

CLOUD COMPUTING

What does it mean to the small and medium sized business

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What is Cloud?

- ✓ SAAS – Software as a Service
 - Messaging, Calendar, Contacts (e.g., Google Apps, Microsoft 365)
 - Accounting (e.g., Quickbooks Online, Sage)
 - Document Management
 - Project Management (e.g., Mavenlink)
 - Customer Relationship Management (Salesforce.com)
- ✓ Infrastructure/Platform as a Service (IAAS or PAAS)
 - Customer owned application hosting
 - Server and Storage infrastructure (e.g., Amazon)
 - Cloud backup
 - Hosted voice communications (e.g., RingCentral)

Benefits of Cloud

- ✓ High Reliability
 - Applications and infrastructure hosted in multiple redundant data centers
- ✓ High Availability
 - Your applications are hosted off site. In the event of a server or disk failure, or an event that impacts your server room (e.g., fire/water), you will still have access to your data
- ✓ Security
 - Data is encrypted and highly secure (how secure is your data today?)
- ✓ Pay As You Go
 - Operationalize your expenses - most Cloud providers charge a monthly fee
 - Typically, no long term commitments or up front setup fees

Benefits of Cloud

- ✓ **Ease of Administration**
 - You don't need to be an IT expert to administrate your systems
- ✓ **Simplify your Infrastructure**
 - Reduction in the amount of IT support services required
- ✓ **Remove Single Point of Failure**
 - For companies with multiple offices or mobile workers, an event in the main server room will not impact remote offices or users
- ✓ **Features and Functionality**
 - As features are added, you have access to them immediately
- ✓ **Reduce your IT spend**
 - Reduce capital expenditures, hardware/software upgrades and associated services

Common Misconceptions

- ✓ My data will not be secure
 - ✓ Most major Cloud providers (e.g., Google, Amazon) make data security risk management one of the the highest priorities. Your data is encrypted in a managed environment with security policies and experts who stay up to date on security risks.
 - ✓ Ask yourself “Do I understand the vulnerabilities of my network? Is my IT guy a security expert keeping up to speed on the latest security risks? Are we keeping a log of intrusion attempts, hacking, phishing, etc.
- ✓ My IT guy says Cloud will affect our network performance
 - ✓ This is partially true. For SAAS or remote file services, traffic will move from LAN to the Internet. Services may suffer if your bandwidth is insufficient. This can be managed by upgrading Internet circuits (lower cost Ethernet based service widely available). For companies with multiple offices, this can reduce the need for tie lines (e.g., T1s) between locations.

Issues and Risks

- ✓ Resistance of IT
 - Your IT support staff may resist change and have concerns about job security (which they should!)
- ✓ Picking the Right Applications
 - You or a designee MUST spend adequate time evaluating potential solutions
 - Most SAAS providers offer free demos for 14-30 days
- ✓ Migrating Data
 - Migration is typically not too difficult or risky. However, you need to have a Fall Back Plan in the event of a problem with data migration.
 - Consider using a resource with expertise in data migration
- ✓ Employee Resistance
 - Majority of people resist or fear change
 - Get buy-in from your key employees to champion the change

Issues and Risks

✓ Training

- Develop a training plan and make sure ALL employees are trained
- Consider breaking up training into multiple sessions. Not giving people too much information in one sitting will help them learn and adapt better

✓ Support

- As you migrate to Cloud, particularly for multiple applications, you need to consider how your systems and users will be supported
- Designate an employee such as an admin staffer to administer the cloud apps (e.g., adding/deleting users, granting permissions, etc.). You don't need an IT person to perform most of the tasks
- Consider outsourcing network administration, helpdesk and desktop support

Getting Started

- ✓ Talk to an experienced expert in Cloud computing and migration
- ✓ Speak with other business owners/peers who have gone through the process
- ✓ Obtain a complete diagram of your IT infrastructure with all servers, storage and network devices, voice and data circuits, and applications
- ✓ Compile a list of each component:
 - Device model #'s, firmware version, etc.
 - Application type/version
 - Circuit type/provider/contract dates, etc
- ✓ Document your IT spend for the past 2-3 years which should include:
 - Hardware and software purchases (e.g., servers, disk storage, etc.)
 - Monthly recurring expenses (e.g., circuits, IT staff/services, etc.)
 - Annual recurring costs (e.g., software licenses, maintenance, etc.)

Getting Started

- ✓ Determine the schedule for system upgrades or replacements
- ✓ Evaluate cloud solutions in the context of:
 - Increasing productivity
 - Enhancing and enabling communication
 - Improving processes
 - Adaptability/absorption of your staff
 - Deferring capital investment
 - Lowering operating expense
 - IMPROVING YOUR BOTTOM LINE
- ✓ Demo applications and/or infrastructure solutions...kick the tires
- ✓ Establish a migration schedule and communicate your plan
- ✓ Execute, Test and Train

My Case Study

- ✓ Migration to Google Apps
 - Faced with upgrade to Microsoft Exchange 2010
 - Upgrade included
 - ✓ New software/licensing
 - ✓ New server hardware
 - ✓ Professional services
 - Upgrade would trigger a domino effect
 - ✓ Upgrading Exchange would require upgrade of SPAM filter
 - ✓ Upgrading BEZ server
 - ✓ Upgrading Cisco phone system
 - Capital required to upgrade Microsoft 2010
 - Equipment and software ~\$60,000
 - Professional services ~\$12,000
 - Cost to migrate to Google...\$2,500 (\$50/user/year)*

My Case Study

- ✓ Migration to new Time and Billing System
 - Aging client/server based system several versions behind
 - Software upgrade would require new server
 - Estimated cost to upgrade
 - ✓ Software upgrade ~\$12,000
 - ✓ Hardware ~\$4,000
 - ✓ Annual recurring cost for maintenance and licensing ~\$7,500
 - Cost to migrate to new Time and Billing System
 - ✓ \$9,000 annual recurring cost

My Case Study

- ✓ Migration to Cloud Backup
 - Backing up to tape (manual process)
 - Tapes taken home weekly
 - Potential of losing/restoring days/weeks of data
 - Option 1 - Cost to continue using tape ~\$200
 - Option 2 - Cost to backup to off-site disk (NAS) ~\$3,000 capital and services
 - Option 3 - Monthly cost to backup 1-TB to Amazon S3 ~\$200
- ✓ Migration to Cloud Accounting
 - Aging client based application, several version behind
 - No ability to access remotely other than Remote Desktop
 - Cost to migrate to Quickbooks Online \$70/mo. for 3 users (including accountant)

Cost Comparison Example Summary of Costs

COST ANALYSIS

YEAR	1	2	3	4	5	Total
Exchange						
CapEx	\$ 60,000					\$ 60,000
Services/Fees/Maint	\$ 12,000		\$ 5,000			\$ 17,000
Staff Labor	\$ 18,000	\$ 18,540	\$ 19,096	\$ 19,669	\$ 20,259	\$ 95,564
Depreciation	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 60,000
Opex (P&L)	\$ 42,000	\$ 30,540	\$ 36,096	\$ 31,669	\$ 32,259	\$ 172,564
Cashflow	\$ 90,000	\$ 18,540	\$ 24,096	\$ 19,669	\$ 20,259	\$ 172,564
Google						
CapEx						
Services/Fees/Maint	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 12,500
Staff Labor	\$ 22,500	\$ 9,000	\$ 9,270	\$ 9,548	\$ 9,835	\$ 60,153
Depreciation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Opex (P&L)	\$ 25,000	\$ 11,500	\$ 11,770	\$ 12,048	\$ 12,335	\$ 72,653
Cashflow	\$ 25,000	\$ 11,500	\$ 11,770	\$ 12,048	\$ 12,335	\$ 72,653

TOTAL COST OF OPERATION

YEAR	1	2	3	4	5	Total	Delta
Exchange	\$ 42,000	\$ 30,540	\$ 36,096	\$ 31,669	\$ 32,259	\$ 172,564	42%
Google	\$ 25,000	\$ 11,500	\$ 11,770	\$ 12,048	\$ 12,335	\$ 72,653	