**Definitions**

A Gartner report listing cloud computing at the top of its strategic technology areas

further reaffirmed its prominence as an industry trend by announcing its formal defi -

nition as:

*“…a style of computing in which scalable and elastic IT-enabled capabilities are delivered*

*as a service to external customers using Internet technologies.”*

This is a slight revision of Gartner’s original defi nition from 2008, in which “massively

scalable” was used instead of “scalable and elastic.” This acknowledges the importance

of scalability in relation to the ability to scale vertically and not just to enormous

proportions.

Forrester Research provided its own defi nition of cloud computing as:

*“…a standardized IT capability (services, software, or infrastructure) delivered via Internet*

*technologies in a pay-per-use, self-service way.”*

*Virtualization*

Virtualization represents a technology platform used for the creation of virtual instances

of IT resources. A layer of virtualization software allows physical IT resources to provide

multiple virtual images of themselves so that their underlying processing capabilities

can be shared by multiple users.

Prior to the advent of virtualization technologies, software was limited to residing on

and being coupled with static hardware environments. The virtualization process severs

this software-hardware dependency, as hardware requirements can be simulated by

emulation software running in virtualized environments.

Established virtualization technologies can be traced to several cloud characteristics

and cloud computing mechanisms, having inspired many of their core features. As

cloud computing evolved, a generation of *modern* virtualization technologies emerged

to overcome the performance, reliability, and scalability limitations of traditional virtualization

platforms.