

# Cloud Hosting Best Practices

How to evaluate cloud providers and choosing the right solution for your growing IT demands.

## Choosing a Cloud Computing Vendor

Most IT departments are no longer asking if they should implement the cloud. Instead, they are asking “which type and when?” Choosing a cloud solution and provider can be challenging. Cloud infrastructures and providers vary greatly in delivery models and end user experience.

Whether your IT department is considering a public, private or hybrid cloud environment, the following checklist will help you identify the key concepts and best practices for implementing new cloud applications or migrating existing applications to the cloud.

## Cloud Computing Environments In Brief

As you consider and prepare to move your enterprise-applications from a fixed, physical hosting environment to a virtualized cloud environment, it’s important to understand how the various cloud solutions stack up to one another.

A public cloud is similar to “shared” hosting where you pay for the use of a portion of a server in a cloud environment that is shared with other clients. Public clouds are typically used in applications where security and compliance requirements are not an issue. Using this utility model of cloud hosting, your server shares hardware, storage and network devices with others clients. You have complete control over the management of the server set up. However, you have no ability to dictate the hardware or type of network for your virtual server which can compromise performance.

Private cloud hosting offers a higher level of control and security because it is dedicated to a single client within a private data center or a third-party hosting provider. Because of this, the hardware, data storage and network can be designed to meet the requirements of a single organization. Compliance is much easier to achieve for clients who need to adhere to PCI DSS, HIPAA, and Sarbanes Oxley standards. The customized and dedicated equipment for a private cloud requires a contract if you host with a third party provider. Private clouds are typically suited for mid to large sized clients that utilize applications involving secure data and customized workloads that require guaranteed resources.

Hybrid cloud hosting is a blend of private cloud and public cloud hosting that is connected so that applications and data are easily shared yet they remain separate hosting environments. This type of cloud solution offers benefits of multiple deployment models with the ability to connect colocation, managed or dedicated services to cloud resources. Combining the cost savings and scalability of public cloud and the security and control of private cloud gives you increased hosting flexibility by allowing you to choose the best solution for your hosting requirements.

Lastly, enterprise cloud provides an additional level of security and management options not available with private and public clouds. With enterprise cloud, the services are divided into tiers that provide different levels of availability and performance for various types of application requirements.

## MOVING TO THE CLOUD

### Business Benefits

- Minimize capital investment
- Lower cost to implement, operate and manage cloud hosting environments
- More efficient resource utilization
- Reduced timeline to market

### IT Benefits

- Easily scalable for application deployment
- Quickly add capacity to meet demand
- Rapid recovery for backup, archiving and storage
- Flexible hosting for testing and development environments

"Our company is built on creating long-lasting relationships with clients. Our goal is to work with companies to find the most strategic and cost effective solutions for them to grow their business without worrying about their IT services."

*Gary Hall, CEO of Arsalon Technologies*

## CLLOUD PRODUCT CHECKLIST

When selecting a cloud provider, analyze the vendors in several different areas. Ensuring that your company's operational objectives align with the cloud hosting vendor's product, IT infrastructure, and business processes is critical.

<b>BEST-OF-BREED CLOUD COMPUTING</b>	<b>ARSALON</b>	Option 2	Option 3
Servers	<input type="radio"/>		
Networking	<input type="radio"/>		
Storage	<input type="radio"/>		
Software	<input type="radio"/>		
<b>CLOUD FLEXIBILITY &amp; CUSTOMIZATION</b>	<b>ARSALON</b>	Option 2	Option 3
Easily scaled cloud environment	<input type="radio"/>		
Customization control over virtual machines	<input type="radio"/>		
Ability to specify underlying hardware	<input type="radio"/>		
<b>CLOUD SECURITY STANDARDS</b>	<b>ARSALON</b>	Option 2	Option 3
Health Insurance Portability and Accountability Act	<input type="radio"/>		
Payment Card Industry Data Security Standard	<input type="radio"/>		
SSAE-16 Type II Audited	<input type="radio"/>		
National Institute of Standards and Technology	<input type="radio"/>		
Safe Harbor Certification	<input type="radio"/>		
<b>CLOUD SUPPORT</b>	<b>ARSALON</b>	Option 2	Option 3
24x7x365 technical support on-site	<input type="radio"/>		
Remote hands support	<input type="radio"/>		
Skilled, certified engineers	<input type="radio"/>		
User-friendly cloud administration	<input type="radio"/>		
Access to managed cloud services	<input type="radio"/>		

## CLOUD VENDOR & DATA CENTER CHECKLIST

Supporting the cloud are critical data center components and business practices of the company providing your virtual infrastructure. Cloud providers should be evaluated for connectivity capabilities, network redundancy, data center facilities and business practices. Once you have a list of prospective vendors, gather answers to fundamental questions about availability, security, performance and customer service.

CLOUD CONNECTIVITY	ARSALON	Option 2	Option 3
Performance based network with private VLANs and redundant network drop availability	<input type="radio"/>		
Redundant network equipment	<input type="radio"/>		
Diversified carriers with ability to select provider	<input type="radio"/>		
Multiple Internet providers utilizing diverse facility entrances for redundancy	<input type="radio"/>		
SONET ring loop architecture to eliminate downtime	<input type="radio"/>		
Private dark fiber network to encompass end-user	<input type="radio"/>		
DATA CENTER INFRASTRUCTURE & SECURITY	ARSALON	Option 2	Option 3
Purpose-built data center with 36" raised floors	<input type="radio"/>		
High capacity power capability, N+1	<input type="radio"/>		
Ability to provide A & B Power feeds for redundancy	<input type="radio"/>		
Multiple high capacity on-site diesel generators	<input type="radio"/>		
Redundant N+1 CRAC units providing closed loop forced air cooling	<input type="radio"/>		
Redundant dedicated Liebert air-handling units	<input type="radio"/>		
Two-alarm VESDA fire detection system and automated FM-200/E-Caro25 fire-suppression systems	<input type="radio"/>		
All client equipment is secured in locked enclosures to individual specification	<input type="radio"/>		
Facility access granted only with photo ID and is monitored, video recorded, logged and escorted	<input type="radio"/>		
Biometric access control with secondary PIN authentication restricting entry of command and computer rooms to authorized personnel	<input type="radio"/>		

# Cloud Hosting for Serious Business

<b>NETWORK SECURITY &amp; MONITORING</b>	<b>ARSALON</b>	Option 2	Option 3
24x7x365 engineer staffed Network Operations	<input type="radio"/>		
Infrastructure and environmental components monitored 24x7x365	<input type="radio"/>		
Network components monitored 24x7x365	<input type="radio"/>		
<b>CUSTOMER SERVICE</b>	<b>ARSALON</b>	Option 2	Option 3
15-minute call back time	<input type="radio"/>		
User-friendly online ticketing system	<input type="radio"/>		
Certified engineers to assist with cloud migration and expansion requests	<input type="radio"/>		
Long-term relationship building	<input type="radio"/>		
<b>HOSTING COMPANY</b>	<b>ARSALON</b>	Option 2	Option 3
Multiple data centers	<input type="radio"/>		
Up-to-date industry certifications	<input type="radio"/>		
Customer base includes Fortune 500 companies	<input type="radio"/>		
Reference accounts available	<input type="radio"/>		
High client retention	<input type="radio"/>		
Years in data center business	<input type="radio"/>		
Stable ownership	<input type="radio"/>		

## Evaluate the transition process

Before making a final selection of your cloud solution and provider, a number of IT planning and migration questions should be researched to ensure a successful transition between your current hosting environment and your cloud solution.

<b>IT TRANSITION STRATEGY</b>	<b>ARSALON</b>	Option 2	Option 3
Will the cloud vendor assist with the cloud architecture, implementation and data migration strategy?	<input type="radio"/>		
Is the vendor willing to assist with customization?	<input type="radio"/>		
Can the vendor meet your development timeline?	<input type="radio"/>		
Are managed cloud solutions available?	<input type="radio"/>		