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Cloud Computing Basics

Most people are already using the cloud in their daily lives, whether they realize it or not, according to Hallie Wheeler, Business Development Director at Webformed. Wheeler explains that cloud software and storage are “something you can access from anything that has an Internet connection. Think of your Yahoo, Gmail, or Hotmail account. You alone have the password, and you can access your email from any computer, smartphone or tablet as long as it has an Internet connection. Isn’t it convenient? In its simplest form, that is cloud software (sometimes called Software as a Service). You are already using the cloud in your day-to-day life!”

The Cloud has become an everyday resource that helps enable our daily routines. Consider how things such as electricity, water, natural gas, telephone service, and television are provided by companies that specialize in delivering those services, and you can begin to wrap your mind around the parallels with cloud computing. As Robert Keahey, IT business and social strategist/commentator at SummaLogic explains it, utilities and telecoms provide services on a scale “that makes it economically feasible for large numbers of customers to consume at a lower price. And, the customer doesn’t have to buy, build, and maintain all the equipment required to provide the service. Simply put, this is what cloud computing does for the digital age. And just like the power grid that delivers electricity to your house, the Internet delivers these cloud computing services to your home, business, mobile phone, or car.”

In this cloud computing guide, Andrew Baker and other industry experts walk through why the Business Consulting industry is choosing the cloud, how your business can benefit, and what you can do to compete more effectively.
Industry Trends/Drivers

Business Consulting firms are in a unique position with regards to cloud computing. Not only do the most common business drivers apply to their industry, but they can more readily reap the benefits of cloud computing because of the maturity of the products that they need to offer us.

Like many other industries, organizations in the Business Consulting industry are looking for ways to accomplish the following:

- Minimize capital expenses related to technology infrastructure
- Reduce time-to-market for new service offerings
- Collaborate more effectively with a distributed workforce
- Enable major scalability without high up-front costs
- Reduce on-premise staffing related to maintaining office systems
- Improve business agility

Minimizing capital expenses and facilities costs

In this economy, even businesses that are doing well are keeping an eye on costs, and the costs of maintaining a robust technology infrastructure are not trivial. Large firms are looking at consolidation as a way to reduce expenses related to hardware maintenance, software licensing, cooling and power. Smaller organizations are looking to get the benefits of office workflow automation tools, without having to hire a large technology staff, or spend a lot of upfront funds on technology or technology infrastructure.
Industry Trends/Drivers

Reduce time-to-market for new service offerings

Every moment that is spent trying to adapt one’s environment to support new industry or client demands, is time lost for providing billable services. Business Consulting organizations are under more and more pressure to generate billable hours, which makes streamlining their operations a high priority.

Collaborate more effectively with a distributed workforce

Businesses today are under pressure to hire the best and brightest from whatever location they can. This is especially true in the Business Consulting arena, where project teams may be put together across disparate geographies on a regular basis. Most organizations are not prepared to provide secure, access anywhere services for their employees, and this is a must for success in this industry, and the on-premise costs for augmenting an existing technology environment are capital intensive.

Enable major scalability without high up-front costs

Over the past 2-3 years, as organizations have sought to cope with a globally depressed economy, many have turned to Business Consulting firms to assist them to streamline their processes and obtain the maximum value from their business operations. This demand for Business Consulting services has spawned a number of new firms, as well as generated an increase in the number of engagements that established firms have to manage.

The ability to scale quickly and inexpensively to accommodate new business is highly desirable, particularly in this economy, as opposed to the risk of losing new business to a competitor. Having to build technology in advance to support peak loads is expensive and inefficient.
Improved business agility

In addition to the common challenges faced by all Business Consulting firms, smaller providers of these services need to content with limited IT staff resources in a competitive market. Making use of more hosted and managed services and cloud-based applications moves the IT hiring problem to the cloud providers, and away from the smaller firms.

While the recommendation of hardware or software is not necessarily a major part of a business re-engineering project, when it is involved, it can represent a major undertaking. Cloud-based solutions help to minimize the deployment time for both customers and consulting firms, which translates to more business engagements.

These are just some of the motivations that Business Consulting firms are evaluating and embracing cloud computing for their businesses.
How the Cloud Can Transform Your Business

The cloud computing landscape for Business Consulting organizations is quite appealing. Many of the solutions in this space are relatively mature, and they offer a variety of benefits to the SMB market.

Data Sharing & Integration

Software applications in the cloud are designed to easily connect to, and share data with, other applications in the cloud. Legacy applications, which refer to any applications which are not cloud or internet aware, and which are hosted on a customer’s local premise, are not as ready to share data or integrate with other applications. Embracing cloud computing solutions gives your organization an advantage when it comes to sharing data with others, whether they are in your organization or outside of it.

Aligning Costs to Usage

Cloud-based servers can be purchased and installed more quickly to support business initiatives, and can also be turned off more readily when the need for them has passed. Not only does this represent a cost savings for such a server, but it removes the delays that are often associated with purchasing traditional server equipment which has to be shipped to your office, installed and then maintained locally. Time is money, and by saving a great deal of time in these common areas of operation, an organization can place itself in a position to make more money.

In short, Business Consulting firms can more closely align their software and hardware costs to usage, which allows them to focus their spending on what they really need, when they really need it. It also makes it less complicated and expensive to get out of a bad purchase than with an on-premise software or hardware solution.
Leveling the Playing Field

Typically, large organizations have more financial and technical advantages than smaller organizations. A large firm is normally better positioned to implement software applications that automate workflow, help to manage the firm’s projects, maintains a central repository of the organization’s customers, and integrates directly into the firm’s billing and accounting system. Smaller organizations tend to rely on a wide range of tools such as spreadsheets, individual documents, isolated project plans, and other tools that might not be standardized across the company. While this might work for very small organizations, it does not take long to realize that this is a very inefficient approach, and business leaders are soon looking for ways to centralize documents, establish workflow, and institute processes and procedures that will balance order with speed.

Cloud computing is the great equalizer in this regard. The plethora of applications and services that can be obtained by organizations of all sizes, allow small and mid-sized Business Consulting organizations to make use of the same tools and services that larger organizations have had access to for years. One prominent example of this is in the area of Customer Relationship Management (CRM). Today, there are a bevy of cloud-based applications in the following categories that scale from small firms to large enterprises:

- Project management
- Process life-cycle management
- Accounting and billing
- Employee time-keeping
- Telephone and video conferencing
- Business analytics

These tools can now be embraced by small Business Consulting firms, allowing them to effectively vie for client engagements with their larger competitors.
Business Agility

Corporate agility is often cited as one of the most significant benefits of adopting cloud computing, and for Business Consulting firms, this translates into more time spent focusing on the needs of their clients, and less time spent thinking about how to manage their infrastructure. The idea is that for most organizations, computing resources should be seen more as a utility than as a discrete entity to be built and maintained. Just as typical organizations no longer build their own power plants to generate electricity, more and more organizations are moving to the place where they no longer build out their own infrastructure to generate computing capacity.

The direction being taken today is to purchase from a dynamic pool of shared computing resources which are hosted outside of their organization's boundaries. Ultimately, this will result in lower costs for corporate consumers, as the cloud providers will be able to realize higher economies of scale, and corporate customers will be able to tap into innovative services that they would not have otherwise been able to afford or manage if they were building and maintaining 100% of their own infrastructure.

Services automation and services resource planning are two key solution areas that Business Consulting organizations can and do use to streamline their own businesses, in addition to providing consulting services for their customers.

Disaster Recovery & Business Continuity

Contrary to some prevailing opinions, the use of cloud services will not automatically guarantee disaster recovery and business continuity. Cloud computing, however, does make these services easier to obtain, and it does provide the pieces that can help an organization facilitate its business continuity.
objectives more easily. By making use of the appropriate cloud-based solutions, a Business Consulting firm can more readily accommodate and survive disruptions to their business such as natural disasters, internet disruptions, geopolitical incidents, and ever-growing security threats. The cloud facilitates a richer set of solutions than most organizations could afford to build from scratch for themselves, and changes the level of integration that is needed to support new functionality on a regular basis.

Supporting Remote Workers

Can you imagine how much more productive your entire workforce could be if they could all use the same resources, applications and services regardless of the size of their particular office? What about the benefits of individual remote workers being able to easily connect to key business applications as though they were right in the office? By using cloud computing solutions, your organization can start spending less time on adjusting to where its employees are, and spend more time collaborating with them as though they were all in the same place.

Communication and collaboration can be greatly aided with solutions for telephone and video conferencing that are deployed in the cloud, rather than in each one of your offices. Employees on engagement at the client site or in a hotel or at home can be just as effective as workers in your main offices. These solutions help to lower the costs associated with supporting remote workers, and help to increase their productivity.

Augmented Security

Business Consulting organizations can also achieve some information security benefits from using cloud based infrastructure vs managing all aspects of their security internally. This is not to suggest that an organization’s responsibility for information security can ever be truly outsourced. Rather, it is incumbent upon cloud-providers to make security a primary business objective given their high profile, and they are in a better position to obtain the necessary expertise and tools vs non-cloud based companies. Once again, economies of scale are a major factor.

Taking advantage of cloud computing solutions makes it easier for Business Consulting organizations to establish new practices and take on new work. These solutions put organizations in a place where they can better adjust to changes from rapid business growth or sudden personnel departures than
Due to the potential for both internal benefits and customer engagements, the Business Consulting industry has been looking at cloud computing for some time now, and there are several robust cloud-based options available today. Beyond the well known areas of accounting and customer relationship management (CRM), there are a number of specific types of applications that are beneficial to Business Consulting organizations.

Business Consulting Automation

There are several strong vendors with cloud-based Business Consulting automation (BCA) solutions in the marketplace today. These solutions provide the following functionality.

- Sales Forecasting & Pipeline Management
- Manage Proposals
- Project Management
- Staff Resource Allocation
- Billing

As comprehensive as BCA solutions are, cloud-based vendors realize that these solutions will still need to tie into other systems, like billing and reporting, and so many of them provide more effective hooks into other platforms and applications and data formats.

BCA solutions play a significant role in helping streamline a Business Consulting organization’s operations and making it possible for them to maximize their billing potential.

Services Resource Planning (SRP)

Services Resource Planning is what a Business Consulting organization needs to keep track of who is on what project, what resources are available for upcoming projects, and how the organization’s staff utilization
is being managed. The type of software is essential for a new Business Consulting firm, or one that is otherwise experiencing major growth, but for a long time, the costs did not make the return on investment clear. Now, with cloud-based SRP solutions, organizations have a very cost effective way to obtain a holistic view of the project flow and resource scheduling across the organization.

Project Life-Cycle Management

Business Consulting firms live and die by their projects, and given the number of projects that need to be managed – both simultaneously and over time – it is very necessary to be able to effectively manage the project process from cradle to grave. Several robust cloud-based tools are available to help organizations manage the lifecycles of their projects. These solutions can integrate with an organization’s BCA and SRP solutions to capture the full scope of activities at the firm.

Conferencing, Messaging and Collaboration

Most organizations already have email and telephone services. This is one of the very first things obtained by a company when setting up a new office, so the tendency is to go with what is already in place elsewhere. Regardless of what a Business Consulting firm is running today for their email and video conferencing needs, now is a good time for them to evaluate voice/video conference services. There are literally dozens of enterprise providers of conferencing and collaboration solutions which allow organizations to dramatically cut their costs while offering an array of communications options to their employees for internal and external video conferencing, corporate chat services, and web-based presentations. No longer do organizations have to set up expensive point-to-point solutions for supporting video conferencing with remote offices or customers/prospects. Most
importantly, with a cloud-based solution, remote workers have the same level of functionality and access to these tools as any other worker in the company.

Additionally, the time and coordination needed to setup a new office is dramatically reduced when using cloud-based voice and video communications services, as compared to legacy telecommunications solutions.

The use of cloud-based communication and collaboration technologies allow a Business Consulting firm to extend its reach to its prospects and customers, and make better use of corporate resources.

Clarity from the Clouds

These are just a few of the cloud-based solutions that are available to Business Consulting organizations of all sizes. Many of the cloud-based application suites mentioned above are quite comprehensive, so that it is possible for organizations to use only one full-fledged suite, or select only the components they are willing to run in the cloud. For example, most life-cycle management suites also have a project management component, so that it might make sense to start with that component if your organization is just starting out, or you might ignore that component if you already have a viable solution.

The key is that whatever gap a Business Consulting organization might have in regards to process automation, and workflow automation, it can be quickly and cost-effectively addressed in a way that integrates well with other applications, and facilitates growth. This enables the firm to spend more time focusing on the delivery of services to clients, rather than getting sidetracked with the implementation of the technology solutions that will deliver those services.

Now is the time for Business Consulting firms – especially the smaller ones that could not otherwise compete for larger customers – to start reaping the benefits of increased efficiency, more business flexibility, and better cash flow. There is tremendous value to be had in the cloud.
Moving to the cloud can help your business realize efficiencies and savings that were once reserved for big enterprises. The cloud has become democratized, as vendors have wised up to the fact that there is money to be made by catering to a full range of businesses, regardless of size. So ample rewards are available for the smart SMB that knows where it’s headed, and the best way to get there. But it’s not all blue skies—the level playing field that cloud computing enables can be fraught with dead-ends and gotchas, especially when it comes to the all-important bottom line. How can your organization avoid ROI missteps and mistakes that can turn your dream opportunity into a nightmare initiative?

**Checklist**

1. Do your homework and know what you’re currently spending.

2. Define your business needs before evaluating pricing models.

3. Understand the difference between CAPEX and OPEX.

4. Apply cost benefit analysis, impact assessment, and due diligence to your cloud initiative.

1. Do your homework and know what you’re currently
Cloud Computing Economics

spending.

“First, have a clear scope and user expectations before beginning. Have a clear cost structure for existing services. Let’s use email, for example: the cost of servers, energy, resources, software, service levels, disaster recovery—all things that must be identified prior to undertaking an ROI. I believe you will find that commodity activities are the best candidates for cloud opportunities.”

(Dion Alley, President, International Business Partners)

2. Define your business needs before evaluating pricing models.

“It is paramount to clearly define your needs before you start shopping for a cloud solution. The similarities in cloud offerings would begin and end at the need for increased value and better redundancy. For example, clouds for Software-as-a-Service (SaaS) would be focused on resource availability. Hosting clouds would emphasize scalability. Storage clouds would rely on fast hardware and data capacity.

“When comparing our options, we looked at what was being charged and evaluated them against our goals. We settled on a company that does not charge solely per-time-unit, but rather, charges a base rate and only charges for usage which is beyond that included in our base package, which is more consistent with traditional web hosting companies. So we know what our resource limits are, and if we ever cross those lines we know what to expect from it. As a result, we save about 60 percent per month on our hosting costs and we still have instant scalability when it is needed.”

(Christopher Ryan, Business Consultant & Project Manager, Prime Logic Consulting)

3. Understand the difference between CAPEX and OPEX.

“Cloud services don’t require capital investments (CAPEX) to be made by the client, so using a pure OPEX model can be attractive for some organizations, as it will allow them to expand and contract quickly with immediate impact to the books. This may be hard to stuff into an ROI model, but it’s an important intangible. Most cloud vendors are going to charge a rate called ‘consumption.’ If you don’t
know what your consumption is on a continual basis then get ready for something similar to the first cell phone bill you get when your teenager started texting (this is circa unlimited texting plans).”

(Scott Archibald, President, Accelerated Business Consulting)

4. Apply cost benefit analysis, impact assessment, and due diligence to your cloud initiative.

“Common business practices such as cost benefit analysis, impact assessment, and due diligence must be applied as you would in any assessment of business change.

- “Cost benefit analysis: Does this make financial sense aligned with short and long term goals?
- “Impact assessment: How will my business processes change, what new skills and expertise will I need, what resources will be freed up?
- “Due diligence: What are the legal implications for using the cloud, what jurisdictions would cover the data, what are the associated risks and how can I make them acceptable?”

(Andrew Rice, Business Development EMEA, HP Information Security)
Moving to the Cloud

Moving from one home to another is a chore. You must consider your new location carefully, choose a reputable realtor, inventory your possessions, decide what to keep and what to pitch, pack carefully, hire a mover, and mentally prepare for life in your new surroundings. Curiously, it’s not unlike moving your business to cloud computing. When your company is ready to “pick up and move” to the cloud, keep the following best practices in mind—from deciding what to “pack” and engaging a “realtor” to preparing for the culture shock of your new environment—to make your migration smooth and successful.

Checklist

1. Carefully consider what you intend to move to the cloud to avoid subpar performance.

2. Scope the resources needed for your deployment thoroughly.

3. Be prepared for the cultural shifts that accompany moving to the cloud.

4. Migrate to the cloud as you would to a larger on-premises server.

5. Purchase high-quality monitoring software for your virtual environment.

1. Carefully consider what you intend to move to the cloud to avoid subpar performance.

“You need to be thoughtful about what you put into the cloud, what level of expectations to set around it being in the cloud, and what provisions to make to mitigate performance issues.

“Perhaps the answer is to add/improve your bandwidth. Perhaps the answer is to add some caching services to your connectivity. Perhaps the answer is to set the right expectations for usage. Perhaps the answer is to alter the configuration of the data set so that it’s not one big massive chunk.
Moving to the Cloud

“No matter what combination of the above turns out to be helpful, the underlying answer must include a thoughtful look at what your organization will move, why it will move it, and what the ramification of that move will be. Migrating to the cloud is not the same as simply moving data or apps to a location that is farther away from you than it is now. Not unless you’re looking to relive the days of modem and ISDN connections, as it pertains to larger data sets.”

(Andrew S. Baker, Information Security & IT Operations Consultant, BrainWave Consulting Company)

2. Scope the resources needed for your deployment thoroughly.

“Most any VAR that you are purchasing your hypervisor from should have capacity planning tools that you can use to assist in planning your deployment. Make sure you purchase enough resources to cover a full year of server/data sprawl and determine what the costs are to add resources later.”

(Steve Heusser, Operations Manager, SolutionPro)

3. Be prepared for the cultural shifts that accompany moving to the cloud.

“Cloud computing has the potential to lead significant cultural changes in an organization, but in and of itself does not have to have any change in the way the organization operates. However, if change does not follow, then costs and benefits will not be realized. Some cultural changes that cloud can bring about include:
Moving to the Cloud

- Better communications between engineering and operations (DevOps)
- Greater emphasis on sharing and collaboration
- Reduction in redundancy
- Greater focus on continuity of business in face of disaster
- Greater operational efficiency
- Less reliance on internal IT
- More agility”

(JP Morgenthal, Principal, Ranger, Cloud & VDC Services, EMC Consulting)

“The business impact that cloud computing has on the whole organization is that it lowers the bar for the execution of ideas.

“Today, there are a whole host of good ideas and initiatives that can be dreamed up by business units that cannot be realized quickly because IT cannot move fast enough. How many times has a product manager thought to himself, ‘You know, we should take advantage of this market opportunity,’ only to dismiss the idea a few seconds later with, ‘Never mind. We could never move fast enough.’ The biggest impact that cloud computing has on the whole organization is that it lowers the bar for the execution of ideas. More things get tried because the cost to execute them is lower (where cost = time, hassle, energy, etc.—not just money). Now, many of those ideas will be failures. But many will be successes. By lowering the cost of failures (you tried it, it didn’t work out, but so what because it was so easy to do), you end up with more successes. And those successes will translate into higher profit, greater market share, and more passionate customers.”

(Dave Roberts, Vice President, Strategy, ServiceMesh)

“With more orgs allowing people to work from home and also employing remote teams as part of their workforce (local or international), true cloud computing (i.e. with IaaS and SaaS) will allow flexibility, around-the-clock development and support, and more productivity.”
4. Migrate to the cloud as you would to a larger on-premises server.

“For the most part, the same underlying deployment and migration processes should be employed for migration into the cloud as would be used to upgrade to a larger server on premises (or in a traditional hosting situation). The cloud doesn’t make this initial migration any easier or harder than other types of migrations, although it will lower the cost, and is easier to practice beforehand.” (Baker)

5. Purchase high-quality monitoring software for your virtual environment.

“Virtual/cloud environments have monitoring needs that differ greatly from traditional deployments. A good monitoring system will alert you to issues before they become problems and allow you to focus on your core business and not reacting to IT issues.” (Heusser)
Choosing a Cloud Computing Partner

Migrating your company to the cloud can be a perplexing proposition. You’ve predicated your success on being a nimble upstart, not a bulging behemoth. Without a bevy of skilled staffers and deep pockets, getting a piece of the cloud action is a bit trickier for a smaller organization than it is for a large enterprise. While the proposition of adopting cloud computing seems daunting at first, rest assured that you don’t need to go it alone. A well-selected provider can answer questions, provide guidance, and help shoulder the burden of cloud migration. Find your perfect match by following these best practices, and you’ll begin your search for a trustworthy partner on the right foot.

Checklist
1. Ask yourself the tough questions before selecting a partner.
2. Be ready to ask potential vendors tough questions.

1. Ask yourself the tough questions before selecting a partner.

Making the business case
- How will this move help me reach my business goals?
- Is the cloud actually going to be more cost effective and/or provide an advantage over a traditional/current model? Some cost/benefit analysis would be needed.
- Are there cloud-based resources I can leverage right now that don’t require going to an additional vendor? (You’d be surprised.)
Choosing a Cloud Computing Partner

Making the move

○ What changes do I need to make in my organization to support this service?

○ If the cloud provider is down, how will my business handle the outage? An alternate cloud provider? High availability and disaster recovery scenarios?

○ Are there low risk functions that could be moved to a cloud platform in order to test how the organization adjusts/supports their applications/services on the cloud?

○ What impact will this have on my industry or regulatory compliance obligations?

○ Does my technology-before-the-cloud (on-premise workstation hardware, Internet provider, telecom/phone/PBX solution, Web/database servers/hosting company) meet the demands a SaaS solution will require?

Data

○ How much control will I have over the vendor’s upgrade schedules, and what will it mean for the integration with the other portions of my business?

○ What are the security/privacy implications of using this technology?

○ What contingencies do I have for my business if this technology is unavailable for a day or a week?

Resources and backup

○ Who do I have on staff that can manage this process?

○ Will this free up personnel resources to work on more business-critical projects?

○ Am I prepared to accept that there’s going to be a learning curve? Just because it’s in the cloud, doesn’t mean I can ‘flip the switch’ and everything’s exactly what I want/need.

○ Have I really taken a hard look at the long-term impact and costs over the life of usage? This includes training, implementation, data backup and retrieval, management, and licensing.
2. Be ready to ask potential vendors tough questions.

**Background**
- How stable is your organization?
- What is your product roadmap?
- Can you provide references that reflect my particular business?
- Can you address industry-specific compliance requirements; encryption levels and authentication protocol details?

**Product**
- What does the interface look like?
- Do you offer a Service Level Agreement (SLA)?
- Is there financial compensation for breaking your SLA?
- Do you have a public site listing issues and outages?
- How do you schedule maintenance and handle upgrades?
- What are the support options?

**Data**
- How do I get my data back out in a way that is useful to me, beyond simply reporting?
- How long will you retain my data, even if I am done with you?
- How can I be assured my data will be protected?
- How do I get my data if I decide to leave?

**In case of emergency**
- What is your security policy and related insurance coverage in the event of a breach?
- If you are breached, are you liable for customer/user data loss?
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