

## Tuning the New Service Environment

By Robert Machin, Comptel

'Cloud' services offer great revenue potential for Communications Service Providers (CSPs) – but their success is likely to depend on how well they can leverage their network assets and turn them into a real differentiator in what will be a highly competitive market.



**Background: a great idea, in theory...**

Cloud services - broadly, the provision of computing on demand across the internet - have the potential to create a whole new line of business for communications service providers (CSPs) - one that could bring them very significant new revenues on the back of their existing network assets and business position.

CSPs, particularly the incumbent PTTs, are undoubtedly serious contenders in this new market. Typically, they are a trusted brand, already have a strong relationship with a large, addressable customer base and, commonly, own the lines of

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communication to customer premises which will make the difference between guaranteed levels of service and the largely 'best efforts' or limited leased VPN coverage which non-telco providers can offer.

The CSP's key strength and unique proposition is their command of the communications network - being able not just to offer IT services, but to blend these with communications offerings such as Voice over IP and Unified Communications, and to control and guarantee quality of service between the customer and Cloud servers through private wire, VPN or QoS prioritisation across multiple access networks. Being able to blend outsourced IT with communications flexibility and guarantees is a serious differentiator, one which could overcome the concerns of many potential customers, particularly with regard to performance and resilience.

Non-telco Cloud providers can offer leased connections between servers and customer, but only a carrier will be able to monitor, vary and guarantee levels of service across a wide network domain - a capability which will become increasingly important as mobile broadband becomes more pervasive and Wi-Fi hotspots more widespread, and customers

increasingly expect to access their IT platforms from a wide range of fixed, wireless and mobile locations.

So the Cloud services market increasingly seems like one in which CSPs can compete. Arguably, it's also a market in which they must compete. If they decline to do so, they will leave the playing field open for IT and internet giants who will not only take revenue directly, but will also stimulate network traffic and indirectly add to carrier costs - perhaps significantly. For example, it's recently been reported that Amazon's EC2 Cloud offering already generates more traffic than all of its retail business.

The challenge for telcos is to create an efficient and integrated platform for the delivery of Cloud services...

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### ...but not without its challenges...

For CSPs, there certainly appears to be a big market out there, and plenty of incentive to address it, but is there a profitable business? How challenging will it be – how different from the communications services that they are familiar with? Will they be able to control it in a way which exploits their communications expertise without threatening revenue from existing services? And at the end of the day, do these Cloud services offer a margin which will make the effort worthwhile?

The challenge for telcos is to create an efficient and integrated platform for the delivery of Cloud

**Billing and charging for Cloud services is another area where telcos can bring vital expertise.**

services which will allow them to easily blend their communications strengths with new Cloud services from a quite different domain – and then deliver those services to customers with minimum human intervention, maximizing their margins in what will inevitably be a highly competitive market.

As a fundamentally different line of business - with different services, service environment, customers, users, perhaps even a whole different business unit within the telco or an outsourced relationship with an IT services partner - it will be vital for the platform to be dedicated to Cloud services. At the same time, however, it must provide dynamic linkage with the communications side of the business. Key capabilities of the Cloud services support platform will include:

- Catalog capability to manage a range of customer products and to federate service elements drawn both from within the business, and from partners (who may be providing some if not all of the IT service capability)

- Automated fulfillment to support efficient and consistent service delivery – vital in the relatively standardized small-to-medium-sized business market (SMBs)
- Real time charging and policy control to support a flexible, pay-as-you-go business model and respond quickly to customer events
- Partner interaction – for settlement, back-to-back SLA assurance and communications
- Analytics, providing vital decision support in an emerging and volatile business sector

### ... and how does it work in the real world?

So how would the Cloud services platform look in practice? There are three key aspects to consider: offline, online and transaction-driven.

#### 1. Support in offline mode

Cloud service providers must be able to create, change and adapt marketable products quickly, responding to competitor initiatives and getting new customer propositions to market fast.

It would be a mistake to think that Cloud propositions will be simple or easily defined. They are likely to require the blending of multiple components, with a high probability that at least some will be provided by partners. These could include, for example, storage and bandwidth allocation, applications, support service levels, possibly even IT and communications equipment and other peripherals. They will also need to recognize various pricing models, thresholds and other commercial characteristics.

For operators, it will also be critical to blend in communications elements, such as voice services and equipment, VPN or fixed wire capability and guaranteed access service levels, across multiple networks.

Being able to create standard packaged offerings from elements of this kind will be vital to maintaining viable profit margins, particularly in the SME market, which is promising in terms of size, but likely to be highly competitive.

A key enabler will be 'catalog' technology that will

allow service elements and products to be defined in isolation from the OSS that directly supports them. A technical catalog with interfaces to the IT and communications-supporting OSS will provide a product creation environment capable of modelling all relevant capability from within the CSP's domain and from partner domains. Catalog solutions can also work in the opposite direction, acting as a high level orchestrator of complex service orders, managing the sequence of activities and the dependencies between the various operational systems required to directly enable the Cloud elements.

## 2. Support in transaction-driven mode

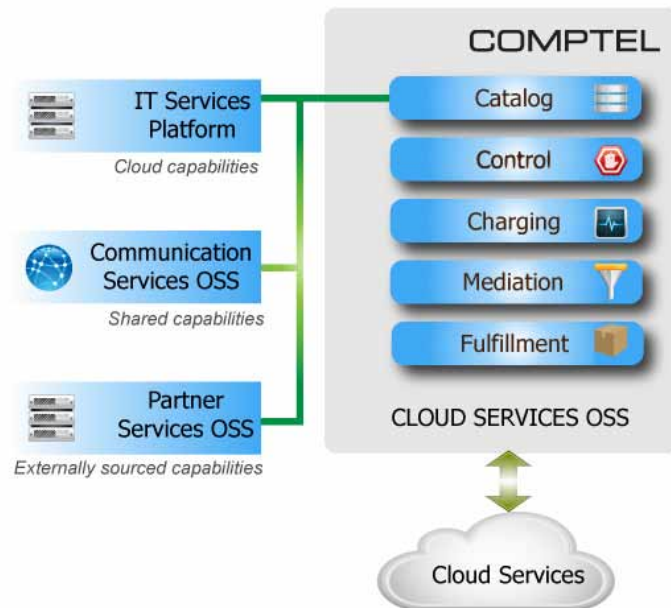
Rapidly fulfilling customer orders and change requests with the minimum of human intervention will be vital to ensure profitable Cloud service provision, as will collecting usage records for billing, settlement and other analytical processes.

Efficient order processing in particular – being able to fulfil Cloud services in as close to real time as possible – will be a vital contributor to the kind of customer experience which will ensure a long-term and high margin customer relationship.

Again, for operators, the fulfillment of the service order is likely to require not just the allocation of virtual desktops, IT environments and applications, but the provisioning and activation of communications services and SLAs. Priorities and contention ratios will need to be set within the network itself, for example, to optimize its performance towards business-critical Cloud services and to ensure that SLAs are met. These can only be managed through fully convergent platforms or, alternatively, through a technical catalog which can orchestrate the required actions and dependencies.

Billing and charging for Cloud services is another area where telcos can bring vital expertise – usage

## Integrated OSS for Cloud Services



based charging, often for very small, high volume chargeable items is something in which carriers have grown expert and efficient over the years and which is highly applicable to the projected business model for Cloud. CSPs are also familiar and proficient with the need to settle with third parties for the shared delivery of services.

## 3. Support in real-time mode

Charging and changing service levels in response to customer requests and customer behavior will be critical to the maintenance of customer satisfaction with the Cloud service proposition.

Customers will expect services to flex in response to their short term as well as long term needs, so

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real-time customer behavior and usage monitoring is an essential enabler, feeding into the kind of policy management that will ensure a consistent response across the customer base with minimal delay or intervention.

Customers for carrier Cloud services will also expect to see assurance of committed bandwidth, and notification when full capacity is being reached – with the option to increase their supply, very likely on a temporary basis. This will require CSPs to be alert to customer needs and behavior, to release additional bandwidth as required (and throttle it back when no longer needed), to charge according to the agreed tariff and collect all relevant activity for later charging and analytics.

Convergent control and charging capability which is able to recognize user activity and charge against a single customer balance, make changes to the service quality, and/or interact with the customer, will be vital to support a fully managed, holistic customer experience.

#### Harmony or discord?

Cloud services have the potential to be sweet music to the ears of CSPs, but only if both sides of

the Cloud business – the outsourced IT services and the communication lines which support them – are singing in harmony. CSPs must exploit their key market advantage – the ability to blend communications elements in with IT services and offer flexible quality of service (QoS) guarantees over and above those available to purely IT players.

This ‘leveraging’ of network assets to create a more compelling Cloud Service offering will only be possible if there is dynamic interaction with the networks side of the business. Product managers can then blend connection services and guarantees into Cloud service offerings and subsequently vary them in response to customer behavior and business rules.

Critical to the success of the operation is a genuinely open and convergent platform which is capable of managing service elements across communications and IT domains, providing efficient and convergent operational and analytical support for a very new kind of business. Ad-hoc, rudimentary and non-automated support will struggle to meet the expectations of customers for Cloud services and will certainly struggle to make those services profitable.

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