges: This being one of the key disadvantages, business planning to take full advantage of the cloud platform will need to shift in the application of IT infrastructure. Such optimization will come with additional costs from a capital expense to an operational cost.
2. Low confidence in data security: It is an arduous task to convince the organization that the application of PaaS and IaaS will guarantee a higher level of security. Indeed, the implementation of data security on the cloud platform solely depends on the preparedness and knowledge in the implementation of security measures to ensure that the data on the cloud is highly secure.
3. Possible breach of service level agreement: All cloud providers have a set of service level agreement upon subscribing to their services. Due to the complex nature of the application of PaaS and IaaS, breaching of the service level agreement may be a common phenomenon and might lead to exposure of organizational data to unauthorized personnel.
4. Integration with the rest of systems and applications: Installation of applications and different packages comes with complexity and additional responsibility in managing and maintaining them; this can make it complex when accessing and using data from the cloud environment.

**Pros and Cons of Private Cloud Model**

**Pros of Private Cloud Model**

1. Improved resource utilization and flexibility: This is important in helping an organization in ensuring application performance and cost reduction.
2. Security: With the application of the private cloud mostly involves the use by one single client. Therefore, the systems and infrastructure can be set and configured to provide a higher level of security to the clients.
3. Easier Customization: Private clouds comprise hardware and other resources that can easily be configured and customized by the company.
4. Controls: Private clouds provide data control for data applications, information assets, as well as users.
5. Flexibility: one of the fundamental pros offered by the private cloud is more flexibility as compared with other cloud computing models. Additionally, with this model, there are no compatibility or limitations issues with the applications or Infrastructure.

**Cond of Private Cloud Model**

1. Maintenance: For both hosted and managed private clouds, the cost of maintenance is how; however, this is mostly determined by how it is deployed on the private cloud environment.
2. Cost: Even though the cost has been listed as pros, a private cloud may be associated with higher costs of investing in the deployment of servers, network infrastructure, data centers, and software applications.

In conclusion, ABC Corp would benefit from migration to a cloud computing environment. The adoption of IaaS and PaaS service model offers a lot of benefits as compared to own physical Infrastructure. Additionally, the private cloud model's deployment, which will provide a range of benefits, has been discussed in this paper.

References

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