

Presented January 14, 2014 at New York Exchange User Group Meeting
Last Updated on 1/14/14

Pro's and Con's of Cloud Hosted Exchange

Technical and Financial Considerations for Making the Right Decision

Ben Serebin
Ehlo & Network Consultant
REEF Solutions LLC (www.reefsolutions.com)

Agenda

- Who am I?
- Projects/Hobbies
- Walk Down Memory Lane
- What is Cloud Hosted Exchange?
- Advantages of the Cloud
- Disadvantages of the Cloud
- Leveraging the Cloud
- Future of Cloud Hosted Environments
- Understanding Total Cost of Ownership

About Me

- Before I started my career in **Information** Technology, my education and experience was in economics/accounting/financial analysis. Financial analysis is part of almost every decision I make for myself and my clients. I have been involved in IT for almost 15 years now. And am active in 4 organizations
- 1) my company, REEF Solutions, a network & wireless consulting firm that brings reliable, effective, efficient, and forward thinking technology solutions to startups and established financial and public relations firms. We specialize in Exchange Server and evolving startups into larger well established companies by maximizing their use of technology with excellent return on investment (aka ROI).
- 2) 8 years ago, was elected and continues to serve on the board of trustees and is treasurer of NYCwireless.net, a non-profit that is very active in the wireless hotspot space.
- 3) founded in 2005, and continues to run, the first and only NY area Microsoft Exchange Server User Group, NYExUG.com.
- 4) on the board and treasurer of Techstravaganza, the annual Microsoft User Group Community “mini-TechEd” conference for IT Pro’s in the NY Metro Area. See Techstravaganza.com for more info.

Projects (present/future)

- Specialty is Exchange Server, Spam Filtering, DNS, & Wireless.
- Current Project Q1 2014: Building my next generation hypervisor platform based on 2012 R2. Dell R410, 128GB, PERC H700 1GB, 2 x 10Gb NICs, 4 x SSDs (960GB) in RAID 5 or 6.
- Current Environment: Running Exchange 2007 & 2013 on ESXi & Hyper-V w/Kemp LB VMs across 2 sites under ESXi & Hyper-V, server computing environment is entirely virtual (ESXi 4, 5, Hyper-V 2008 R2, 2012, and 2012 R2. DC1 on ESXi 4 w/DAS and DC2 on VM cluster w/iSCSI storage, Blackberry Enterprise Server Express 5 running on VMware ESXi 4 and BES 10 on Hyper-V 2012. Current handheld email device is a BlackBerry Q10 running leaked OS 10.2.1925.

A short walk down memory lane...

The meaning behind “Cloud” computing changed in 2010.

- Back in the beginning of time, the term, “Cloud” was about instantly scalable computing. Think Amazon, Rackspace, etc.
- Microsoft has been marketing “Windows Server” as a Cloud solution since 2010. So, your servers are now “Clouds”.

What is Cloud Hosted Exchange Server?

Microsoft PSS Supported Solutions Listed Here.

- 1) Scalable Exchange computing in your company (aka your environment on/off-site)
- 2) Scalable Exchange computing at a remote datacenter (aka private/managed hosting)
- 3) Mailboxes as a Service (e.g. Intermedia, AppRiver, Microsoft Exchange Online)
- 4) Mailboxes w/Semi-Control (Office 365)
- 5) Combination of above (Hybrid Mode)

Advantages of Private/Managed Hosting

- Ability to control organizational and server level settings
- Ability to deploy 3rd party solutions
- Higher up-time (reliable)
- Maintenance windows controlled by your company
- Control over where data is at rest
- Priority Support when problems occur

Advantages of Mailboxes as a Service

- Cost well defined
- Easiest administration (HR can be trained)
- Easy implementation (migrate on or new)
- Documentation included for end user setups
- Large mailboxes
- Spam Filtering included
- Streamlined Solution
- Least time commitment for IT

Advantages of Mailboxes w/Semi-Control

- Aka: Office 365 Plans
- Ability to set some server level settings
- Includes/Integrates with SharePoint, Lync, and more
- Easily scalable
- Cost Well Defined
- Run by Microsoft
- Includes latest versions of Microsoft Office

Advantages of Hybrid Mode

- Ability to control which users are in Cloud (sales/field workers vs management)
- Ability to offer seamless integration (SSO)
- More customizable compared to Mailbox Semi Control (Office 365)
- Smoother Migration to hosted environment
- Optional Microsoft Office licensing
- All messages **MUST** flow through on-premise.

Examples of Pricing for Various Supported Options

- Microsoft's Exchange Online Plan 1 is \$4/mailbox w/50GB storage. No Office.
- AppRiver's Mailbox is \$13/mailbox w/unlimited storage. Outlook included.
- Office 365 E1 \$8/user/month [unlimited users]. No Office, but all tools (SharePoint, Lync, etc).
- Office 365 Midsize Business \$15/user/month [300 user maximum] w/50GB mailbox. All tools.

Pricing of *Non-Supported* Cloud Platform Options

- TOO COMPLICATED!!!
- Don't forget: cpu, memory, storage (OS volume & mail DB volume), bandwidth, static IP's, vpn, etc.



Language: English

Need Help? [Watch the Videos](#) or [Read 'How AWS Pricing Works' Whitepaper](#)

NEW! - AWS lowers its pricing again - Lower pricing for [M3](#) and [M1](#) instance types across all regions and introducing new instance types [C3](#) and [I2](#) Family

FREE USAGE TIER: New Customers get free usage tier for first 12 months

Services Estimate of your Monthly Bill (\$ 5481.30)

Choose region: US-East US Standard (Virginia) Inbound Data Transfer is Free and Outbound Data Transfer is 1 GB free per region per month

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers. Amazon Elastic Block Store (EBS) provides persistent storage for Amazon EC2 instances. [View Facts](#)

Compute: Amazon EC2 Instances:

Description	Instances	Usage	Type	Billing Option	Monthly Cost
Storage	5	100 % Utilized	Windows and Web SQL Server on m1.xlarge	On-Demand (No Co-ops)	\$ 3513.60
EC2	4	100 % Utilized	Windows on m1.large	On-Demand (No Co-ops)	\$ 1065.80

Storage: Amazon EBS Volumes:

Description	Volume Type	Storage	IOPS	Snapshot Storage
Storage Data	Standard	500 GB	0	0 GB-month of Storage

Elastic IP:

Number of Additional Elastic IPs: 0
Elastic IP Non-attached Time: 1 Hour/Month
Number of Elastic IP Release: 0 Per Month

Data Transfer:

Inter-Region Data Transfer Out: 1000 GB/Month
Data Transfer Out: 1000 GB/Month
Data Transfer In: 1000 GB/Month
Intra-Region Data Transfer: 5 GB/Month
Public IP/Elastic IP Data Transfer: 5 GB/Month

Elastic Load Balancing:

Number of Elastic LBs: 0
Total Data Processed by all ELBs: 5 GB/Month

Common Customer Samples:

- Free (Website on AWS)
- AWS Elastic Beanstalk Default
- Marketing Web Site
- Large Web Application (All On-Demand)
- Media Application
- HPC Cluster
- Disaster Recovery and Backup
- European Web Application

Pricing of Non-Supported Cloud Platform Options

- Amazon AWS: 5 x Exchange Servers & 4 x AD Servers [5 x m1.xlarge (4 core, 15GB, 5 x 500GB volumes) & 4 x m1.large (7.5GB) \$5k/month, \$400/month support (% of cost). \$120/GB transfers. Total is about \$5,500 + bandwidth.
- Microsoft Azure: 5 x Exchange Servers [8 x 1.6GHz, 14GB] & 4 AD Servers [\$3,213] \$300/month support (flat). \$120/GB transfers. Total is about \$3,513 + bandwidth.

Understanding Total Cost of Ownership

- TCO is simply added up all costs (hardware, software, and labor) associated with a something.
- Labor was not factored in since it was unknown if full timer for Exchange, IT generalist, or IT consultant.

Exchange Online E1 Plan	
250# of Users	
\$ 8.00	Cost Per Mailbox
\$ 2,000.00	Monthly E1 Cost
\$ 24,000.00	Yearly E1 Cost
\$ 120,000.00	5 Year Cost
Exchange On-Premise w/DR Failover w/Hyper-V	
\$ 20,000.00	Server Cost
\$ 3,000.00	Anti-Spam (\$1/mailbox/month)
\$ 1,600.00	Exchange Licensing 2010
\$ 25,000.00	Per Seat (\$100/CAL)
\$ 38,800.00	Total First Year Cost
\$ 88,600.00	5 Year Cost

Leveraging the Cloud

- Sign-up for an Exchange Online or Office 365 account to become familiar with both
- Review your existing/planned environment's requirements and specifications to get estimates
- Cloud Platform not ready due to high cost for testing. Cheaper to deploy test environment re-using or even buying new equipment.

Amazon's Exchange 2010 "Support"?

- Released a 31 page how to white paper in July 2013 about deploying Exchange 2010 in AWS.
- Very complicated and involves many AWS specific configurations.
- The GOOD: Documented Jetstress, CPU Query, Exchange Calculator, AD Site Design, AWS Mgmt Pack for System Center, provided scripts, templates, etc.
- The BAD: Not Microsoft supported, complicated deployment, AWS recommends scaling outward and not upward (due to performance but be aware there are cost implications to this)
- <http://aws.amazon.com/windows/exchange/>

This is NOT a Microsoft Supported Solution.

Future of Cloud Hosted Exchange

- Support for Hybrid for Mailboxes as a Service (mailbox hosting company allowing Exchange on-premise + their hosting)
- Support for Azure & AWS Hybrid mode (VPN extend your office network and run VMs in both places and seamless have access between the two)
- Support for native Azure & AWS (run Exchange inside the platform)

Thanks for coming!

Question of the Month and raffles.

See you at the next meeting wherever it may be
(old or new Microsoft office). www.nyexug.com