Mostly Sunny, with a Chance of Thunderstorms
Is there a Cloud in your future?

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View this presentation online at
http://www.HoodSoftwareSolutions.com/UNITE

Is there a Cloud in your future?

The short answer is Yes

In fact, you might already be a Cloud user

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You *Might* be a Cloud User…

- If you have a Smartphone, Tablet, or other mobile device
  - You might be a Cloud user
- If your email address is anything other than your company name (gmail.com, yahoo.com, outlook.com….)
  - You might be a Cloud user
- If you access your applications via a web browser or mobile app
  - You might be a Cloud user
- If you don't know where the server is located, what OS it is running, or who is actually managing it
  - You might be a Cloud user
- If you use Dropbox, OneDrive, Office 365, Google Docs, Safesforce, Azure, AWS…
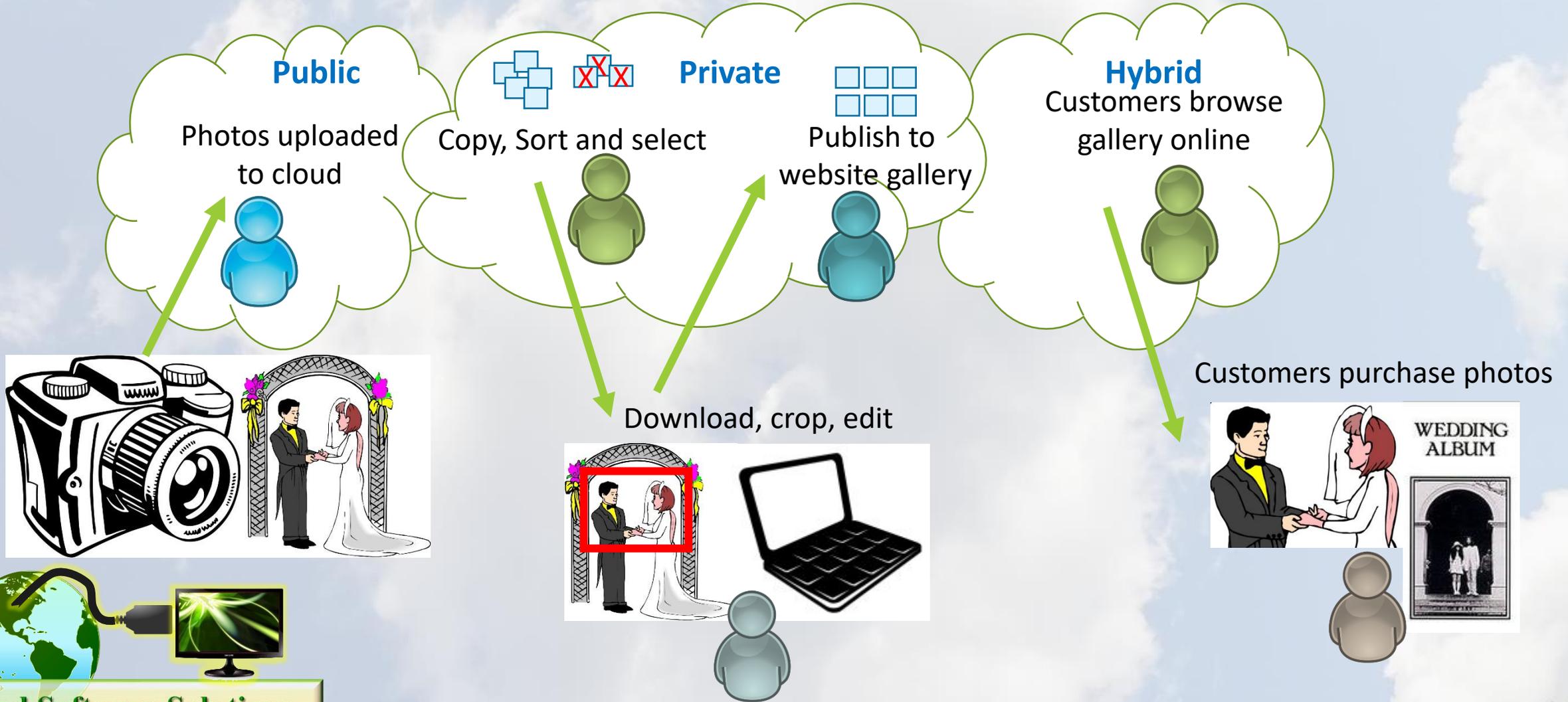 - You *Are* a Cloud user

On the other hand, if you access your applications from a fixed location, using a character-based terminal or emulator, or if your application involves a lot of archaic external interfaces (like tape drives), you probably are not a Cloud user.

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Cloud example – professional photographer

Public

Photos uploaded to cloud

X X X

Private

Copy, Sort and select

Publish to website gallery

Hybrid

Customers browse gallery online

Download, crop, edit

Customers purchase photos

WEDDING ALBUM

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Characteristics (Goals) of Cloud Computing

- Agility – improved flexibility
- Cost reduction – moving from capital expenditure to operational expenditure
- Device and location independence
- Easier maintenance
- Multitenancy
- Performance (monitoring and SLA fulfillment)
- Productivity
- Reliability
- Scalability and elasticity
- Security

Source: Wikiedia.org Cloud computing

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Common Types of Cloud Computing

XaaS ("X" as a Service)

- IaaS – Infrastructure as a Service
  - Machines (virtual), Servers, Network, Storage, Load Balancing
- PaaS – Platform as a Service
  - Database, Web server, Dev Tools, Execution runtime
- SaaS – Software as a Service
  - Email, CRM, Virtual Desktop, Communications, Gaming

- On Premise vs. Off Premise

- Private – Public – Community – Hybrid

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Some related models

- ## Client-Server model
  - Distributed application, with roles for service providers (servers) and service requestors (clients)
- ## Service Bureau
  - Provides "off premise" computer resources
- ## Grid Computing
  - Distributed, loosely coupled computers, sharing resources to complete an application
- ## Peer-to-peer
  - A form of distributed architecture with no central control or coordination

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Are there other types of Clouds?

- Private / Public / Hybrid
  - It's a case of where it is located and how it is managed
- XaaS – "X" as a Service
  - Choose anything for X – someone will probably call it a Cloud architecture
- Is a Virtual Machine (VM) a Cloud?
  - Maybe, but not always.
  - VM is often used in a Cloud architecture
- Is a Service Bureau a Cloud?
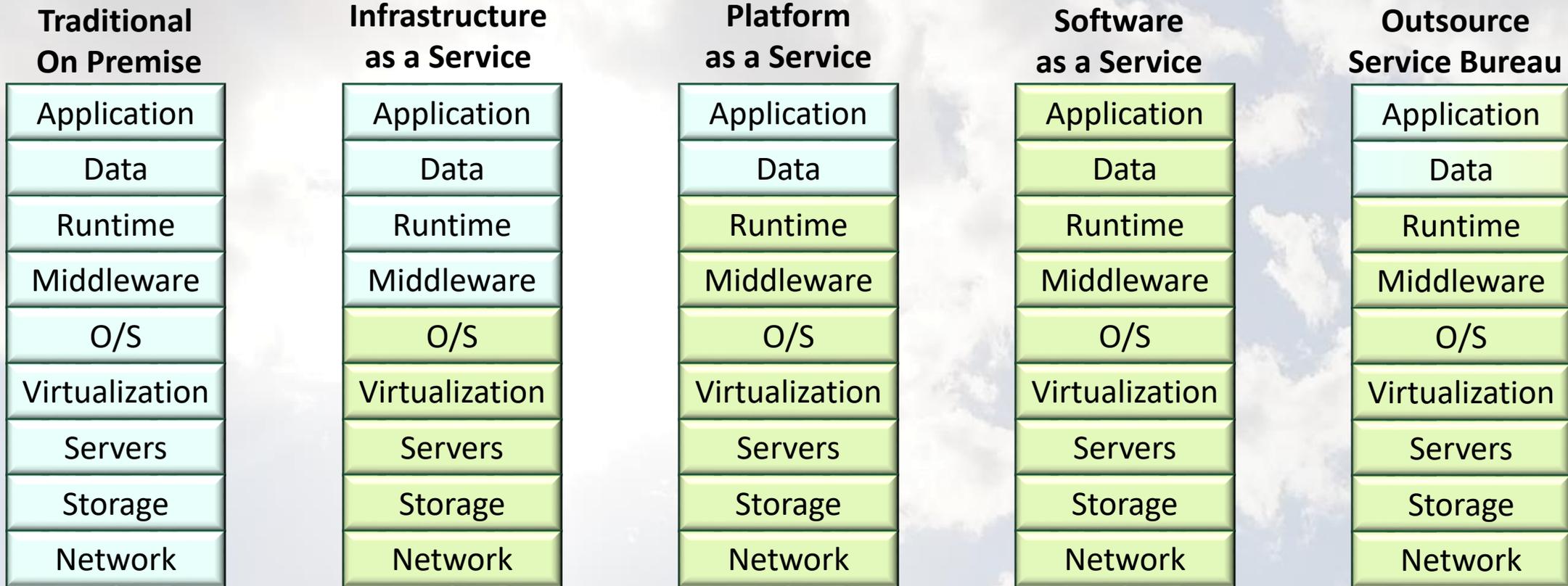 - Maybe
- Is ClearPath Forward a Cloud?
  - ClearPath Forward has many features in common with Cloud

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Degrees of control and management

Traditional On Premise	Infrastructure as a Service	Platform as a Service	Software as a Service	Outsource Service Bureau
Application	Application	Application	Application	Application
Data	Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage	Storage
Network	Network	Network	Network	Network

Managed by You   **Managed by Provider**

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Some impediments or concerns about Cloud

- Data motion
  - If your application requires a very large database, consider the time required to move that data from on premise to a remote Cloud
  - A Hybrid solution that allows the application to access the data locally, but off-board less data-intensive transactions may be a better solution
    - E.g. Consider Look vs. Buy problem in travel industry
- Highly volatile transaction load
  - Consider the time required to provision a new Cloud environment
- Security
  - Consider physical security as well as transactional security (e.g. hacking, DDOS attacks, Malware…)

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What makes an application a good Cloud candidate?

Characteristic	Traditional	Private	Hybrid	Public
Primarily uses character based terminal interface	√			
Security and data integrity paramount	√	√	√	
Very large data volume	√	√	√	
Requires access to legacy applications a data	√	√	√	
Performance critical, high volume transactions	√	√	√	
Web or Mobile user interface	√	√	√	√
Some periodic shift in volume (e.g. seasonal sales increases)	√	√	√	√
Highly scalable, resilient application architecture	√	√	√	√

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Additional Resources

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From Microsoft – 10 Myths about Moving to the Cloud

Myths

1. Office 365 is just Office tools in the cloud, and I can only use it online.

2. If our data moves to the cloud, our business will no longer have control over our technology.

3. Keeping data on-premises is safer than in the cloud.

4. I have to move everything to the cloud; it is an all-or-nothing scenario.

5. Cloud migration is too much for my business to handle.

6. Corporate spies, cyberthieves, and governments will have access to my data if it is in the cloud.

7. I have to learn all new tools to manage SharePoint Online.

8. Skype and Skype for Business are one and the same.

9. Email isn't any simpler in the cloud.

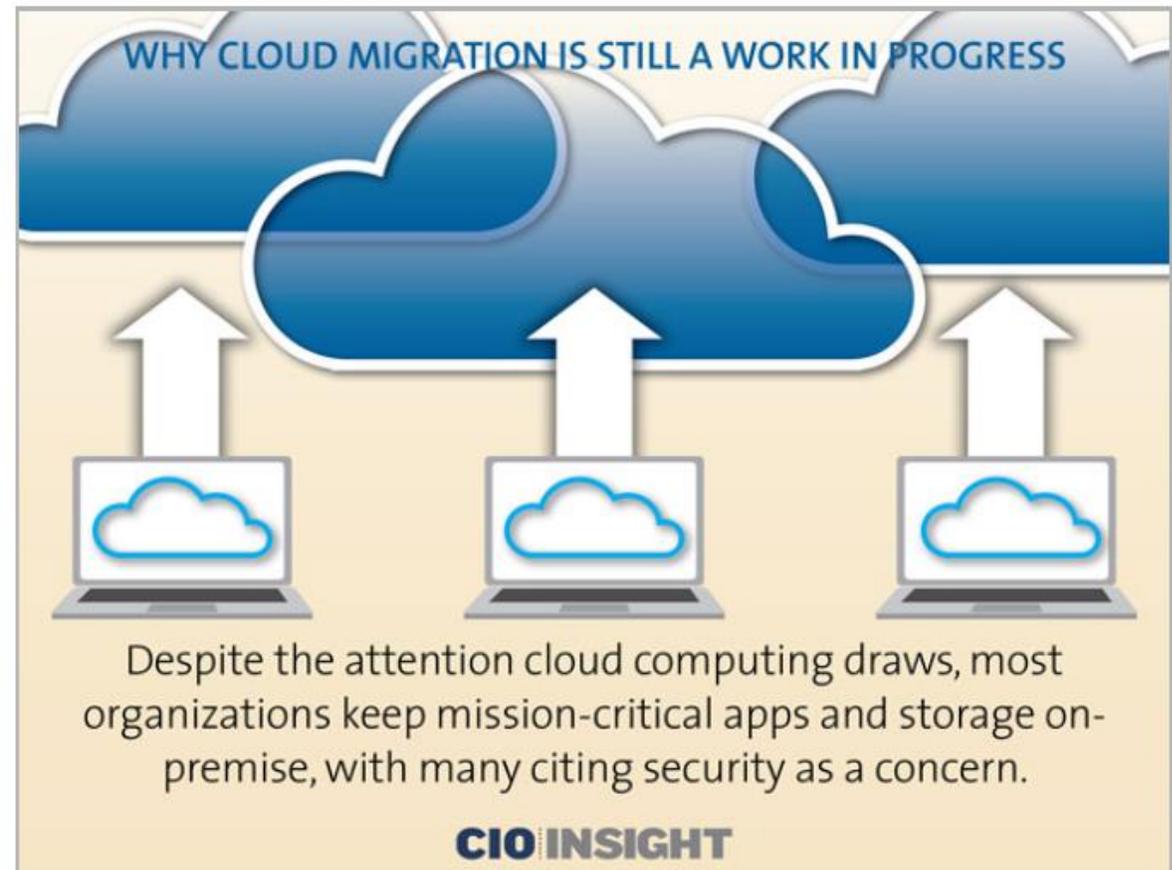10. Continuously updating Office 365 will break my critical business applications.

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From CIO Insight

- They cite concerns about security as the greatest challenge to Cloud adoption
- Mission critical apps will stay on premise

WHY CLOUD MIGRATION IS STILL A WORK IN PROGRESS

Despite the attention cloud computing draws, most organizations keep mission-critical apps and storage on-premise, with many citing security as a concern.

CIO INSIGHT

Why Cloud Migration Is Still a Work in Progress

Despite the attention cloud computing draws, most organizations keep mission-critical apps and storage on-premise, with many citing security as a concern.

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http://www.cioinsight.com/it-strategy/cloud-virtualization/slideshows/why-cloud-migration-is-still-a-work-in-progress.html

From Unisys

Unisys Study Shows U.S. CIOs Leading the Charge to the Cloud

- **72% say CIO is their organization's primary driver of cloud migration**
- **63% say cost reduction is a key motivation for cloud adoption**
- **62% cite on-demand access to computing capacity as key cloud benefit**
- **67% see at least half of IT resources in the cloud by 2018**
- **42% cite security as the biggest challenge in cloud management**

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http://www.unisys.com/offerings/cloud-and-enterprise-compute-services/news%20release/unisys-study-shows-us-cios-leading-charge-to-cloud

- **Ease of Access**
- **Performance**
- **Security**

"You can have any two"

Ease of Access

Performance

Security
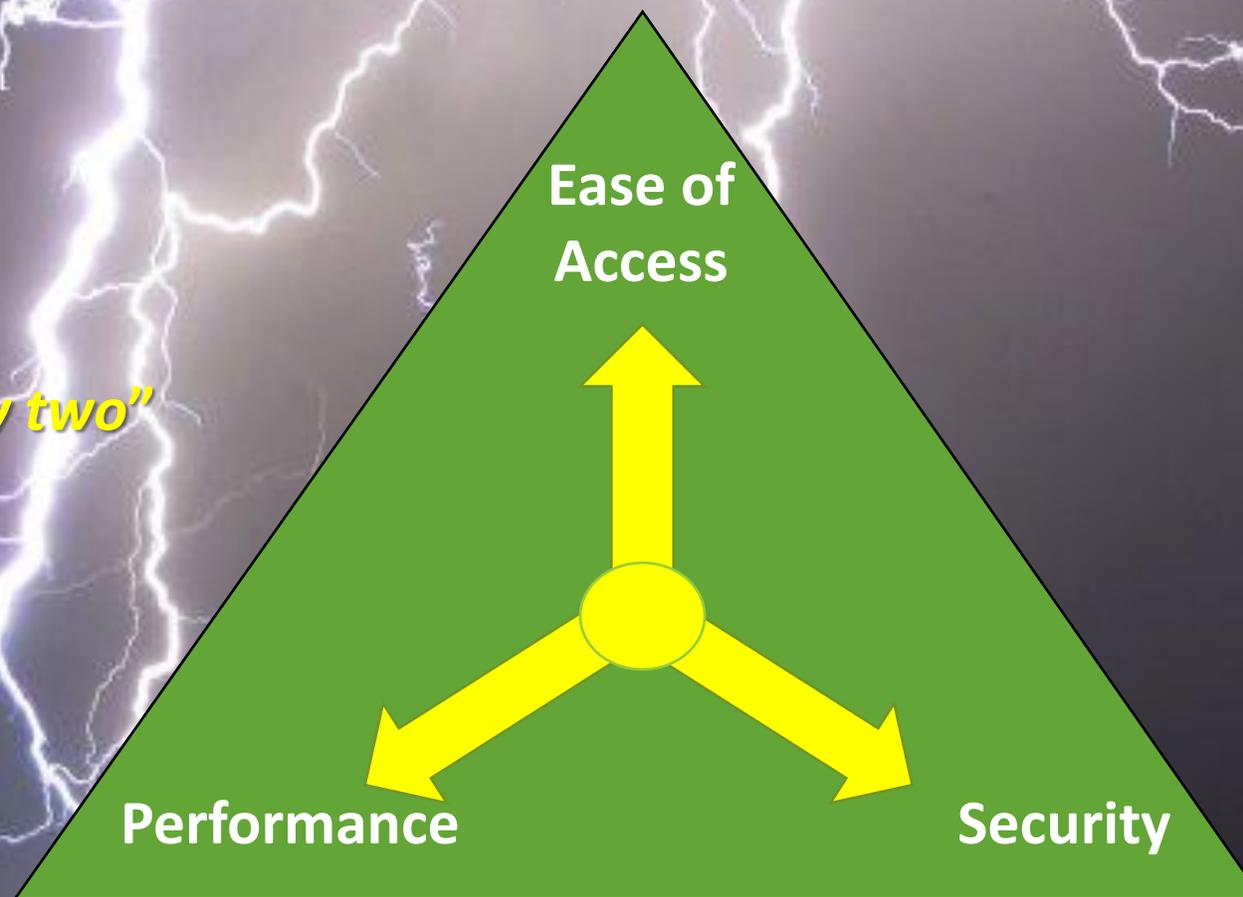
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ClearPath Forward

- Supports premium ClearPath operating environments (MCP, OS 2200)
- Supports Unisys defined images for Linux and Windows
- Support user defined (and managed) partitions
- Partitions provisioned and administered using a portal
- Highly scalable and resilient
- Very secure

ClearPath Forward could be a component in a Private or Hybrid Cloud architecture

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What about your core application?

- Agile Business Suite
  - Supports ASP .NET and Web Services interface
  - Available for ClearPath MCP (private) and Windows .NET (private, public)
  - Works with ClearPath ePortal
- Business Information Server
  - Supports browser and service oriented interfaces
  - Supports ClearPath OS 2200 (private) and Windows/Linux (private, public)
- COBOL and other 3GL
  - Works with ClearPath ePortal and various web enabling technologies

Functionality driven by browser interfaces or wrapped as services can easily become part of a private Cloud environment, with appropriate security and control

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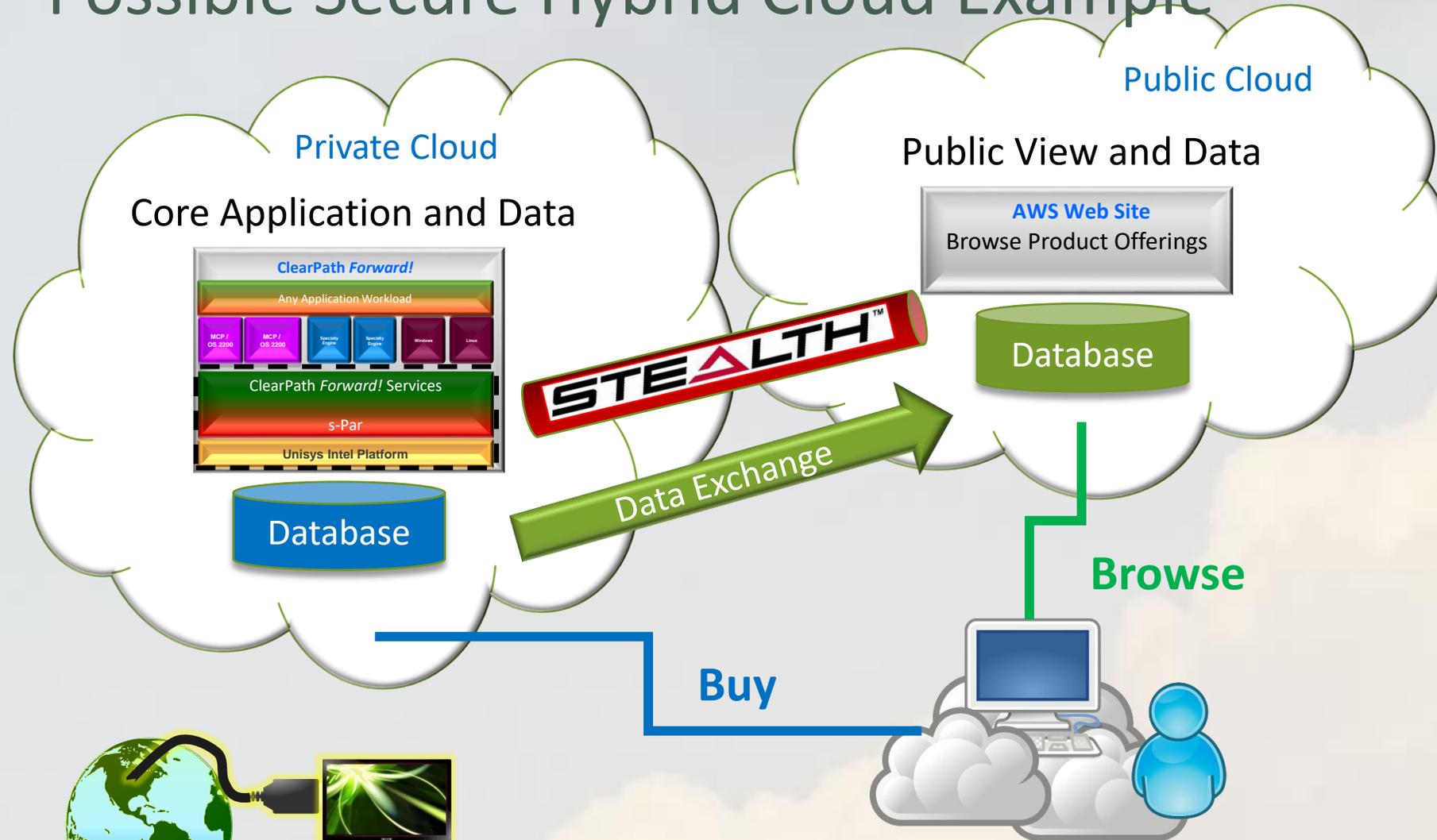# STEALTH™

More information about Stealth from Unisys at https://unisyssecurity.com/unisys-stealth/

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Possible Secure Hybrid Cloud Example

Public Cloud

Private Cloud

Public View and Data

Core Application and Data

ClearPath *Forward!*
Any Application Workload

| MCP / OS 2200 | MCP / OS 2200 | Specialty Engine | Specialty Engine | Windows | Linux |

ClearPath *Forward!* Services

s-Par

Unisys Intel Platform

STEALTH™

AWS Web Site
Browse Product Offerings

Database

Data Exchange

Database

Browse

Buy

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- Core functionality resides in ClearPath
- Off load Browse/Look functionality to Public Cloud (e.g. AWS)
  - Update in "near Real Time" with Data Exchange
- Users Browse Public Cloud
- When ready to buy, Login switches them to Core application
- Purchase is made on secure Core application (ClearPath Forward) protected by Stealth

About Hood Software Solutions

- I have been associated with AB Suite and its predecessors for many (many, many, many) years, as an engineer, architect, program manager, and technical consultant.
- Last year I formed Hood Software Solutions to help people solve their business problems with the aid of software solutions.
- I do not represent Unisys, but I do work closely with them.
- My expertise includes EAE and AB Suite, but also much more.

How can I help you?
- Application Design and modernization
  - Restructuring
  - Web, GUI, Mobile modernization
  - Requirements gathering, prioritization, planning
- System Architecture and Planning
- AB Suite or EAE training and mentoring
- AB Suite migration
- Agile development processes
- AB Suite or EAE application design audits
- Application development, coding and mentoring

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Is there a Cloud in your future?

Probably.

Hopefully this has given you some points to think about to help make your transition to Cloud safe, secure, and as easy as possible.

Thank you

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