

Q.1) Which of the following service offers unlimited storage space ?

- a) Adrive b) 4shared **c) Badongo** d) All of the mentioned

Explanation: *Badongo.com is an online software service that enables storage, management and publication of personal content.*

Q.2) Point out the correct statement:

- a) In a managed cloud storage system, the user provisions storage on demand**
b) Unmanaged Storage is meant to support virtual cloud computing
c) In managed storage, the storage service provider makes storage capacity available to users d) All of the mentioned

Explanation: *User pays for the storage using a pay-as-you-go model in managed cloud storage.*

Q.3) Which of the following service has WebDAV as developer API ?

- a) Adrive** b) Drop.io c) Dropbox d) All of the mentioned

Explanation: *ADrive provides online cloud storage and backup solutions for personal, business and enterpriselevel data.*

Q.4) Which of the following developer API is provided by FilesAnywhere service ?

- a) FA** b) CA c) BA d) All of the mentioned

Explanation: *FilesAnywhere is the creation of Dallas-based software design and consulting firm, Officeware systems.*

Q.5) Point out the wrong statement:

- A. The most basic service that online storage can serve is to provide disk space on demand
B. The user may be able to purchase additional space for paid service
C. **S3 is example of unmanaged cloud storage**
D. None of the mentioned

Explanation: *S3 is example of Managed cloud storage.*

Q.6) Which of the following service is provided by Google for online storage ?

- a) Drive** b) SkyDrive c) Dropbox d) All of the mentioned

Explanation: *Google Drive is a file storage and synchronization service created by Google.*

Q.7) Which of the following association has coined the term Data Storage as a Service (DaaS) to describe the delivery of storage on demand to clients over a distributed system ?

- a) SNIA** b) COA c) OCCl d) None of the mentioned

Explanation: *Others have called these types of system services Storage as a Service (STaaS).*

Q.8) Which of the following are Managed cloud storage providers

- ? a) EMC Atmos
b) Amazon.com Simple Storage Service
c) IBM Smart Business Storage Cloud
d) All of the mentioned

Explanation: *IBM has both infrastructure and software offerings that allow businesses to create and manage a private storage cloud.*

Q.9) Which of the following is mainly focused on backup and digital archiving, not on storage hosting ?

- a) Nirvanix **b) Iron Mountain** c) Google Storage for Developers d) All of the mentioned

Explanation: *Iron Mountain Inc., founded in 1951, is an enterprise information management service.*

Q.10) Which of the following offer direct competition to Amazon's S3 service ?

- a) Nirvanix **b) Rackspace Cloud** c) Badongo d) All of the mentioned

Explanation: Unlike other cloud providers, Rackspace only offers managed solutions.

Q.11) Which of the following feature make cloud-based storage systems highly reliable ?

- a) Redundant networks b) Redundant name servers
c) Replication **d) All of the mentioned**

Explanation: Failover can involve a system simply changing the pointers to the stored object's location.

Q.12) Point out the correct statement:

- a) **With Atmos, you can create your own cloud storage system or leverage a public cloud service with Atmos online**
b) IBM is a major player in cloud computing particularly for businesses
c) In managed storage, the storage service provider makes storage capacity available to users d) All of the mentioned

Explanation: User pays for the storage using a pay-as-you-go model in managed cloud storage.

Q.13) Redundancy has to be implemented at the _____ architectural level for effective results in cloud computing.

- a) lower **b) higher** c) middle d) all of the mentioned

Explanation: ADrive provides online cloud storage and backup solutions for personal, business and enterpriselevel data.

Q.14) Which of the following can manage data from CIFS and NFS file systems over HTTP networks ?

- a) StorageGRID** b) DataGRID c) DiskGRID d) All of the mentioned **Explanation:** StorageGRID can enforce policies and create a tiered storage system.

Q.15) Point out the wrong statement:

- a) AWS S3 essentially lets you create your own cloud storage
b) AWS created "Availability Zones" within regions, which are sets of systems that are isolated from one another
c) Amazon Web Services (AWS) adds redundancy to its IaaS systems by allowing EC2 virtual machine instances d) **None of the mentioned**

Explanation: In theory, instances in different availability zones shouldn't fail at the same time.

Q.16) A _____ is a logical unit that serves as the target for storage operations, such as the SCSI protocol READs and WRITEs.

- a) GETs b) PUN **c) LUN** d) All of the mentioned

Explanation: In traditional pooled storage deployments, storage partitions can be assigned and provide a device label called a Logical Unit Number.

Q.17) Which of the following use LUNs to define a storage volume that appears to a connected computer as a device ?

- a) SAN b) iSCSI c) Fibre Channel **d) All of the mentioned**

Explanation: Unused LUNs are the equivalent of a raw disk from which one or more volumes may be created.

Q.18) Which of the following protocol is used for discovering and retrieving objects from a cloud ?

- a) OCCI** b) SMTP c) HTTP d) All of the mentioned

Explanation: Making cloud storage data discoverable on a TCP/IP network using HTTP or some other protocol requires that objects be assigned a unique identifier.

Q.19) Which of the following disk operation is performed When a tenant is granted access to a virtual storage container ?

- a) CRUD b) file system modifications c) partitioning **d) All of the mentioned**

Explanation: Data stored in a virtual storage container may be stored in chunks or buckets.

Q.20) Which of the following standard connect distributed hosts or tenants to their provisioned storage in the cloud?

- a) CDMI** b) OCMI c) COA d) All of the mentioned

Explanation: CDMI stands for Cloud Data Management Interface

Q.21) Which of the following factors are deemed to be important considerations for evaluating cloud solutions ?

- a) Seamless maintenance and upgrades b) Performance characteristics
b) Client self-service **c) All of the mentioned**

Explanation: In addition to assigning security-provisioned cloud storage to a client or service requester, a cloud storage service provider must be able to deliver a measured level of service.

Q.22) Point out the correct statement:

- a) QoS levels may be applied to different services against a single virtual storage container
b) An SLA might specify that a particular Quality of Service (QoS) for a virtual storage container may be measured in terms of the I/O per second
c) To provide for scaling, a virtual storage container must be easily migrated from one storage system to another
d) All of the mentioned

Explanation: One unique characteristic of cloud-based storage solutions is that they permit rapid scaling, both in terms of performance and storage capacity.

Q.23) How many categories of backup exist in cloud storage?

- a) 3 b) 4 c) 5 **d) None of the mentioned**

Explanation: Seven categories of backup exist for cloud storage.

Q.24) Point out the wrong statement:

- a) To scale in, the service must allow for stored data to span additional storage systems**
b) To scale up, the service must allow for more disks and more spindles to be provisioned
c) To increase the capacity of a storage provision, it is necessary to provide the capability to scale up or scale out across storage systems
d) None of the mentioned

Explanation: Cloud storage systems that successfully scale their provisioned storage for clients often allow for the multiple storage systems to be geographically dispersed and often provide load-balancing services across different storage instances.

Q.25) Which of the following is not a backup category?

- a) Full system backup **b) Half system backup**
c) Image backup d) All of the mentioned

Explanation: An image backup creates a complete copy of a volume.

Q.26) Which of the following backup is also referred to as snapshots?

- a) Point-in-time** b) Differential c) Image backup d) All of the mentioned

Q.27) Which of the following software supplies full system backup?

- a) Carbonite **b) Ghost** c) RDIFF-BACKUP d) All of the mentioned

Explanation: An image backup allows a system to do what is referred to as a bare metal restore.

Q.28) Which of the following backup lets you restore your data to a point in time and saves multiple copies of any file that has been changed ?

a) **Point-in-time** b) Differential c) Reverse backup d) None of the mentioned **Explanation:**

At least 10 to 30 copies of previous versions of files should be saved.

Q.29) The amount of time needed to backup a system is referred to as its:

a) backup time b) backup sheet c) **backup window** d) all of the mentioned

Explanation: The first backup is quite slow over an Internet connection, but the incremental backup can be relatively fast.

Q.30) Which of the following flag is used by backup software to specify whether a file should be backed up or not

a) **archive bit** b) passive bit c) active bit d) all of the mentioned **Explanation:**

The bit is set on for backup and cleared when backup has copied the file.

Q.31) Point out the correct statement:

- a) **To create an image backup of an active system, you may need to stop all application**
- b) To create an incremental backup of an active system, you may need to stop all applications
- c) Differential backup allows a system to do what is referred to as a bare metal restore
- d) All of the mentioned

Explanation: Full System backup is also referred to as image backup.

Q.32) Which of the following backups are faster and more efficient from a storage perspective ?

a) Point-in-time b) **Incremental** c) Reverse Delta backup d) All of the mentioned

Explanation: Files in intervening incremental backups may be taken as temporary or scratch versions.

Q.33) Which of the following backups creates a full backup first and then periodically synchronizes the full copy with the live version ?

a) Continuous Data Protection b) Open file backup
c) **Reverse Delta backup** d) None of the mentioned

Explanation: The older versions of files that have been changed are archived so that a historical record of the backup exists.

Q.34) Point out the wrong statement:

- a) To scale out, the service must allow for stored data to span additional storage systems
- b) The data is backed up, and then every so often changes are amended to the backup creating is referred to as an incremental backup
- c) **A differential backup is related to a full system backup**
- d) None of the mentioned

Explanation: A differential backup is related to an incremental backup.

Q.35) Which of the following backup is used by Apple's Time Machine ?

a) Continuous Data Protection b) Open file backup
c) **Reverse Delta backup** d) Mirroring

Explanation: Software that uses reverse delta backup system is Apple's Time Machine and the RDIFF-BACKUP utility.

Q.36) Which of the following backup create a cloned copy of your current data or drive ?

a) **Continuous Data Protection** b) Open file backup
c) Reverse Delta backup d) None of the mentioned

Explanation: CDP is also referred to as mirroring.

Q.37) Which of the following backup systems are expensive and highly customized to a particular application such as SQL Server ?

- a) Continuous Data Protection
- b) **Open file backup**
- c) Reverse Delta backup
- d) Data archival

Explanation: Some applications such as database systems and messaging systems are mission critical and cannot be shut down before being backed up.

Q.38) Which of the following is useful for legal compliance or to provide a long-term historical record ?

- a) Continuous Data Protection
- b) Open file backup
- c) Reverse Delta backup
- d) **Data archival**

Explanation: Data archives are often confused with backups.

Q.39) Which of the following is used to specify the migration of data that is no longer in use to tertiary long-term data storage for retention ?

- a) replicating
- b) scaling
- c) **archiving**
- d) all of the mentioned

Explanation: You can't restore your current data set from an archive

Q.40) It is _____ strength and _____ permeability.

- a) High, high
- b) Low, low
- c) **High, low**
- d) Low, high

Explanation: It is specifically chosen so as to have particularly appropriate properties for the expected use of the structure such as high strength and low permeability.

Q.41) "High Performance concrete works out to be economical". Is it true or false?

- a) **True**
- b) False

Explanation: High Performance concrete works out to be economical, even though its initial cost is high.

Q.42) "HPC is not used in high span bridges". Is it true or false?

- a) True
- b) **False**

Explanation: Major applications of high-performance concrete in the field of Civil Engineering constructions have been in the areas of long-span bridges, high-rise buildings or structures, highway pavements, etc.

Q.43) Concrete having 28- days' compressive strength in the range of 60 to 100 MPa.

- a) **HPC**
- b) VHPC
- c) OPC
- d) HSC

Explanation: High Performance Concrete having 28- days' compressive strength in the range of 60 to 100 MPa.

Q.44) Concrete having 28-days compressive strength in the range of 100 to 150 MPa.

- a) HPC
- b) **VHPC**
- c) OPC
- d) HSC

Explanation: Very high performing Concrete having 28-days compressive strength in the range of 100 to 150 MPa.

Q.45) High-Performance Concrete is _____ as compared to Normal Strength Concrete.

- a) Less brittle
- b) Brittle
- c) **More brittle**
- d) Highly ductile

Explanation: High-Performance Concrete is more brittle as compared to Normal Strength Concrete (NSC), especially when high strength is the main criteria.

Q.46) The choice of cement for high-strength concrete should not be based only on mortar-cube tests but it should also include tests of compressive strengths of concrete at _____ days.

- a) **28, 56, 91**
- b) 28, 60, 90
- c) 30, 60, 90
- d) 30, 45, 60

Explanation: The choice of cement for high-strength concrete should not be based only on mortar-cube tests but it should also include tests of compressive strengths of concrete at 28, 56, and 91 days.

Q.47) For high-strength concrete, a cement should produce a minimum 7-days mortar-cube strength of approximately ____ MPa.

- a) 10 b) 20 c) 30 d) 40

Explanation: For high-strength concrete, a cement should produce a minimum 7-days mortar-cube strength of approximately 30 MPa.

Q.48) _____ mm nominal maximum size aggregates gives optimum strength.

- a) 9.5 and 10.5 b) 10.5 and 12.5 **c) 9.5 and 12.5** d) 11.5 and 12.5

Explanation: Many studies have found that 9.5 mm to 12.5 mm nominal maximum size aggregates gives optimum strength.

Q.49) Due to low w/c ratio

- a) It doesn't cause any problems
c) Workability is easy
- b) It causes problems**
d) Strength is more

Explanation: Due to low w/c ratio, it causes problems so superplasticizers are used

Q50) Which is not a type 1 Hypervisor?

- a) VMware Workstation b) KVM c) Hyper-V d) ESXi Server

Q51) Which is the most important criteria for a cloud application architecture design?

- a) It should be able to make use of maximum bandwidth available from the cloud
- b) It should be able to make use of maximum processing power available from the cloud**
- c) It should be able to make use of maximum storage available from the cloud
- d) It should optimize the use of cloud resources to seek the best ROI from infrastructure expenses**

Q.52) What is not provided by Infrastructure-as-a-Service cloud?

- a) Storage
c) Networking Components
- b) Software Development Tools**
d) Hardware systems

Q53) What is true about the full virtualization technique?

- a) The OS is aware that it is running in a virtualized environment.
- b) The Applications running within the virtualized OS are aware that they are virtualized
- c) The OS is not aware that it is running in a virtualized environment
- d) **The Applications running within the virtualized OS are not aware that they are virtualized**

Q54) What is not true about the paravirtualization technique?

- a) The OS is aware that it is running in a virtualized environment.
- b) The OS is not aware that it is running in a virtualized environment
- c) The OS Kernel needs modifications to support paravirtualization technique.
- d) **Para virtualization technique through modified OS is easier to achieve than full virtualization**

Q55) Which benefit is related to the ability of cloud to pool resources together in a system that supports multitenant access to cloud services?

- a) Resource Pooling b) On Demand Self Service c) Measured Services d) Broad Network Access

Q56) Which essential characteristics of the cloud computing is making organizations adopt private cloud technologies?

- a) Resource Pooling b) On Demand Self Service c) Measured Services **d) Broad Network Access**

Q57) Which industry will be most benefited with the Platform-as-a-Service cloud?

- a) Banking Organization

- b) Health Care Organization
- c) Software Development organization.
- d) Manufacturing Organization
- e) **All of the above**

Q58) Which model is designed to be an essential first tool to help business evaluate the risk and opportunity associated with moving into the cloud?

- a) James Cube Model
- b) Microsoft Cube Model
- c) Cloud Cube Model
- d) **Jericho's Cube Model**

Q59) Which type of cloud is best suitable for end users?

- a) Infrastructure-as-a-Service
- b) Software-as-a-Service
- c) Platform-as-a-Service
- d) Desktop-as-a-Service

Q60) Which component of Microsoft System Centre 2012 provides a workflow management solution to automate the creation, monitoring and deployment of resources in a private data center or cloud?

- a) **Orchestrator - Answer**
- b) Virtual Machine Manager
- c) Configuration Manager
- d) Operations Manager

Q61) Which service of VMware Vsphere allows for migration of a virtual machine from one physical server to another physical server while the virtual machine runs continuously and ongoing transactions remain unaffected?

- a) Vshifter
- b) **Vreplicator**
- c) Vmotion
- d) Vmigrator

Q62) Which is the most common technique used to provide data redundancy against any physical hard disk failure?

- a) Redundant Array of Internal Disks
- b) **Redundant Array of Independent Disks**
- c) Redundant Array of Backup Disks
- d) Redundant Array of Replicating Disks

Q63) Which is the biggest advantage of running R on the cloud?

- a) Cloud provides a very high bandwidth so that huge amount of data can be transferred easily to the cloud.
- b) Cloud provides a very high storage space so that huge amount of data can be stored easily on the cloud.
- c) Cloud provides access to data from any device anytime.
- d) **As R is constrained to process data only big as the RAM size and cloud allows you to increase RAM to any amount and for required duration only.**

Q64) Which is not mentioned in the new version of ISO 27001 as compared to the earlier version of ISO 27001?

- a) Flow Charts
- b) Delphi cycle
- c) Gantt Charts D. Deming's PDCA Cycle
- d) **Irrelevant question. Delete this question.**

Q.65) _____ computing refers to applications and services that run on a distributed network using virtualized resources.

- a) Distributed
- b) **Cloud**
- c) Soft
- d) Parallel

Q.66) Point out the wrong statement :

- a) The massive scale of cloud computing systems was enabled by the popularization of the Internet
- b) **Soft computing represents a real paradigm shift in the way in which systems are deployed**
- c) Cloud computing makes the long-held dream of utility computing possible with a pay-as-you-go, infinitely scalable, universally available system

d) All of the mentioned

Q.67) _____ as a utility is a dream that dates from the beginning of the computing industry itself.

- a) Model b) Computing c) Software d) All of the mentioned

Q.68) Which of the following is essential concept related to Cloud ?

- a) Reliability b) Productivity **c) Abstraction** d) All of the mentioned

Q.69) Point out the wrong statement :

a) All applications benefit from deployment in the cloud

b) With cloud computing, you can start very small and become big very fast

c) Cloud computing is revolutionary, even if the technology it is built on is evolutionary **d) None of the mentioned**

Q.70) Which of the following cloud concept is related to pooling and sharing of resources ?

- a) Polymorphism b) Abstraction **d) Virtualization** d) None of the mentioned

Q.71) _____ has many of the characteristics of what is now being called cloud computing.

- a) Internet** b) Software's c) Web Service d) All of the mentioned

Q.72) Which of the following can be identified as cloud ?

- a) Web Applications b) Intranet c) Hadoop d) All of the mentioned

Q.73) Which of the following is Cloud Platform by Amazon ?

- a) Azure b) AWS c) Cloudera d) All of the mentioned

Q.74) Cloud computing is an abstraction based on the notion of pooling physical resources and presenting them as a _____ resource.

- a) real **b) virtual** c) cloud d) None of the mentioned

Q.75) Point out the wrong statement :

a) Abstraction enables the key benefit of cloud computing: shared, ubiquitous access

b) Virtualization assigns a logical name for a physical resource and then provides a pointer to that physical resource when a request is made

c) All cloud computing applications combine their resources into pools that can be assigned on demand to users

d) All of the mentioned

Q.76) Which of the following type of virtualization is also characteristic of cloud computing ?

- a) Storage b) Application c) CPU d) All of the mentioned

Q.77) The technology used to distribute service requests to resources is referred to as :

- a) load performing b) load scheduling c) load balancing d) All of the mentioned

Virtualization

1. Point out the correct statement :

a) A client can request access to a cloud service from any location

b) A cloud has multiple application instances and directs requests to an instance based on conditions

c) Computers can be partitioned into a set of virtual machines with each machine being assigned a workload d) All of the mentioned

2. Which of the following software can be used to implement load balancing ?

- a) Apache mod_balancer
c) F6's BigIP
- b) Apache mod_proxy_balancer**
d) All of the mentioned
3. Which of the following network resources can be load balanced ?
a) Connections through intelligent switches
b) DNS
c) Storage resources
d) All of the mentioned
4. Which of the following is a more sophisticated load balancer ?
a) workload managers
b) workspace managers
c) rackserve managers
d) All of the mentioned
5. An _____ is a combination load balancer and application server that is a server placed between a firewall or router.
a) ABC
b) ACD
c) ADC
d) All of the mentioned

ISSA

1. Which of the following is a virtual machine technology now owned by Oracle that can run various operating systems ?
a) Vmachines
b) VirtualBox
c) ThoughtPolice
d) None of the mentioned
2. Point out the correct statement :
a) JumpIt is an open-source virtual appliance installation and management service
b) Converting a virtual appliance from one platform to another is easy proposition
c) Nearly all major virtualization platform vendors support OVF, notably VMware, Microsoft, Oracle, and Citrix
d) All of the mentioned
3. Which of the following lets a Web service advertise itself in terms of a collection of endpoints ?
a) WSDL
b) VMC
c) SOAP
d) All of the mentioned
4. Which of the following is a specification for multicast discovery on a LAN ?
a) WS-Agent
b) WS-Discovery
c) WS-SOAP
d) All of the mentioned
5. Point out the wrong statement :
a) Cloud computing arises from services available over the Internet communicating
b) XML-RPC uses platform-independent XML data to encode program calls that are transported over HTTP
c) SOAP uses JSON for its messages and uses RPC and HTTP for message passing
d) None of the mentioned
6. _____ as a Service is a cloud computing infrastructure that creates a development environment upon which applications may be built.
a) Infrastructure
b) Service
c) Platform
d) All of the mentioned
7. _____ is a cloud computing service model in which hardware is virtualized in the cloud.
a) IaaS
b) CaaS
c) PaaS
d) None of the mentioned
8. Which of the following is fundamental unit of virtualized client in an IaaS deployment ?
a) workunit
b) workspace
c) workload
d) All of the mentioned
9. How many types of virtual private server instances are partitioned in an IaaS stack ?
a) one
b) two
c) three
d) All of the mentioned

Extra MCQ

- 1) A large organization is considering a data integration project that will last six months. They are looking for a solution that will enable them to derive value from the complex information spread across their systems. The solution should profile, cleanse, and integrate the data across diverse sources (structured, unstructured, mainframe, and application sources) to deliver trusted information. Which IBM database server offering is best suited for this client scenario?
- A) IBM Informix Dynamic Server
 - B) **IBM InfoSphere Information Server**
 - C) IBM Lotus Domino Server
 - D) IBM DB2 Enterprise Server
- 2) Which statement is true about the Platform as a Service cloud computing delivery model?
- A) It provides a virtual machine and storage so that computing platforms can be created.
 - B) It provides the entire infrastructure along with a completed application that is accessible using a web based front end.
 - C) It is required by the infrastructure as a service delivery model so that end user applications can be delivered on the cloud.
 - D) **It provides a runtime environment for applications and includes a set of basic services such as storage and databases**
- 3) A company is currently using IBM LotusLive and would like their mobile users to have access to the instant messaging feature. How can this be accomplished?
- A) **Mobile devices with a IBM Sametime Connect client can be configured to connect to the IBM LotusLive Sametime community.**
 - B) A Sametime gateway can be installed and configured to provide connectivity via the text messaging service available on mobile devices.
 - C) Mobile users can install IBM LotusLive Engage on their mobile device.
 - D) Supported client devices can be configured to use the IMAP IDLE protocol to support instant messaging with the IBM LotusLive servers.
- 4) In addition to resource virtualization and consolidation, which three options provide a complete set of dynamic infrastructure capabilities?
- A) Centralization of resources
 - B) **Automated provisioning, service standardization and flexible infrastructure**
 - C) Product integration
 - D) Network virtualization
- 5) When will cloud computing provide the most value?
- A) A company has several thousand documents that need to be indexed in many months.
 - B) A company has purchased additional hardware in order to process their payroll activities faster at the end of each pay period.
 - C) **A company has to process their payroll activities at the end of each pay period in batch mode.**
 - D) A company has several hundreds of documents that need to be indexed in a few minutes.
- 6) Which statement accurately describes how mobile devices are supported by the IBM LotusLive iNotes cloud offering?
- A) E mail can be pushed to devices using SMTP
 - B) E mail can be accessed using the SOAP interface

C) E mail can be pushed to devices using POP3 interfaces

D) **E mail can be pushed to devices using IMAP IDLE**

7) Which customer scenario best fits a deployment on a public cloud?

A) A customer who is not too concerned about security control over their data, and the system load is almost a constant at all times.

B) **A customer who does not have the IT infrastructure to handle variable system load.**

C) A customer whose IT infrastructure is underutilized.

D) A customer who deals with highly sensitive user information

8) What are two common concerns in a cloud environment?

A) Running out of storage space and network bandwidth at peak usage times

B) **Illegal access to private data stored by applications in the cloud and If two guest instances are running on the same host or on different hosts connected to the same physical ethernet, they should not be able to read or modify each other's network traffic**

C) Inability to use proxy servers and load balancers

D) Not enough computing capacity during peak usage times

9) Which cloud characteristic refers to the ability of a subscriber to increase or decrease its computing requirements as needed without having to contact a human representative of the cloud provider? =

A) Resource pooling

B) On-demand self service

C) Rapid elasticity

D) Broad network access

10) Which Tivoli product migrates an operating system replica from RedHat KVM to VMware?

A) IBM Tivoli Storage Manager

B) IBM Tivoli Business Service Manager

C) IBM Tivoli for Operating System Deployment

D) **IBM Tivoli Provisioning Manager for Images**

11) Which licensing model is supported for the IBM Smart Business Development and Test Cloud?

A) Monthly Billing

B) Bring Your Own

C) Utility

D) Credit Card

12) Which IBM Cloud solution is differentiated by its focus on automating existing processes to increase efficiencies in enterprise data centers?

A) IBM Cloud Services Lifecycle Management

B) **IBM Service Management Center for Cloud Computing**

C) IBM CloudBurst

D) IBM Smart Business Storage Cloud

13) In cloud computing, which term is used to describe the nature of IT infrastructure and allows dynamic scaling depending on the demand for resources?

A) Clustering

B) Consolidation

C) Virtualization

D) Elasticity

14) Which billing model allows companies to have a predetermined and recurring costs for services used in a cloud environment?

A) Utility

B) Resource based

C) Subscription

D) Metered

15) A company is considering a cloud environment to improve the operating efficiency for their data and applications. The company is part of an industry where strict security and data privacy issues are of the highest importance. Which type of cloud would be a good choice?

A) Hybrid cloud

B) Public cloud

C) Governed cloud

D) Private cloud

- 16) A large infrastructure as a service provider wants to allow users to provision new server capacity from a variety of different interface technologies. Which web technology should the service provider use to build an interface that users can leverage?
- A) The company should provide a proprietary remote API
 - B) **The company should provide an HTTP REST API**
 - C) The company should provide an XML RPC service
 - D) The company should provide a command line interface
- 17) Which statement best describes the IBM Smart Business Storage Cloud offering?
- A) The performance of the IBM Storage Cloud is limited only by the performance of its fastest disk
 - B) The performance of backups and file system scanning of the IBM Storage Cloud degrades significantly for very large systems due to long file system scan times
 - C) **The IBM Storage Cloud offers extreme performance and scalability and supports an unlimited storage under a single global namespace**
 - D) Automated data tiering and information life cycle management is available in the IBM Storage Cloud
- 18) A client wants to automate the on site design, deployment, and management of services such as middleware containers, applications, hardware, and networks from existing assets for development, test, and production. Which option would fit the client's requirement?
- A) IBM WebSphere CloudBurst Appliance
 - B) IBM Service Management Center for Cloud Computing
 - C) **IBM Tivoli Service Automation Manager**
 - D) IBM Smart Business Development and Test Cloud
- 19) A cloud service provider wants to provide storage as a service to users. The company is based in New York and operates its data center there. What should the company do in order to ensure high availability for the storage services they provide?
- A.) Instruct users to keep their own backups for the information they store
 - B.) Build a data center in Chicago and backup user data there**
 - C.) Backup user data on removable media for off site storage
 - D.) Build a data center in New York and backup user data there
- 20) What are two common areas of concern often expressed by customers when proposing a multi tenancy software solution compared to a single tenancy solution? (Choose two.)
- A) Less efficient use of computing resources
 - B) **Data privacy and Complexity to customize solution**
 - C) Higher costs
 - D) Greater network latency
- 21) A cloud provider offers an environment for building applications that will run from the customer's environment. Which cloud computing delivery model are they using?
- A) Software as a Service
 - B) Development as a Service
 - C) Infrastructure as a Service
 - D) Platform as a Service
- 22) A company gathers, stores, manages, and protects data as part of its business. How can it create business value from the data?
- A) Create a virtualized server infrastructure.
 - B) Create a virtualized end user / client infrastructure.
 - C) **Create a virtualized information infrastructure.**
 - D) Create a virtualized application infrastructure.

- 23) What are some challenges that existing data centers face as they move toward supporting cloud computing?
- A) Storage capacity, data protection, and storage provisioning as instances accumulate and scale up**
 - B) Greater energy consumption for the same load of applications
 - C) Acquiring new servers to support virtualization
 - D) Increased IT labor costs to manager the cloud environment
- 24) A company delivers Software as a Service that allows users to fill out and submit tax forms on line. What should the company do to accommodate the spike in demand on the date when the tax forms are due?
- A) Design a robust load balancing architecture that monitors application performance and routes request to application instances appropriately**
 - B) Monitor the system and lease additional hardware during the peak tax season
 - C) Build the system according to peak demand requirements
 - D) Build the system with high end hardware to ensure system performance
- 25) How does automation increase the effectiveness of an IT organization?
- A) It reduces costs by increasing asset utilization.
 - B) It provides usage monitoring and cost allocation capabilities.
 - C) It optimizes availability by maintaining configurations and managing changes to resources.
 - D) It reduces the manual intervention needed for deploying and managing IT services.**
- 26) In which category of SaaS services does customer relationship management (CRM) software fall?
- A) A) Consumer services
 - B) Infrastructure services
 - C) Communication services
 - D) Business services**
- 27) Which customer scenario is best suited to maximize the benefits gained from using a virtual private cloud?
- A) An enterprise that does not want to sacrifice security or make changes to their management practices but needs additional resources for test and development of new solutions.**
 - B) An enterprise that requires minimal security over their data and has a large existing infrastructure that is capable of handling future needs.
 - C) A small start up business focused primarily on short term projects and has minimal security policies.
 - D) An enterprise whose IT infrastructure is under utilized on average and the system load is fairly consistent.
- 28) What would be used to satisfy a requirement for an on premises cloud installation?
- A) The IBM Smart Business Development and Test Cloud**
 - B) The IBM Smart Business Development and Test on the IBM Cloud
 - C) IBM CloudBurst
 - D) IBM CloudBurst for Development and Test
- 29) Which product helps manage software license and compliance risk?
- A) IBM CloudBurst
 - B) IBM Service Management Center for Cloud Computing
 - C) IBM Tivoli Asset Management for IT**
 - D) IBM Tivoli Service Automation Manager
- 30) A company interested in cloud computing is looking for a provider who offers a set of basic services such as virtual server provisioning and on demand storage that can be combined into a platform for deploying and running customized applications. What type of cloud computing model fits these requirements?
- A) Platform as a Service
 - B) Software as a Service
 - C) Application as a Service
 - D) Infrastructure as a Service**

31) How is a business approval process related to a cloud computing environment?

- A) A cloud computing environment requires an expedited business approval process.
- B) A cloud computing environment can be implemented without a business approval process.
- C) **A business approval process must be documented before implementing a cloud computing environment.**
- D) A business approval process is required to deploy a cloud computing environment.

32) Why is a defined approval process important for a cloud computing implementation?

- A) It defines the authorization process for a cloud computing implementation.
- B) **It defines the authorization process for cloud computing provisioning.**
- C) It defines the access to a cloud computing resource.
- D) It defines the responsibilities for the cloud computing environment.

33) What is a common mechanism of communications among virtual machines running in a cloud environment?

- A) A public IP address for each instance that is connected to a virtual private bridge.
- B) A private IP address for each instance that attaches to the OS software ethernet bridge.
- C) **A private IP address for each instance that is connected to a virtual private bridge.**
- D) A public IP address for each instance that attaches to the OS software ethernet bridge.

34) What is the definition of provisioning as an automated process related to cloud computing?

- A) **It handles computing resource management processes.**
- B) It adds security constraints to a cloud environment.
- C) It moves data from one cloud to another.
- D) It provides server consolidation capability.

35) What benefits can be achieved by a small business adopting a cloud based solution with IBM Informix Dynamic Server?

- A) It will provide a low cost, full function data server that delivers the highest OLTP performance and near hands free administration
- B) It will enable data integration from disparate sources and deliver trusted and complete information at the time it is required and in the format it is needed
- C) It will enable reporting, analysis, dashboarding, and scorecarding on a single service oriented architecture
- D) It will enable capture and delivery of changed data from heterogeneous systems to support warehousing, MDM, SOA, e Business, and application migrations

36) What are the common set of technologies used to create a manageable cloud environment?

- A) A hypervisor, a hypervisor manager, self service portal, and an automated provisioning tool like IBM Tivoli Provisioning Manager
- B) **A hypervisor, a hypervisor manager, a self service portal, automated provisioning, and monitoring**
- C) A hypervisor and a hypervisor manager like Virtual Center or VMControl
- D) A hypervisor, a hypervisor manager, automated provisioning, and monitoring

37) Which cloud computing feature allows for server consolidation resulting in increased asset utilization and decreased data center energy needs?

- A) **Virtualization**
- B) Provisioning
- C) Automation
- D) Governance

38) Which statement best describes the Software as a Service cloud delivery model?

- A) A virtual machine provisioned and provided from the cloud which allows the customer to deploy custom applications.

- B) A multi tenant storage service provisioned from the cloud which allows the customer to leverage the cloud for storing software data
- C) A solution stack or set of middleware delivered to the client from the cloud which provides services for the design, development, and testing of industry aligned applications.
- D) **An application delivered to the client from the cloud which eliminates the need to install and run the application on the customer's own computers and simplifying maintenance and support.**

39) What benefit can a retail organization gain by adopting a cloud based solution with IBM Cognos 8 Business Intelligence?

- A) It will provide a low cost, full function data server that delivers the highest OLTP performance and near hands free administration
- B) It will provide a powerful document management system with ready to use workflow and process capabilities to automate and drive their content related tasks and activities
- C) It will enable them to use reports, analysis, dashboards, and scorecards to identify and analyze trends and to respond to consumer buying needs and behaviors
- D) It will enable them to capture and deliver changed data from heterogeneous systems to support warehousing, MDM, SOA, e Business, and application migrations

40) What is a common trait of cloud architectures?

- A) It dictates monolithic application designs.
- B) It must use publicly accessible computing resources.
- C) A fixed set of computing resources is pre allocated to each application.
- D) **While in operation the application automatically scales up or down based on resource needs.**

41) What is an advantage of building a private cloud infrastructure?

- A) An enterprise can reduce the cost from capital expenditures and IT infrastructure investment to an utility operating expense model.
- B) **An enterprise can consolidate hardware, storage, and network by virtualizing resources to be more flexible, dynamic, and meet on demand requirements.**
- C) A private cloud enables a business to reduce operating costs by having maximum control over the data and infrastructure.
- D) A private cloud enables a business to reduce operating costs by using their own IT department to manage computing resources

42) Which statement is true about a cloud computing environment? A)

- It cannot be used to host location based applications.
- B) It introduces latency as the servers are geographically dispersed.
- C) It can improve a web server response time by having servers closer to the end user.
- D) **It enables users to access systems regardless of their location.**

43) How can IT resource consolidation and virtualization help companies deliver services? A)

- It reduces the network traffic.
- B) It scales applications better than traditional clustering of application servers.
- C) It creates more maintenance work but virtualization makes it easy to scale applications.
- D) **It allocates computing resources more efficiently and reduces maintenance costs.**

44) Which statement is true about a bare metal hypervisor? A)

- It can only be hosted on an existing operating system.
- B) It requires a separate license for the native operating system.
- C) It has minimum functionality to support only one type of operating system.
- D) **It runs directly on server hardware to provide virtual machines with timesharing resources.**

45) Which computing feature is related to utility computing?

- A) Security B) Virtualization **C) Metering** D) Multi tenancy

46) What is one functionality of IBM Tivoli Service Automation Manager?

- A) Software discovery B) Business service monitoring B)
C) Out of the box cloud solution **D) Virtual server provisioning**

47) When building data center clouds, certain network performance characteristics should be closely evaluated so that users are not negatively impacted. What are the two most important characteristics that should be examined?

- A) Network latency and network packet loss rate** B)
Network routing information loss
C) Network security
D) Network buffer overflow rate

48) A company would like to leverage cloud computing to provide advanced collaboration services (i.e. video, chat, and web conferences) for its employees but does not have the IT resources to deploy such an infrastructure.

Which cloud computing model would best fit the company needs?

- A) Virtual Private Cloud **B) Public Cloud** C) Hybrid Cloud D) Private Cloud

49) Which business scenario is best suited to maximize the benefits gained from using a private cloud? A) An enterprise that manages sensitive data and the load on their systems is fairly consistent.

- B) An enterprise that is focused primarily on short term projects, and the load on their systems is highly unpredictable.
C) An enterprise that is not too concerned about control over their data, and the load on their systems is almost a constant at all times.
D) An enterprise that manages sensitive data requiring maximum control and does not have enough infrastructure capacity to handle variable load.

50) Which is considered the most widely used cloud computing service?

- A) Infrastructure-as-a-Service (IaaS) B) Communication-as-a-Service (CaaS) **C)**
Software-as-a-Service (SaaS) D) Platform-as-a-Service (PaaS)

51) Which delivery model is an example of a cloud computing environment that provides users access to virtual machines?

- A) Infrastructure as a Service** B) Application as a Service C)
Platform as a Service D) Software as a Service

52) An insurance company wants to build a business analytics solution in the cloud. They need comprehensive view across claims, customer service, the workforce, and performance management in order to make quick decisions. The

solution should help them bring together all of their data assets across the organization via reports, analysis, scorecards, plans, and budgets. This will enable them to manage conflicting priorities, tackle compliance issues quickly, maximize operational efficiency, and manage growth and product offerings. Which IBM offering is best suited for this client scenario?

- A) IBM InfoSphere Replication Server **B) IBM Cognos 8 Business Intelligence** C)
IBM FileNet Content Manager D) IBM InfoSphere Information Server

53) A company would like to perform a product launch virtually in order to reach a larger audience and save costs. In addition to web conference services, the company is looking for automated e mail announcements, registration management, and summary/reports through multiple browsers and platforms. Which IBM offering can meet the needs of this company?

- A) IBM LotusLive Events
- B) IBM Smart Business Cloud Conferences
- C) IBM Lotus Connections
- D) IBM Lotus Sametime Meetings

54) An enterprise needs highly controlled storage and access to their databases as well as managing the infrastructure for web front ends and other applications. They have a large existing IT infrastructure and they are continually expanding the capabilities. Which cloud computing model will satisfy all their current needs and enable them to reduce cost?

- A) Public cloud
- B) Private cloud
- C) Internal cloud
- D) Hybrid cloud

55) The IBM Smart Business Development and Test Cloud is used to evaluate, plan, design, and implement what type of environment?

- A) A dynamically scalable virtualized runtime cloud environment
- B) **A dynamically scalable virtualized development and testing cloud environment**
- C) A static runtime cloud environment
- D) A static development and testing cloud environment

56) Which concept aligns business and IT assets, helps provide flexible IT capacity, and provides real time allocation of IT resources in line with demand from business processes?

- A) Elasticity
- B) Virtualization
- C) Automated management of resources
- D) **Dynamic infrastructure**

57) What is true about an application service provider?

- A) It delivers Communications as a Service.
- B) **It delivers Software as a Service.**
- C) It delivers Platform as a Service.
- D) It delivers Infrastructure as a Service.

58) What are the components of a cloud computing environment?

- A) **Client, application, platform, infrastructure, server**
- B) Application, presentation, transport, network, data
- C) Application, platform, infrastructure
- D) Client, application, session, network, data

59) What are two traits of a cloud computing architecture? (Choose two.)

- A) Client and server run in the same physical environment
- B) **On demand access to resources and internet/intranet accessible server**
- C) Single tiered
- D) Not scalable

60) A company has decided to leverage the web conferencing services provided by a cloud provider and to pay for those services as they are used. The cloud provider manages the infrastructure and any application upgrades. This is an example of what type of cloud delivery model?

- A) Platform as a Service
- B) Infrastructure as a Service
- C) **Software as a Service**
- D) Application as a Service

61) A company has implemented a cloud computing solution. After a request for the new environment is approved, the provisioning process is manually initiated by a system administrator. How can the company use automation to improve this process?

- A) By implementing an extension to the cloud environment.
- B) By sending an alert to a system administrator indicating that an environment needs to be provisioned.
- C) **By provisioning the requested environment after the request approval without the need for manual intervention.**
- D) By sending an alert to an approver indicating that a request needs attention.

62) A company wants to build a test environment to test software updates and new solutions. The environment should mirror the production environment and be secure and inaccessible from outside the company network. The company does not want to invest in infrastructure that may be idle for a significant amount of time. Which cloud computing model will satisfy all these requirements?

- A) Public Cloud
 - B) Private Cloud
 - C) External Cloud
 - D) **Virtual Private Cloud**
- 63) Which two architectural features make the IBM Rational Jazz platform well suited for the IBM Smart Business Development and Test Cloud?

- A) TCP/IP
- B) Eclipse Modeling Framework
- C) **Web User Interfaces and RESTful web services**
- D) SOAP Services

64) A company that provides gift giving advice has leveraged collaborative services in a cloud computing environment to provide on line chat between its employees and customers. As the holiday season approaches, the company is able to easily increase the resources needed in the cloud environment. When the season has ended, the company is able to reduce the resource usage. This allows the company to effectively manage the required computational resources and thereby reduce costs.

What type of cloud computing billing model is this company using?

- A) Monthly
- B) Subscription
- C) **Utility**
- D) Recurring

65) Which IBM products are included in the IBM Rational Automation Framework for WebSphere?

- A) IBM WebSphere Integration Developer, IBM Rational BuildForge
- B) IBM Rational Team Concert, IBM WebSphere CloudBurst Appliance
- C) IBM WebSphere Application Developer, IBM Rational Team Concert
- D) **IBM Rational BuildForge, IBM WebSphere CloudBurst Appliance**

66) What is a common design element often found in cloud architectures?

- A) Synchronous web services
- B) **Asynchronous web services**
- C) Single tiered
- D) Terminal emulators

67) What is the benefit of using automation techniques in conjunction with cloud computing?

- A) Automation allows for sharing of computer resources.
- B) Automation reduces costs by increasing asset utilization.
- C) Automation optimizes availability by maintaining configurations and managing changes to resources.
- D) **Automation reduces human errors.**

68) Software as a Service is considered to be included in which cloud computing layer?

- A) Data
- B) Infrastructure
- C) **Application**
- D) Client

69) What are two advantages of using the IBM Smart Business Development and Test Cloud?

- A) Reduces short term software costs
B) Improves quality through more accurate configurations and enhanced modeling and Assists in reducing capital and licensing expenses as much as 50 to 75 percent using virtualized resources
C) **No licensed software required**
D) Requires 35 to 45 percent less training than in house development
- 70) What is the name of the public cloud offering from IBM Rational?
A) IBM Rational Collaborative Application Lifecycle Management Cloud
B) **IBM Smart Business Development and Test on the IBM Cloud**
C) IBM Rational Monthly SaaS
D) IBM Rational Public Cloud
- 71) What is true about an application service provider? A.) It offers a computer infrastructure service.
B.) It offers Software as a Service.
C.) It offers access to the Internet.
D.) It offers metered service to the customer.
- 72) What is grid computing?
A.) It is parallel and distributed computing where computer infrastructure is offered as a service.
B.) It is parallel computing where autonomous computers act together to perform very large tasks.
C.) It is distributed computing where autonomous computers perform independent tasks.
D.) It is interconnected computing where a computing platform is delivered to consumers.
- 73) When implementing a cloud computing environment, which scenario should be considered first? A) An area where there is no documented approval process.
B) **An area where the approval process can be automated.**
C) An area where the approval process is complex.
D) An area where most of the approval can be delegated.
- 74) Which model of cloud computing services provides the servers, storage devices, and networks for a subscriber?
A) Infrastructure-as-a-Service (IaaS)
B) Software-as-a-Service (SaaS)
C) Platform-as-a-Service (PaaS)
D) Communication-as-a-Service (CaaS)
- 75) Cloud service providers typically provide web based management consoles that provide users insight on the state of cloud services. What is one technology used in client side browser code that queries back end systems for data from the cloud services?
A) XHTML **B) AJAX** C) PHP D) HTML
- 76) Which business type provides Software as a Service?
A.) Internet Service Provider B.) Infrastructure Service Provider
C.) Application Service Provider D.) Platform Service Provider
- 77) Application developers and testers are required to routinely setup complex multi tiered application environments to complete their tasks. How can provisioning capabilities in a cloud computing solution improve setup efficiencies?
A.) It reduces the complexity of the application environments.
B.) It allows the employees to reduce the number of managed servers.
C.) It allows the employees to capture complex environments and set them up in a consistent manner.
D.) It reduces the number of application environments to set up.

- 78) What is the value of IBM Security Information and Event Manager in a cloud provider environment?
- A.) Out of the box SOX compliance
 - B.) Management of cloud subscriber log files
 - C.) Desktop compliance enforcement for cloud users
 - D.) Out of the box reports for privileged user management**
- 79) What is the main purpose of an IBM CloudBurst solution?
- A.) It provides a feature to deploy IBM WebSphere Application Servers topologies in a cloud environment
 - B.) It provides an out of the box cloud solution**
 - C.) It clones WebSphere topologies across an enterprise
 - D.) It provides the software base to build a cloud solution
- 80) What is the feature of a cloud computing that allow the servie to change in size or volume in order to meet a user';s needs?
- A) Cost-saving
 - B) Scalability**
 - C) Virtualization
 - D) Security
- 81) A company with less than 50 employees is looking for a web based e mail service that provides essential messaging and calendaring capabilities. They have a limited budget and cannot afford a hosted e mail solution. Which IBM cloud services would best meet their needs without having to hire IT staff to manage and maintain the infrastructure?
- A) IBM LotusLive Connections
 - B) IBM LotusLive iNotes**
 - C) IBM Lotus Notes
 - D) IBM LotusLive Web E mail
- 82) Data center clouds are formed by connecting two or more data center cloud networks over wide area network. When building such data center clouds, which component is mainly responsible for increasing the network latency?
- A.) Network servers
 - B.) Network routing protocols
 - C.) Network interfaces**
 - D.) Network clients
- 83) How can a company leverage the Platform as a Service cloud computing delivery model?
- A.) A company obtains an environment with a software stack from a cloud provider, develops a custom application, and makes that application available to its customers on the Internet.**
 - B.) A company is running out of storage space to store a customer database and dynamically requests additional space via the cloud provider web services interface.
 - C.) A company requires more processing power to perform its financial analysis calculations and acquires additional computational resources.
 - D.) A company requires a customer relationship management solution and obtains an application that addresses their requirements from a cloud provider.
- 84) Which three input parameters are required when creating an instance of the IBM Smart Cloud for Development and Test?
- A) MIPS
 - B) Location
 - C) CPU Brand
 - D) CPU, Storage Size and Operating System**
- 85) Which cloud deployment model is operated solely for a single organization and its authorized users? **A) Private cloud**
- B) Public cloud
 - C) Community cloud
 - D) Hybrid cloud
- 86) A company must perform a complex analysis for a client, and their computer systems do not have the computation capacity to perform this analysis. How can this analysis be completed quickly and cost effectively?
- A.) Order new hardware to boost computational power.
 - B.) Consolidate the existing hardware to find required computational capacity.
 - C.) Virtualize existing hardware to extract efficiency and utilize the extra capacity.
 - D.) Temporarily access computational power on demand from a cloud service provider.**

- 87) A company needs to provide IT services to a worldwide customer base utilizing a diverse set of devices. Which attribute of cloud computing can help the company deliver such services?
- Flexible pricing
 - Horizontal scaling of application servers
 - Pervasiveness**
 - Vertical scaling of application servers
- 88) What are two advantages of adopting a hybrid cloud model for an enterprise?
- It can pool their existing infrastructure to be more flexible and increase their capacity for short term needs and it can manage sensitive data in a compliant and secure manner, and benefit from flexible pricing models for select services or infrastructure**
 - It can have maximum control over aspects such as security and performance since the entire infrastructure will be managed within their own IT department
 - It can reduce their infrastructure cost since all their data centers will be managed in a third party cloud
 - It can reduce their cost drastically since they will be adopting a flexible pricing model for their entire operations
- 89) What is IBM WebSphere Application Server Hypervisor Edition?
- A single virtual image that contains IBM WebSphere Application Server and IBM Tivoli Provisioning Manager
 - A single virtual image that contains an operating system, the IBM HTTP Server, and the IBM WebSphere Application Server
 - A bare metal hypervisor platform built by IBM
 - A hypervisor platform built by IBM that comes with IBM WebSphere Application Server Network Deployment
- 90) How can resources used by an application running in a shared virtual environment be measured?
- Use the hypervisor management console
 - Each machine receives equal resources in the environment
 - Use IBM Tivoli Monitoring to calculate the usage based on CPU utilization
 - Use IBM Tivoli Usage and Accounting Manager to collect the metrics for the resources and produce report based on the application**
- 91) A company that originally planned its web based IT system to support 10,000 users suddenly notices that there is a four times increase in demand. Assuming that the company has deployed its system in a true cloud environment, what are the incremental maintenance costs to adding new resources to this environment?
- Four times its original costs of deployment.
 - Negligible.**
 - Twice its original costs.
 - Three times its original costs.
- 92) A private cloud helps businesses reduce their cost in what two ways?
- It reduces operating costs by having the internal IT department manage all the computing resources.
 - It reduces infrastructure cost by adopting virtualization techniques and It reduces infrastructure cost by consolidating computing resources and distributed computing.**
 - It reduces infrastructure cost by owning all of the computing resources.
 - It reduces operating costs by having maximum control over the data and infrastructure.