

Accounting for cloud-based software

Historically, companies acquiring IT and other infrastructure have only faced one decision - buy or lease? From a financial perspective, the choice was simple: lease, because it didn't require up-front capital and potentially allowed assets to be kept off balance sheet under the old accounting rules. A buy decision meant an up-front investment of capital and a depreciating asset on the balance sheet.

However, with the evolution of technology, a new choice has emerged - cloud services, which can be obtained without buying or leasing. Instead of expensive data centres and IT software licenses, users can choose to simply have a provider host all of their infrastructure and services. No upfront investment is required, just a simple monthly series of payments that can be scaled up, scaled back or cancelled as needed. But what does all of this mean for income statements - and your company's balance sheet?

Cloud accounting - a different business model

Historically, any company purchasing its IT infrastructure would capitalise the costs and amortise them over time. Under the new leases standard, a company using a lease or hire purchase arrangement to access IT infrastructure would end up with a similar capitalised asset and amortisation charge over time. However, the cloud alternative represents a fundamentally different business model, one where, unlike the legacy purchase model, a user of cloud services does not ever own the underlying assets.

While this isn't yet another article about the new leases standard, it's useful to step through some of the sensitivities in financial metrics under the leasing standard. While cloud services are likely to result in a differing accounting treatment, the all too familiar concerns in lease accounting are still relevant.

Clearly, accounting can have a significant impact on performance metrics, either positive or negative depending on the strategic focus of a company and the metrics on which they're assessed - metrics that are increasingly in the spotlight given widespread publicity on the impact of the leases standard. Those companies with a focus on balance sheet metrics typically prefer being able to expense costs as they are incurred: for example, utilities and banks, which are measured on leverage and return on assets. In contrast, those with a focus on income statement profitability, and therefore the deferral of costs, would have a preference to capitalise software costs in line with their current accounting policy. Examples are technology companies and startups, which are keenly focused on NPAT profitability.

In all of this, there is little specific guidance in Australian accounting standards to deal with accounting for a cloud model. But before we look at the possible approaches, we need to understand the terminology.

What are the types of cloud?

Not all cloud-based technology arrangements are the same; they may cover hardware, software or some combination of the two. Generally, any arrangement involving Amazon Web Services or Microsoft Azure is likely to be a cloud arrangement. We've identified the three main types of cloud services below, along with their main characteristics.

Software as a Service (SaaS)¹	Platform as a Service (PaaS)	Infrastructure as a Service (IaaS)
<ul style="list-style-type: none"> refers to software applications that are delivered over the Internet, on demand and usually via subscription cloud providers host and manage the software and associated infrastructure, and handle maintenance (i.e. upgrades) users connect to applications over the Internet (via web browser on smart devices or PC) 	<ul style="list-style-type: none"> refers to cloud computing services that supply an on-demand environment that developers can use to develop, test, deliver and manage software applications allows developers to create web or mobile apps without the need to set up or manage the underlying infrastructure (i.e. servers, storage, networks, databases) 	<ul style="list-style-type: none"> refers to the most basic group of cloud computing services customer pays for scalable IT infrastructure from a cloud provider on a pay-as-you-go basis. This includes servers, storage, networks and operating systems can be a fixed or scalable capacity

1. '[What is cloud computing? A beginners guide](https://azure.microsoft.com/en-au/overview/what-is-cloud-computing/)', Microsoft Azure, Accessed 13/9/18.
<https://azure.microsoft.com/en-au/overview/what-is-cloud-computing/>

Approaches to cloud accounting

Under Australian accounting standards, IT expenditure costs may be capitalised under either AASB 116 *Property, Plant and Equipment*, AASB 16 *Leases* or AASB 138 *Intangible assets* where a company:

- acquires legal title for hardware and IP licences or otherwise has contractual or legal rights to a specific asset
- expects to derive a future economic benefit, and
- the benefit is derived over a period or more than 1 year.

In a cloud arrangement, the right to access hardware or software does not generally result in any title transfer or licence being granted - a critical point. The cloud service provider may opt to vary the underlying platforms used, location of assets and technology as long as the contracted service is being delivered.

As such, the ability to apply cost capitalisation principles to cloud arrangements is limited. At best, upfront costs may be capitalised and amortised over the contracted service period. However, ongoing monthly fees should be expensed as incurred as an operating expense, not amortisation. This is distinct from how monthly payments are capitalised upfront in the new world of leasing.

Does the arrangement include a software license?

If the cloud arrangement includes a software license, which may typically be the case with PaaS or IaaS, the arrangement falls within the general principles of intangible accounting. A good rule of thumb, borrowing from US literature, is that cloud software license agreements should be capitalised if both of the following principles are met:

- the customer has the contractual right to take possession of the software at any time during the hosting period without significant penalty, and
- it is feasible for the customer to either run the software on its own hardware or contract with another party unrelated to the vendor to host the software.

If neither of these criteria are met, then typically the software would be recorded as an operating expense.

If the arrangement does not include a software license, as would be most likely the case for SaaS, the arrangement is a service contract and therefore ongoing payments are treated as operating expenses, regardless of whether they are cancellable or not.

Costs of implementation and data migration

Implementation may cover a range of activities, each of which is likely to have a different potential accounting treatment. Typically, implementation includes evaluation of providers, installation and configuration costs, integration with existing systems and middleware, training, data migration and customisation.

The table below illustrates what costs are typically capitalised and expensed. Determining which activities in the implementation process are eligible for capitalisation requires judgement and an analysis of the nature of costs incurred.

Stage of implementation process	Cost treatment
Preliminary project stage <ul style="list-style-type: none"> Internal/external costs prior to selection of a provider 	<ul style="list-style-type: none"> Expense as there is no specific future benefit at this stage
Installation and implementation <ul style="list-style-type: none"> Internal and external costs incurred, modify provider offerings or develop bridging modules to existing systems or bespoke additional capability Configuration and set up of provider offerings and customisation 	<ul style="list-style-type: none"> Capitalise, where code is developed internally for which the provider does not obtain IP rights Judgemental depending on extent and substance of modifications and incremental capability being added
Training costs at implementation <ul style="list-style-type: none"> Employee training costs Development of training materials / content 	<ul style="list-style-type: none"> Expense employee training costs as there is no intangible asset controlled by the company Capitalise costs of developing training materials, e-learns and content that is retained by the company
Data conversion costs <ul style="list-style-type: none"> Including purging or cleansing of existing data, reconciliation or balancing of the old data and the data in the new system, creation of new or additional data, and conversion of old data to the new system 	<ul style="list-style-type: none"> Expense as there is no future benefit obtained in migration to a system that is not owned by the user
Post implementation - Operation stage <ul style="list-style-type: none"> Internal and external people training costs and maintenance costs 	<ul style="list-style-type: none"> Expense as there is no future incremental economic benefit

Similar considerations would arise in multiple staged deployments where each phase or module provided through the cloud would need to be separately assessed.

Amortisation of capitalised costs – the useful life

Capitalised initial costs should generally be amortised over the life of the service arrangement on a straight line basis. The amortisation should not be based on expectations about the entity's use of the software (for example, how many users access the software or volume of transactions in a given month).

The amortisation period may be extended beyond the non-cancellable period of the service to include:

- periods covered by an option to extend if the user is reasonably certain it will exercise that option, and
- periods covered by an option to terminate if the entity is reasonably certain it will not exercise that option.

The amortisation period assessment will need to be reassessed periodically, with any change accounted for prospectively as a change in estimate.

Next Steps

Accounting for cloud software arrangements is an area that requires judgement. It's a fundamentally different economic model to traditional licence, purchase or hire purchase arrangements, and the accounting may give rise to a different earnings, EBITDA and balance sheet profile. Where these have been used to support valuation models, companies should keep investors informed by clearly communicating their shift to a cloud environment as part of a discussion on IT strategy.

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