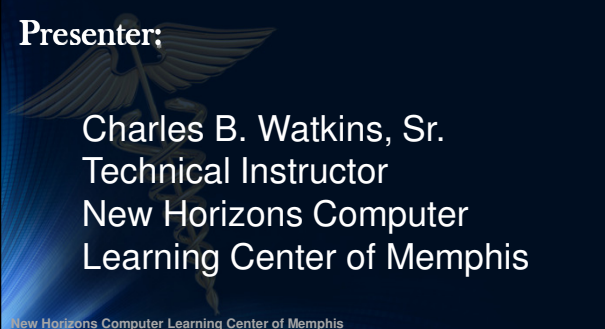




New Horizons Computer Learning Center of Memphis
Presents
Leveraging Technology
New Horizons Computer Learning Center of Memphis



Presenter:
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Technical Instructor
New Horizons Computer Learning Center of Memphis
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About Me:

- MCITP SQL Server 2008 BI, Admin
- MCITP SQL Server 2005
- MCDBA SQL Server 2000
- MCTS SQL Server 2008, 2005
- MCITP-MCSA Windows 2008
- MCITP-MCTS SharePoint 2010
- MCTS Windows Virtualization Hyper-V
- MCSE-MCSA Windows 2003-2000
- ITIL Foundations, Service Design, Operational Support and Analysis
(I Really Like Computers)

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Agenda:

1. The Concept of Leveraging Technology in the New Health Care Frontier
2. Virtualization – Requirements / Benefits / Challenges
3. Cloud Computing – Requirements /Benefits / Challenges

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Leveraging Technology / Reasons and Focus

1. Patient Care
 - Patient Information
 - Reduction in Readmissions (Health Data Initiative)
 - Patient / Facilities Management
2. Medical Professional Interface
 - Mobil computing – PADS / Phones
 - E-Prescriptions
 - Medical Diagnostics

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Leveraging Technology / Reasons and Focus

3. Business
 - Billing
 - Patient Administration
 - Administrative Operations
 - Government Compliance
 - Insurance / Claims

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Getting Started:

Realizing one thing:

IT and the influence of Technology in every aspect of Health Care is present today and Inevitable to your future.

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Getting Started:

1. Complete Assessment of your present Infrastructure as it relates to IT, Processes, Services and End-to-End configuration.
 - This requires a close interaction of all Subject Matter Experts (SMES) both non-IT and IT.
2. Define a definite strategy for moving forward.
 - What in your infrastructure to Maintain
 - Mandatory Technology Advances (EMR – EMI)
 - Optional Technology Advances (Virtualization – Cloud Services)

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Getting Started:

Housing the Infrastructure:

1. Private / Local
2. Hybrid
3. Community
4. Cloud

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Virtualization:

What is Virtualization?:

Virtualization means to create a virtual version of a device, resource or service. This can include a client, server, storage device, network or even an operating system where a host resource is divided into one or more execution environments.

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Virtualization:

Benefits:

1. Hardware Cost
2. Infrastructure Governance / Deployment
3. Quick Provisioning
4. Interface Governance
 - Virtual Desktop Interfaces (VDI)
 - Application Virtualization

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Virtualization – Server

Benefits:

1. Save energy, go green
2. Reduce the data center footprint
3. Increase uptime
4. Improve disaster recovery
5. Extend the life of older applications
6. Help move things to the cloud

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Virtualization – Server

Solutions:

1. Microsoft Hyper-V 3.0
2. VMWare
3. Citrix XenServer
4. Oracle
5. Red Hat
6. Amazon (EC2 using Xen)
7. Google Apps

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Virtualization – Virtual Desktop

Benefits:

1. Anywhere access for Connected Devices
2. Superior security
3. Rapid client deployment
4. Improved desktop standardization
5. Superior back-ups and disaster recovery
6. Simplified manageability
7. Uncomplicated remote user support
8. Significantly lower costs

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Virtualization – Virtual Desktop

Solutions:

1. Microsoft
 - Remote Desktop Services
 - Application Virtualization
 - Virtual Desktop Infrastructure
2. Citrix – XenDesktop
3. Amazon
4. Oracle
5. VMware

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Cloud Computing

Definition:

Anything that involves delivering hosted services. These services can be delivered via your local IT infrastructure or the internet.

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Cloud Computing

Solution Providers:

1. Microsoft Azure
2. Rackspace
3. Amazon
4. Dell
5. Oracle
6. VMWare
7. Google
8. EMC2

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Cloud Computing

Definition:

Anything that involves delivering hosted services. These services can be delivered via your local IT infrastructure or the internet.

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Cloud Computing

Categories:

1. Infrastructure-as-a-Service (IaaS)
2. Platform-as-a-Service (PaaS)
3. Software-as-a-Service (SaaS).

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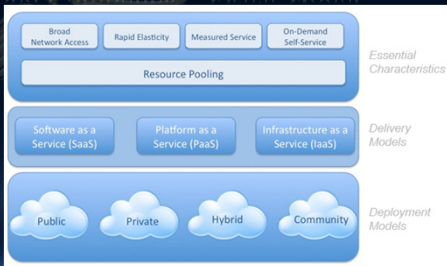
Cloud Computing

Characteristics:

1. It is sold on demand, by the minute or hour
2. It is elastic – user can control the amount of service used at any time.
3. Service fully managed by the provider.
4. Broadband internet access makes this possible in the public space.

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Cloud Computing - Visual Model

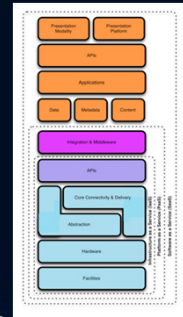


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Cloud Computing

Multi-Tenancy:

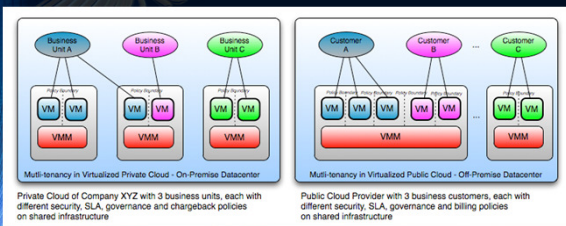
The use of the same resources or applications utilized by multiple consumers that may belong to the same organization or different organizations



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Cloud Computing

Multi-Tenancy:



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Cloud Computing

Security:

1. HIPPA / HITEC states that the originating healthcare entity is ultimately responsible for the privacy, security and integrity of all Protected Health Information (PHI)
2. HIPPA, at present, does not provide any direct certification bodies for cloud based solution providers.

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Security - ISO 27001:

1. Is a specification for an Information Security Management System (ISMS). This is the system for monitoring, measuring and controlling information security as a whole.

These standards provide the framework for an organization to systematically protect itself by managing risk, comply with relevant legislation, and have a mechanism to validate that their supply chain and business partners have secure systems.

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Cloud Computing

Security - Statement of Auditing Standard (SAS 70 Type I / II):

1. Under SAS 70, auditor reports are classified as either Type I or Type II.
 - In a Type I report, the auditor evaluates the efforts of a service organization at the time of audit to prevent accounting inconsistencies, errors and misrepresentation. The auditor also evaluates the likelihood that those efforts will produce the desired future results.
 - Type II report includes the same information as that contained in a Type I report; in addition, the auditor attempts to determine the effectiveness of agreed-on controls since their implementation. Type II reports also incorporate data compiled during a specific time period, usually a minimum of six months.

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Cloud Computing

Security:

1. You are responsible for all HIPPA / HITEC compliance in a Private Cloud Based infrastructure
2. In the public Cloud space it depends on the category of service provided.
 - Infrastructure as a Service (IaaS) – Compliance totally shouldered by the customer
 - Platform as a Service (PaaS) – Compliance shared between Provider and the Customer. The Provider compliance is minimal
 - Software as a Service (SaaS) – Compliance more equally shared between Provider and Customer as it relates to infrastructure and Software.

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