Nous devons répondre à plusieurs questions : quand qui pourquoi comment et pour qui, décrire le passé, le présent et le future du cloud computing

1. The notion of network-based computing dates to the 1960s, but many believe the first use of “cloud computing” in its modern context occurred on August 9, 2006, when then Google CEO Eric Schmidt introduced the term to an industry conference.

Internet-based computing in which large groups of remote servers are networked so as to allow sharing of data-processing tasks, centralized data storage, and online access to computer services or resources.

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2.1 : a method of software delivery and licensing in which software is accessed online via a subscription, rather than bought and installed on individual computers.

Exemple d'entreprises qui utilisent le SaaS :

American Red Cross

Jet.com

Netflix

Rovio

Et les développeurs en général ou même le grand public avec office 365

2. 2 : Infrastructure as a service (IaaS) is a form of cloud computing that provides virtualized computing resources over the internet. IaaS is one of the three main categories of cloud computing services, alongside software as a service (SaaS) and platform as a service (PaaS)

Enabling add-on services – in addition to providing day-to-day computing resources, IaaS allows users to layer a wide-range of services on top of the infrastructure. That might include computing-as-a-service, disaster recovery-as-a-service, analytics or BI-as-a-service, and more.

2. Big data – Managing, storing and analyzing big data like structured data (i.e., databases) and unstructured data (i.e., social media, images, web, emails, Internet of Things (IoT) sensors) requires a significant amount of processing power. IaaS is a perfect environment to manage big data because it can handle large workloads and can integrate with business intelligence tools. This delivers business insights that can help users predict trends, improve relationships with customers and create new products and services.

Disaster recovery – With a robust and scalable infrastructure layer, organizations can consolidate their disparate disaster recovery systems into one virtualized environment for disaster recovery. This diversifying of the backup systems gives businesses peace of mind knowing that their data is secure.

Testing and development – The computing and networking power behind IaaS make it a perfect place to run and manage testing and development cycles. With SLAs in place from providers and a high-level of security, enterprises can trust IaaS to run business-critical projects and get to market faster with a higher scalability of computing resources.

Networking services – Because the network continues to grow in complexity, many are turning to IaaS service providers to deliver networking-as-a-service support. This may be for a short-term big data project, or to support ongoing initiatives, freeing up internal IT staff for other priorities.

2.3 : Platform as a service (PaaS) is a complete development and deployment environment in the cloud, with resources that enable you to deliver everything from simple cloud-based apps to sophisticated, cloud-enabled enterprise applications.

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A PaaS is a set of tools to help you build and deploy software applications that run in cloud(s).

The cloud could be your own on-premise hosted cloud you run yourself or it could be a public cloud or a combination (hybrid). PaaS helps you deploy to IaaS infrastructure automatically, operate the software, handle runbook scenarios automatically, help you manage the users and tenants using the applications in production as well as the developers, testers or others working on the applications. A PaaS also performs some very important functions such as managing the isolation of different tenants, scaling up the instances of the application as load builds from any tenant or combination of tenants and distributing the demand from users to the right instances of the applications. A PaaS can do many other things including services to support application development, allocating resources for each user or tenant instance. A PaaS can also help in the development process by including the Application Lifecycle Management tools and even IDE’s (Integrated development environments).

I call a PaaS which does the entire development process an Ecosystem PaaS. See the diagrams above for a typical architecture of PaaS and Ecosystem PaaS. My article and powerpoint: understanding-the-taxonomy-and-complexity-of-paas gives details on the types of PaaSs and what they include to help you select the PaaS best for your needs. It explains the terms and features in more detail to help you figure out which features are important.