





US\$112 billion

is what enterprises will spend over the next six years cumulatively on cloud related technologies such as SaaS, PaaS and IaaS

Source: Gartner's Cloud Outlook 2011

EXECUTIVE SUMMARY

The growth in the use of Cloud services to replace traditional IT service provision is rapid, and accelerating. From a tax perspective – this means change. Business models are evolving and they are changing to fit in with how the Cloud is actually developing.

KPMG have put together this briefing paper which covers a number of direct and indirect issues, challenges and opportunities that can arise out of utilizing Cloud computing. In essence the Cloud brings with it:

- Significant tax issues for both parties in a Cloud supply arrangement, providers and purchasers, and these are multiplied when the transactions are cross-border.
- An uncertainty around the tax implications. Often, the tax impact is not fully considered at the time that the transition to a new Cloud delivery model is being planned and executed. Tax can influence the long term outcomes of planned new Cloud projects, and should be included in any business case.
- Additional scrutiny from Tax authorities who are becoming increasingly aware of the tax implications of the switch from traditional IT service provision and the potential for tax leakage.

It is becoming increasingly important that companies do not undertake Cloud activities in isolation but weigh up any business opportunities with the potential tax implications.

INTO THE CLOUD

For many years organizations have sought to improve the cost and return on investment of IT through various outsourcing or intra-group sub-contractual arrangements (insourcing). This has evolved into what we describe today as Cloud computing.

Cloud can be considered as no more than the means to source certain IT functions from a virtual environment – however for many it also turns out to be cheaper and, more effective, with the ability for either supplier or purchaser to scale up or down to meet fluctuating demands. This flexibility has, in part, enabled new business models, which can for example, reduce time to market for new products, and assist in the delivery of products and services to consumers.

The key differences between historical outsourcing/insourcing and working in the Cloud are the elastic, on-demand nature of Cloud services. This coupled with virtualization, the ability to allow Cloud Service Providers (CSPs) to offer true multi-tenancy to customers while maintaining security and performance levels normally associated with dedicated computing, has produced a step change in the ability of providers to service large portions of their market. This efficiency and scalability are two of the reasons that Cloud is becoming a fundamental component in the supply chain of many organizations.

Cloud as a physical medium does not really exist; it is a term that is used to describe how organizations can source their IT needs without having to resort to the usual channels of purchase/license, ownership and administration. This new business model is driven by the combination of the increasing desire of companies to:

- use the most-up-to date software
- keep their balance sheets lean
- swap capital expenditure for more flexible operating expenditure; and
- manage their procurement activities cost effectively.



It is generally accepted that there are three main service models and four deployment models that together categorize ways to deliver Cloud services (see side bar for further details).

TAX IN THE CLOUD

There are a number of direct and indirect tax issues, challenges and opportunities that arise as a consequence of:

- companies using Cloud in their supply chain; and

- multi-national groups transitioning from a more traditional IT delivery model to one shaped and charged as a Cloud service.

This is particularly relevant as more and more tax authorities wake up to the complexities of Cloud and try to prevent any potential tax leakage.

Considering the tax implications may well strengthen a long term business case for Cloud and help organizations improve their bottom line performance and their operating effectiveness.



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Service Models

Software as a Service (SaaS)

This is the provision of software or applications through the web to organizations that no longer choose to host or license the underlying software themselves. At present, this applies on a B2B level with a fast growing B2C element; for example, online gaming where players may have basic functionality (i.e. programs) on their own computers but access more expansive software or expansion packs through the internet, for which a charge can be made. Examples of software providers include Microsoft, Google, Salesforce.com – “software services” would include such applications as Office 365 and Google mail and docs.

In delivering SaaS to the consumer, the provider uses software applications hosted on the providers’ hardware.

Platform as a Service (PaaS)

PaaS offers the consumer the facility to deploy their own applications without the cost and complexity of buying and managing the underlying hardware and software and hosting capabilities. This facilitates application design, application development, testing, and the deployment of applications. Typically this service does not include the hosted application itself but the tools upon which applications can be deployed. This is most likely to be found in a B2B environment where the organization is reliant on third-party infrastructure and needs extensive developmental capability. This is analogous to a musician who uses a recording studio to create an album – they can use the equipment for the time period that they need without needing to incur the risks of overall ownership of the underlying equipment. Window’s Azure, Amazons AWS and Salesforce’s Force.com are good examples of companies that operate in this space.

Infrastructure as a Service (IaaS)

This service provides access to computer processing, network and storage. Rather than purchasing servers, software, data center space or networks and firewalls, consumers instead buy those resources as a fully outsourced service. Again, this is most likely to be found in a B2B environment, for example, through companies like Rackspace and Amazon EC2, although there is a growing B2C market in this area. For example, personal data storage where one can back-up the contents of a computer through a virtual provider such as Apple’s iCloud offering.

It is expected that by 2014, the UK market in Software as a Service (SaaS) and Platform as a Service (PaaS) will be worth about £1.8bn .

DEPLOYMENT MODELS

There are four types of Cloud deployment models:

- **Private** – operated solely for a single business, whether managed internally or by a third-party and hosted internally or externally. The 'G' Cloud (government) will be essentially a Private Cloud.
- **Public** – available to all and hosted by a Cloud Service Provider (CSP).
- **Community** – whereby charities, voluntary bodies, companies involved in similar business/procurement arenas operate together and share information.
- **Hybrid** – combination of public and private clouds, where private data and applications are kept internal to the business and other data and application are hosted by the public CSP.

PAYMENT MODELS

Payment models typically revolve around: subscription; pay as you go (or metering) and reserved capacity contracts. There are other variants, which include a developing commodities market for IT capacity, whereby some providers will auction excess capacity and advertising models, where access to Cloud is provided for free, and revenue is derived from the advertising.

SPECIFIC TAX ISSUES

Transaction Classification

Classification is determined to a large extent by whether, as part of the transaction, there is transfer of property to the customer. In many, if not most Cloud transactions, there will be no such transfer and the rules governing the taxation of services income likely would apply. However, there may be circumstances where a right is transferred to a customer, in which case the CSP will have to consider whether the income earned is treated as rental, or royalty income (each of which involve the transfer of either a copyrighted article or an intangible property right). Where there is a transfer of property, classification will depend upon the nature of the rights the customer has in the property transferred. It is likely that classification matters will progress along a continuum from a pure cloud transaction where no property is transferred through to transactions where property is transferred together with perpetual rights to use once payments cease.

The correct classification of the underlying transaction is fundamental to the tax treatment.

'The correct classification of the underlying transaction is fundamental from a tax perspective'

Transfer Pricing

From a Transfer Pricing perspective the classification is required in order to appropriately assess the pricing of the services rendered. It is essential to establish if it is a service that has been rendered and not a transfer of tangible property or IP. For example could the transaction be considered a sale, lease or licence as opposed to a service? This scrutiny will significantly impact upon the benchmarking analysis required to support the intra-group transaction as arm's length. It is also important from a Corporate Tax perspective because many jurisdictions will treat the income derived from each of these types of transactions differently, with specific tax provisions applying to each type.

Reviewing the contractual evidence and the potential payment model would be the starting point in determining whether property or a service has been conferred and whether any IP has been transferred. Questions to be answered would include: Have multiple contracts been used, for feasibility and requirement studies; are these contracts commercially and economically linked and as such should they be valued, and therefore priced, as a single arrangement? Do the Service Level Agreements (SLAs) factor in capacity or down time risk? Who bears the security risk? Can the end user keep any of the physical property in perpetuity once the subscription ends? Do they have reserved space in the Cloud?

Indirect Tax

The classification of the services also drives the Indirect Tax treatment of the transactions. For instance, if the services provided are software in nature then the Indirect Tax treatment, from an EU perspective, would likely apply a reverse-charge. This is certainly the case at a B2B level when services are provided cross-border, in this instance the recipient company needs to self-assess any taxes that may be due. Generally speaking, many non-EU jurisdictions that operate Indirect Tax systems will have similar regimes in place.

From a B2C perspective, the services provided would normally fall within the definition of "electronically supplied services" (ESS) and hence, when supplied by a non-EU established provider into the EU, would require the service provider to register for VAT under Article 58 of the Principal VAT Directive. Within the EU, for B2C purposes, the rules (up until 2015) will allow service providers to account for VAT at the rate prevalent in the Member state in which they are established. After 2015, the changes to the place of supply rules will require a similar approach to that existing currently for the non-EU established provider – i.e. needing to account for VAT in the customer's Member state.



purposes), protected from third-party access, more commercially viable and most importantly, these facilities provide the ideal environmental conditions (i.e. they are kept dry and cool). In these facilities, individual servers are locked in metal cages where physical access can be restricted. Coupled with intensive security and screening checks, put briefly, access to such sites is anything but easy.

Depending on the classification of the transaction a different Indirect Tax analysis and outcome may arise. Indeed, even the pricing models themselves can be unusual; whereas 10 years ago such prices were based on the amount of space that was taken up, today, some pricing models revolve around the amount of electricity that is consumed or is technically required to keep the area cool.

Again, the critical issue in understanding the tax consequences is to determine the exact nature of the underlying supply. This type of data management is similar to traditional outsourcing. Where IaaS is truly Cloud, i.e. completely virtual, characterizing and determining the place of supply becomes even more complex.

Many businesses may share the same 'facilities' and may not know where the data is located. The location could in fact be a number of places. Costs, such as power, will still be included, but not transparently.

From a tax perspective it is therefore important to strip back the underlying contracts in order to fully understand what may lie beneath the label. For the vast majority of the services that may be termed Cloud, a rational and hopefully logical tax consequence will arise. In order to strip back the underlying contract you need to fully understand the supply chain, recognising the risks and rewards within the new business model from both a commercial and tax perspective.

The next section explains the impact Cloud is having on present day supply chains.

If the services provided relate to more than software (i.e. moving into the PaaS service model), then the Indirect Tax position does shift. It becomes more compelling that when an application or platform is being used it could qualify as a "lease" of goods – some software programs are only capable of being utilized on certain types of hardware – therefore, the question then arises as to what is the underlying supply – is it the lease or supply of the hardware or more generically is it some form of electronic service?

If we assume that there is a lease or supply of hardware, then we potentially could enter into issues of "use and enjoyment" – whereby the underlying taxation, from an Indirect Tax perspective can become more complex, especially with global supply contracts. If we go down the latter

analysis of some form of electronic service, then in principle the issue becomes relatively simple as such services would probably fall to be ESS. For EU B2C purposes, such services would fall fairly and squarely into ESS and for EU B2B services, probably within the definition of a supply of software which essentially would allow such charges to be liable to tax where the customer is located.

Infrastructure - Goods or services

When we get into infrastructure, the supplies made could form a mix of goods and services. Take data management for example. Many companies that use off-site data storage facilities (i.e. servers/databases as opposed to file and boxes) will do so as their data can be made secure (for disaster recovery

EXPORTING CLOUD

Somewhat surprisingly, Cloud services can be affected by export controls. Such controls – which traditionally only related to the physical movement of certain types of goods – now also apply to technology and virtual elements of global businesses.

Organizations that transfer data, software and other Cloud services across border need to be aware of the potential liability to export controls. Simply put, export controls are restrictions placed on transactions and technology by governments. In particular, the regulatory environment in the US is extremely complex as there are several federal agencies that regulate exports. To further complicate matters for exporters, US export laws apply to US-origin technology in perpetuity. Even incorporating the controlled US technology into a non-US product does not necessarily relieve the restriction of US controls.

From a Cloud standpoint, it is therefore important to consider:

- the origin of open-source and third-party software;
- if the software contains encryption; and
- the location of the server used to house the applications.

The business will need to observe the export controls for each jurisdiction accordingly as they may need to obtain licences from the relevant authorities.

Failure to take export controls into account can lead to penalties, which include fines and imprisonment – and therefore, evaluating export controls if you are a CSP should be a high priority.

UNDERSTANDING SUPPLY CHAINS IN THE CLOUD

The global fluidity of Cloud results in tax compliance risks in terms of evaluating the location of the Cloud business and its customers and assessing intra-group Cloud transactions in accordance with the arm's length principle. However it also provides opportunities for multi-national groups providing Cloud services, either internally or externally, to consider a tax efficient structure/strategy for the provision of such services.

Compliance – the source of income

Let us first consider the tax compliance aspect of the Cloud supply chain. Fundamental issues include:

- The source of the income for purposes of computing creditable foreign taxes;
- Whether the income, if earned through an offshore subsidiary, will be subject to controlled foreign company (CFC) or other avoidance legislation; and

- Whether, or to what extent, the income is subject to home territory or foreign withholding tax.

Determining the source of income is important because this determines whether the income is domestic source or foreign source. In many jurisdictions foreign tax credits may only be claimed to the extent foreign taxes paid are associated with foreign source income. Various tax treaties may impact this determination. A foreign CSP will be interested in the source determination since it may affect whether withholding taxes are imposed on payments received from its Cloud transactions.

Generally, income derived from the provision of services is sourced to where the services are performed. The source rule for services income raises certain complexities in the Cloud context. Rarely will all of the inputs that make up the service offering be provided in a single jurisdiction. Consequently revenue allocation will likely be required. If a transaction is classified as rental income, income from the transaction generally is

sourced to the place where the property is used (e.g. generally where the servers and other components of the cloud apparatus are located). If a classification analysis leads to a conclusion that a transaction gives rise to sales income (e.g. the transaction is a sale of an item of property), income generally is sourced to where the sale takes place (e.g. where the contract is concluded and where title and the benefits and burdens of ownership pass to the buyer). As with the location of services inputs, ascertaining the location of production activities in the Cloud context may not be a straightforward exercise. Careful consideration of the facts will





be necessary. Royalties usually are sourced from where the IP is used (exploited) by the CSP's customer.

MANAGING THE TAX LOCATION OF CLOUD SERVICES

Many tax jurisdictions have implemented CFC anti-avoidance legislation to limit the transfer of income off-shore to a tax advantaged location. In developing a Cloud infrastructure, care must be taken to ensure income does not inadvertently fall within such legislation bringing income on-shore for inclusion within

a domestic tax return. A particular issue in the virtual world is the ability for transactions and services to be delivered with little or no "human" involvement. Would a server farm that has significant physical presence in the form of tangible assets be considered to have substance from the perspective of being able to demonstrate an independently managed business operation, if minimal individuals are involved in running the server farm? Another key issue that needs to be considered is – whether operating in the Cloud creates a permanent establishment (PE) for tax purposes for both the service provider through its infrastructure

or for the client through the use of servers in a territory outside the home jurisdiction.

The OECD Model Tax Convention describes a PE as a fixed place of business through which the business of an enterprise is wholly or partly carried on.

As noted above, Cloud allows the remote operation of many IT processes. Should some processes be moved onto the Cloud, consideration would need to be given as this process in itself would constitute a fixed place of business in an overseas jurisdiction.

Cross-border strategies

In considering a tax efficient strategy it is therefore important to identify the key value drivers within the supply chain; the classification of the nature and location of the services provided and sourced; and importantly the profit and growth projections for the business. The following scenarios highlight the issues faced when considering cross-border tax strategies that arise on the provision of Cloud services.

As discussed Cloud offerings may consist of platforms, service, infrastructure and storage. As depicted in the diagrams, these offerings may be undertaken and provided by a single or multiple multi-national group(s).

Within a group, you would need to consider how the value (or income) generated by the Cloud should be allocated between the functions performed by the personnel supporting the business and the assets owned by the business, such as IP and infrastructure. In such an analysis you would also need to consider where the functions and risks are performed and by whom. The identification of which legal entity (or indeed PE) is contributing which aspect of the Cloud service is therefore fundamental for Transfer Pricing compliance and planning purposes. This can be a highly complex question because multiple entities (both related and third-parties) may combine their efforts to provide Cloud offerings. From a Transfer Pricing perspective each entity's economic contribution will need to be assessed and each entity will need to be compensated according to the arm's length principle.

See figure 1.1 and 1.2

The role of value drivers

Consideration should therefore be given to the location of the value drivers. For instance the management and ownership of servers does not have to be in the same location as the servers themselves. Separating ownership and management may generate a tax beneficial outcome. Likewise with the development

Figure 1.1

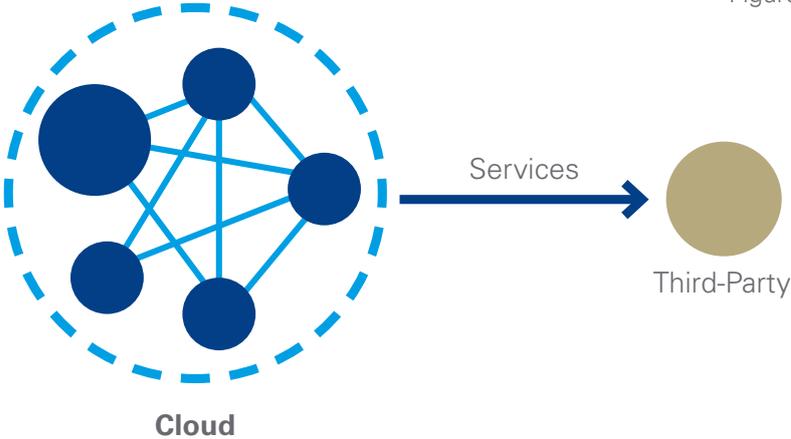
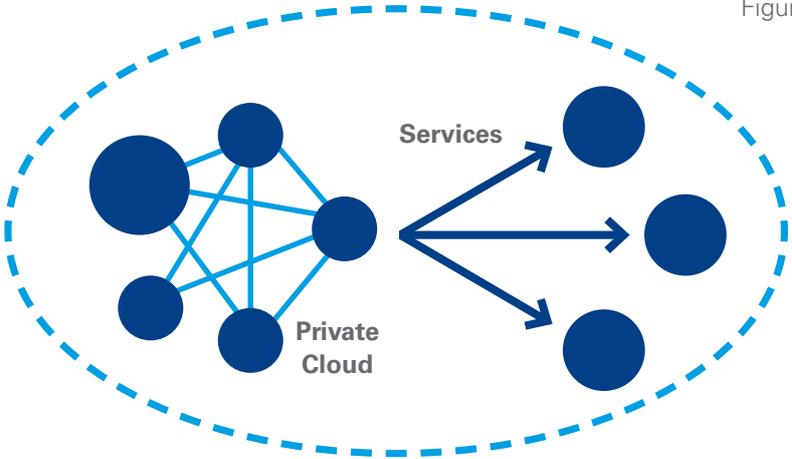


Figure 1.2



of software – software is typically developed in global hotspots, such as the US, UK, India, Israel and Ukraine; but economic/ legal ownership of the software can be located anywhere in the world through service provider contracts with the software developers. Locating value drivers in a tax efficient location may therefore bring tax as well as commercial benefits to the business.

In this context a CSP could be a joint venture enabling third-party companies to come together and provide Cloud services to the market. Transfer Pricing analysis would be required to assess the relative value of the contributions to the Cloud and to allocate the value accordingly.

For instance if a website hosted through a Cloud generated income through click-throughs rather than monthly subscription, is the value in the business derived from the technology, software, web-content or the marketing department who

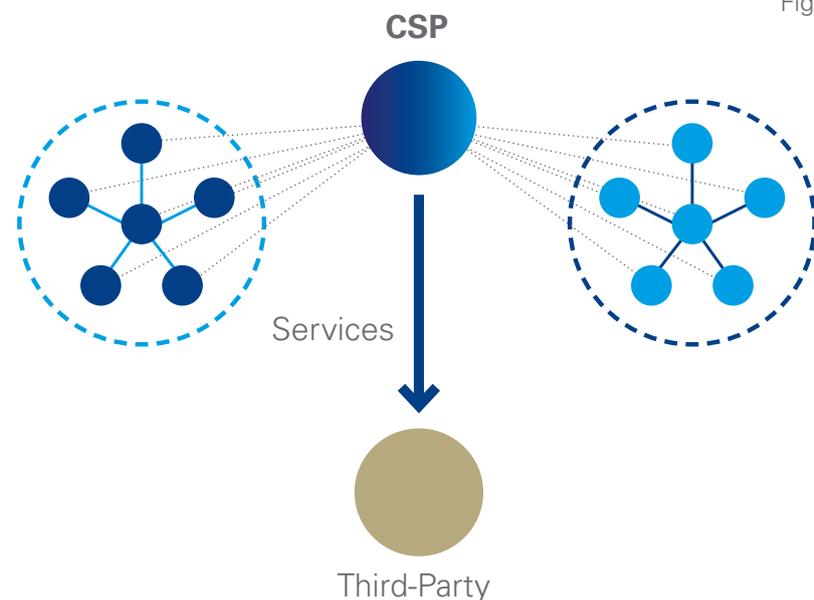


Figure 1.3

promote and contract with the website's advertisers? Determination of the business value drivers will

also ensure that there is a robust commercial basis in any tax efficient planning undertaken. **See figure 1.3**



CONCLUSION

It is no surprise, especially when considering the fact that revenues can be earned remotely, that tax authorities are seeking to address any possible tax leakage. Since Cloud is unbroken territory for most tax authorities, taxpayers will need to have a high level of clarity over the transactions undertaken and how the value of the Cloud business is distributed among the IP, infrastructure and the personnel that support the business. Commercial decisions can have far-reaching tax consequences that bring their own risk and reward.

'We therefore recommend that companies do not undertake Cloud activities in isolation but that they weigh up any business opportunities with the potential tax implications'.

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**Organization
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