Cloud Computing: Will it affect E&P?

Augustin Diz (Repsol)

Introduction

The concept of remote computing for E&P began in earnest with the rise of the Dot Coms. However the infrastructural requirements; bandwidth, disk space, and even user-interfaces did not help to make it an immediate success.

The nature of the compute services has been changing. Cloud Computing, a generic name for a host of services (from infrastructure to software hosting) is generating changes.

What are the options for E&P companies in this new environment?

The first question is the issue of bandwidth to access information. This requires thinking about:

- What information should we host externally
- What are the procedures to have access to it.

As bandwidth increases, or in areas with high bandwidth already, the questions are different:

- Can all the information be stored and managed offsite?
- What about the applications?

The benefits will depend on several factors, including information ownership, and how applications share information.

Several scenarios are presented for discussion, extremes being:

1. Use the Cloud only to store and access information. Applications and interpretations reside behind company firewalls.
2. Use the Cloud for information storage and application hosting, including methods to capture and store interpretations offline. In this scenario, the Cloud also offers the data management services, data loading and transfer. Public and Private information sources provide application-ready information through the Cloud.

Conclusions

The Cloud will challenge and change how we manage and use information. Issues on security and physical location of the information will initially be the main elements that need to be addressed. Information providers will most likely gain prominence. Open standards for the transfer of information will be critical for the model to work efficiently, especially to connect different applications. It will also challenge software development for interpretation.

The Cloud will most likely shift attention away from the databases, infrastructure and how to deliver our internal services around information management, and more on controlling that we capture the right information at the right time, as well as making it more readily available.