



The Great Cloud Debate

Mike Czerniak
Data Center and Cloud Practice Leader

Mindsight 
Technology. Transparency. Trust. SM

Agenda

- **My Cloud Background**
- **Discussion Topics**
- **Bonus Topic**
- **Cloud Case Study**
- **Closing**





My Cloud Background

My Background

Mindsight

- » Joined Mindsight over 4 years ago
- » Currently leader of the Cloud and Data Center practice
- » Previously held roles as Team Leader and Senior Data Center Engineer

Work History

- » Spent 7 years with a Chicago-based managed services provider
- » Started my IT career as a Help Desk Technician in 1999

Over the Last 11 Years

- » Performed over 60 significant cloud migrations as lead engineer
- » Architected over 30 large private cloud migrations
- » Offering *Cloud before Cloud*
 - *SaaS before SaaS*
 - *IaaS before IaaS*



What to Expect in this Session



Hear the questions our customers are asking - and learn about the decisions they are making in relation to cloud

Expect a high level overview of cloud services and technologies – not a technical deep dive

We'll be covering 5 key topics and 1 bonus topic



Key Topics

Topic #1

Should we move to the cloud or remain on premise?

- » Investment - Review your existing investment in hardware/software
- » Age - Review age of existing hardware in relation to your refresh cycle
- » Cost - Review CapEX vs OpEX model
- » Business Compliance - Compliance requirements might prevent cloud adoption



Topic #2

What server/services should we migrate to the cloud?

- Must have a thorough understanding of your IT services and interdependencies
- Varies by organization

Common cloud adoption:

- Phase 1

Non-Production Systems	Production Systems
PaaS – Application Development	SaaS – Email Services
IaaS – Test/Sandbox Environments	SaaS – CRM
IaaS – Backup Copies	SaaS – Ticketing

Topic #2 – *Continued*

What server/services should we migrate to the cloud?

» Phase 2

Production Systems

IaaS – Less Impactful Production Systems – Patching Server, AV, Utility

» Phase 3

Production Systems

IaaS – Production Systems – Network Services, DCs, ERP

Topic #3

What type of cloud deployment should we choose?

Public cloud



Public clouds are owned and operated by a third-party cloud service provider, which delivers computing resources like servers and storage over the Internet.

Private cloud



A private cloud refers to cloud computing resources used exclusively by a single business or organization.

Hybrid cloud



Hybrid clouds combine public and private clouds, bound together by technology that allows data and applications to be shared between them.

Topic #4

How do I select a public cloud provider?

- » Existing Cloud Services – Build upon existing cloud provider
- » On Premise – Build upon the skills and knowledge you have for on premise environment
- » Staff – Utilize the skills/training of your IT team
- » Features – Leverage exclusive features like snowball or Azure Stack
- » Enterprise Systems – Evaluate ERP systems - sometimes they drive a decision
- » Technology Partners – Build upon the guidance of your partnerships



Topic #5

Is moving to a public cloud service secure?

It is important to understand responsibilities!

Cloud Provider Responsibilities

- » The services that the major providers are responsible for are extremely secure
- » They have completed the most rigorous compliance certifications

Your Responsibilities

- » The cloud provider is not responsible for how you configure your services
- » You could enable a security hole with a simple click of the mouse

Topic #5 – *Continued*

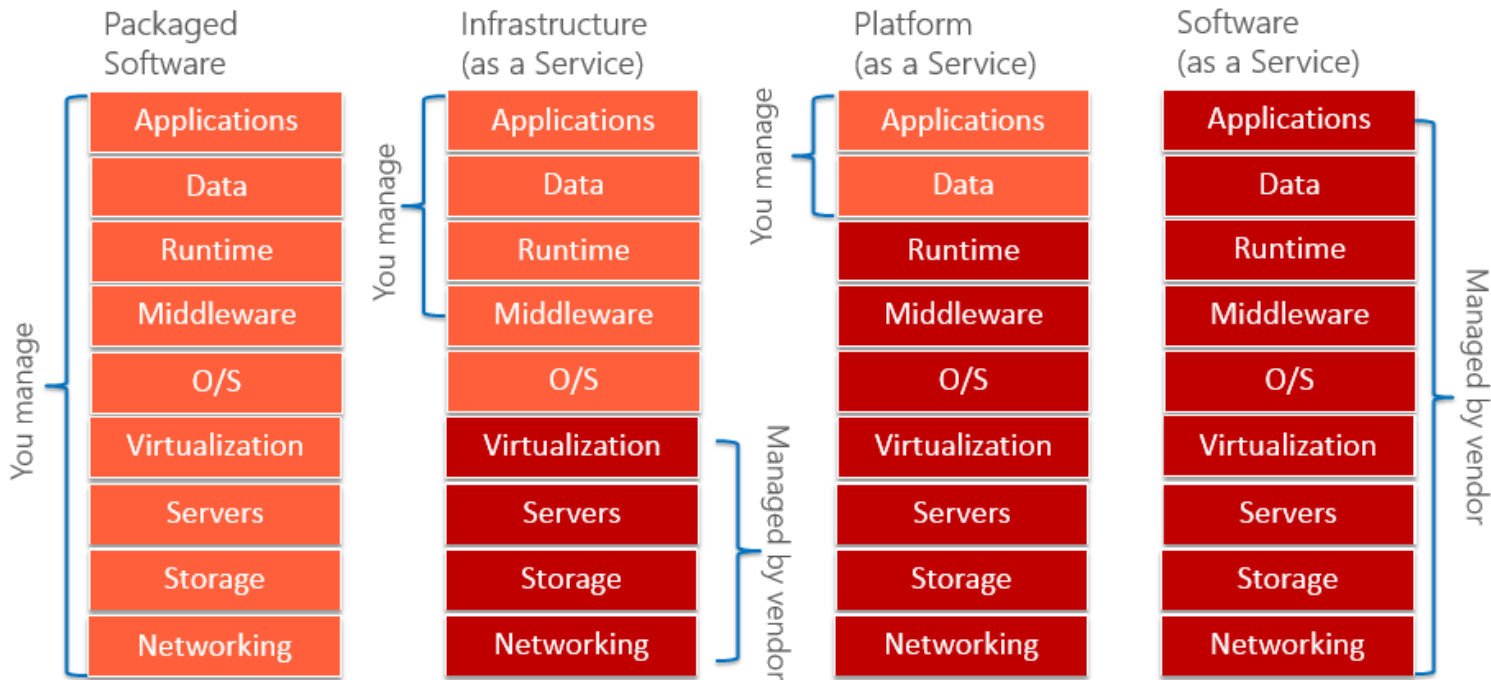
Is moving to a public cloud service secure?

Your Responsibilities – *Continued*

- » You must have the expertise to set up the services in a secure manner
- » You must manage access to the environment
- » Use automation tools to:
 - Monitor changes to the environment
 - Conduct routine security audits

Topic #5 – Continued

Is moving to a public cloud service secure?



Summary

In order to make your cloud decisions, you should:

- » Determine if the cloud is right for you
- » Validate the servers and services you will migrate to the cloud
- » Select a cloud option
- » Review the public cloud providers
- » Review your cloud responsibilities, especially around security

Additionally:

- » Seek guidance when necessary to help you navigate the cloud decision
- » Use assessment tools





Bonus Topic: Cloud Migration Process

Migrating to the Cloud Like a Pro

5 Keys to Success



#2 Key to Success

Communication...Communication...Communication

- » **Leadership Team** – Must get business buy in by having discussions with the leadership team
- » **Application Owners** – Include the application owners in your cloud discussions
- » **Application Vendors** – Determine if your applications are cloud ready
- » **Consultants** – Seek expert advice from a trusted IT services provider

#3 Key to Success

Team Work...Team Work...Team Work

Continued and constant collaboration with your:

- » **Cloud Consultants** – Expertise to help you navigate cloud environments – and help prevent pitfalls.
- » **Application Vendors** – Need to confirm the application is supported in the cloud.
- » **IT Department** – Might be impacting other parts of the IT department.
- » **Application Developers** – Need to understand the impact of moving to the cloud. Application changes will need to be addressed.
- » **Application Owners** – Need to understand the application may function differently. Owners may have access to the environment and will change once moved to the cloud.

#4 Key to Success

Testing...Testing...Testing

- » **Develop Test Plan** – Develop test plan based on previous keys to success
- » **Execute Test Plan** – Execute test plan to determine migration issues
- » **Adjustments** – Adjust the migration plan based on the test results
- » **Retesting** – Retest to validate changes

#5 Key to Success

Execution...Execution...Execution

- » **Prerequisites** – To perform the cutover with confidence, don't start the execution until you have:
 - » Completed your planning sessions
 - » Communicated to the various parties
 - » Included various members of the many teams
 - » Successfully completed the testing plan
- » **Single threaded changes** – Do NOT upgrade and migrate at the same time
- » **Change control** – Follow change control processes
- » **Post cutover testing** – Needs to be completed by multiple teams
- » **Support** – Day 1 Support



Cloud Case Study

ISO Industries

Phase 1

- » 3 years ago, ISO Industries hired Mindsight to perform an assessment of their environment
- » Mindsight reviewed the various aspects of the environment and mapped out options for moving to the cloud

Phase 2

- » ISO Industries followed Mindsight's recommendation and selected a migration to O365 as the first step into the cloud
- » Mindsight followed the 5 Keys to Success and successfully migrated the customer

Phase 3

- » One year later, ISO Industries was due for a hardware refresh
- » ISO was happy with the O365 SaaS service and decided on Azure for IaaS
- » Mindsight established a VPN between Azure and the customer's site
- » We built a VM for an additional AD site domain controller



ISO Industries

Phase 4

- » Mindsight helped set up additional IaaS services for backup processing and replicated backup data
- » IaaS services were added to another Azure location and backup copies kept here

Phase 5

- » The application development team moved their development and sandbox environments to additional IaaS services

Phase 6

- » The remaining production VMs were migrated from the outdated hardware to additional IaaS services
- » Mindsight's Managed Services team started monitoring and managing the environment



ISO Industries: Value Delivered

- No need for email licensing - no longer managing email and can focus on business improving initiatives
- Built upon the SaaS offering by selecting Azure
- Utilized in house Microsoft skills by selecting Azure
- No investment in new hardware needed
- Can scale up faster (hours) without significant capital investment.





Conclusions



In Closing

- » **Past:** Cloud went mainstream...most exciting technology shift in years.
- » **Present:** Almost all technology vendors are refining their cloud market strategy. Validated by visiting the main page of any technology website.
- » **Future:** According to a recent article by Gartner, cloud growth over the next 3 years will be over \$100 Billion.

Table 1. Worldwide Public Cloud Service Revenue Forecast (Billions of U.S. Dollars)

	2017	2018	2019	2020	2021
Cloud Business Process Services (BPaaS)	42.2	46.6	50.3	54.1	58.1
Cloud Application Infrastructure Services (PaaS)	11.9	15.2	18.8	23.0	27.7
Cloud Application Services (SaaS)	58.8	72.2	85.1	98.9	113.1
Cloud Management and Security Services	8.7	10.7	12.5	14.4	16.3
Cloud System Infrastructure Services (IaaS)	23.6	31.0	39.5	49.9	63.0
Total Market	145.3	175.8	206.2	240.3	278.3



Thank You!

Mike Czerniak
mzczerniak@gomindsight.com
630.981.5064