Cloud Computing

Template

Please complete the two sections below to demonstrate your understanding of Cloud Computing.

Section 1

Glossary of terms

Please create a ‘glossary of terms’ for the key terminology needed to hold a credible conversation about Cloud Computing:

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| Term | Definition |
| Artificial intelligence (AI) | The capability of a computer system to imitate human intelligence. Using math and logic, the computer system simulates the reasoning that humans use to learn from new information and make decisions. |
| Business analytics tools | Tools that extract data from business systems and integrate it into a repository, such as a data warehouse, where it can be analysed. Analytics tools range from spread sheets with statistical functions to sophisticated data mining and predictive modelling tools. |
| Business intelligence (BI) tools | Tools that process large amounts of unstructured data in books, journals, documents, health records, images, files, email, video, and so forth, to help you discover meaningful trends and identify new business opportunities. |
| Cloud | A metaphor for a global network, first used in reference to the telephone network and now commonly used to represent the Internet. |
| Cloud bursting | A configuration that’s set up between a private cloud and a public cloud. If 100 percent of the resource capacity in a private cloud is used, then overflow traffic is directed to the public cloud using cloud bursting. |
| Cloud computing | A delivery model for computing resources in which various servers, applications, data, and other resources are integrated and provided as a service over the Internet. Resources are often virtualized. |
| Database sharing | A type of partitioning that lets you divide your large database into smaller databases, which can be managed faster more easily across servers. |
| Hybrid cloud | A cloud that combines public and private clouds, bound together by technology that allows data and applications to be shared between them. A hybrid cloud gives businesses greater flexibility to scale up and down and offers more deployment options. |
| Infrastructure as a service (IaaS) | A virtualized computer environment delivered as a service over the Internet by a provider. Infrastructure can include servers, network equipment, and software. Also called hardware as a service (HaaS). |
| Microsoft Azure | The Microsoft cloud platform, a growing collection of integrated services, including infrastructure as a service (IaaS) and platform as a service (PaaS) offerings. |
| Middleware | Software that lies between an operating system and the applications running on it. It enables communication and data management for distributed applications, like cloud-based applications, so, for example, the data in one database can be accessed through another database. Examples of middleware are web servers, application servers, and content management systems. |
| Platform as a service (Paas) | A computing platform (operating system and other services) delivered as a service over the Internet by a provider. An example is an application development environment that you can subscribe to and use immediately. Azure offers PaaS. |
| Private cloud | Services offered over the Internet or over a private internal network to only select users, not the general public. |
| Public cloud | Services offered over the public Internet and available to anyone who wants to purchase them. |
| Serverless computing | A computing model in which the cloud provider provisions and manages servers. It enables developers to spend more time building apps and less time managing infrastructure. |
| Software as a service (SaaS) | An application delivered over the Internet by a provider. Also called a hosted application. The application doesn’t have to be purchased, installed, or run on users’ computers. SaaS providers were previously referred to as ASPs (application service providers). |
| Virtual machine | A computer file (typically called an image) that behaves like an actual computer. Multiple virtual machines can run simultaneously on the same physical computer. |
| Visualization | The act of creating a virtual rather than a physical version of a computing environment, including computer hardware, operating system, storage devices, and so forth. |

Section 2

Benefits

Please state the key benefits of Cloud Computing:

* **Cost:** Cloud computing eliminates the capital expense of buying hardware and software and setting up and running on-site datacenters—the racks of servers, the round-the-clock electricity for power and cooling, and the IT experts for managing the infrastructure. It adds up fast.
* **Reliability:** Cloud computing makes data backup, disaster recovery, and business continuity easier and less expensive because data can be mirrored at multiple redundant sites on the cloud provider’s network.
* **Speed:** Most cloud computing services are provided self service and on demand, so even vast amounts of computing resources can be provisioned in minutes, typically with just a few mouse clicks, giving businesses a lot of flexibility and taking the pressure off capacity planning.
* **Global scale:** The benefits of cloud computing services include the ability to scale elastically. In cloud speak, that means delivering the right amount of IT resources—for example, more or less computing power, storage, bandwidth—right when they’re needed, and from the right geographic location.
* **Productivity:** On-site datacenters typically require a lot of “racking and stacking”—hardware setup, software patching, and other time-consuming IT management chores. Cloud computing removes the need for many of these tasks, so IT teams can spend time on achieving more important business goals.
* **Performance:** The biggest cloud computing services run on a worldwide network of secure datacenters, which are regularly upgraded to the latest generation of fast and efficient computing hardware. This offers several benefits over a single corporate datacenter, including reduced network latency for applications and greater economies of scale.