

Are We Becoming Cloud Slaves?

Shôn Ellerton, October 30, 2022

Are we becoming too dependent on the Cloud and the Internet? I think we are...



Are we becoming Cloud slaves? For those readers expecting a raunchy article penetrating the dark world of online sex and virtual BDSM environments will be sorely disappointed I'm afraid.

I'm referring to our worryingly increasing dependence on 'the Cloud' or the Internet. I use the term interchangeably considering that most Internet usage involves some sort of interaction of stored information held 'in the aether' on third-party host providers connected via the Internet. We have, in essence, a new Master and Slave relationship with the Cloud, where the Master represents that collection of entities including big tech, corporate interests and those, in general, who want to rake in the money by enticing us to invest in new products, often through annual subscriptions which look economical and cheap on the surface. The Slave, of course, represents that individual ingesting that daily dose of social media much like a modern-day form of Soma as portrayed in Aldous Huxley's [Brave New World](#). Or perhaps that business targeted by aggressive online product marketers pushing the narrative that the panacea of all your IT issues will be solved through low-code Cloud solutions, many of which, turn out to be simply expensive tools for gullible investors.

Much has been written about the worrying trend of increased day-to-day immersion from reality to virtual reality. One of the most poignant novels written about the subject is Ernest Cline's [Ready Player One](#). Written in 2011, it depicts a world that has declined into stagnation and the masses are hooked into a virtual universe called OASIS, where they are educated, earn credits through

doing work, play games and socialise with others through avatars. Meanwhile, in the real world, most of them are living in slum-like conditions, where food is delivered to them, and all their VR equipment needs are supplied to 'keep them happy' under the control by those living in the real world operating the virtual world network.

Sounds overly dramatic and dystopian. Perhaps. But, without resorting to conspiracy, there seems to be a deliberate trend in getting the masses hooked onto Cloud services and becoming wholly dependent on the Internet. What is often overlooked is that around 60 percent of the world's population has access to the Internet, ranging from 98 percent in Europe to around 25 percent in central Africa according to Statista. Therefore, it is not wholly unsurprising that we are designing Internet-dependent products mainly for those living in the developed world with high Internet penetration. For those living in Internet deprived areas, many initiatives have been pushed out to extend the availability of the Internet to those who previously never had access to it. Take Elon Musk's Starlink. Satellites beaming Internet from space is the closest parallel I can think of which reminds me of the fictional Skynet as portrayed in the Terminator movies. Although this was probably preceded by the less-known older 70s Cold War sci-fi movie, [*Colossus: The Forbin Project*](#), a personal favourite film of mine, in which the grand plan was for two colluding US and Soviet supercomputers to control the world's communication systems including all defence systems. To achieve one hundred percent Internet penetration worldwide is unlikely, not entirely different to the situation for those left 'out of the system' like the forgotten proles in George Orwell's *Nineteen Eighty-Four* or the native American Indians in *Brave New World*.

The Cloud has its place in today's world, I will not contest that. However, the idea that the Cloud is always better and that thinking otherwise is old-fashioned simply because modern is always better is hogwash. I went into a bank the other day to do some refinancing. While I sat there watching this guy tapping all this data into various systems on the screen, he came across an ancient-looking text-based window which looked remarkably like a mainframe terminal console. I asked him if it was and he said when all the systems are down, this one practically *always* works. And that is true with most of today's mainframe environments which don't seem to need an endless deluge of security patches and software updates. They are not only nearly bombproof with respect to its underlying programming languages immune from needless deprecation but far

more secure, some of which may be attributed to obscurity. After all, few these days understand the mainframe environment. The increasing problem of data theft such as the Optus and Medibank data breaches during 2022 which made major news in Australia and abroad may have a silver lining insofar that more thought is now being put in place by the data industry to re-think the strategy that ‘the Cloud is always best and the way of the future’.

In this piece, I can elaborate on three real-life examples of how being reliant on the Cloud may be problematic or, at best, limiting.

Managing your data in the cloud

The whole ethos of The Cloud has permeated so extensively into the IT corporate framework that those hoping to find a career in IT without Cloud experience are at a disadvantage. I wrote a separate piece titled [*Struggling to Find the Right Fit for a Data Role? Try Easing Up on the Cloud Jargon*](#) in which there is a disconcerting trend obsessed with finding candidates with specific skills in Cloud-based data products rather than seeking skills and experience with the handling of data in general. I’ve come across new employees in the data industry who were successfully hired having had exposure of both Azure and AWS environments. Yet, one of them could not write a simple stored procedure, a bit of re-executable SQL code to do something in a database. With data skills at the core of my experience, I’ve had to adapt to both modern Cloud technologies *and* the older data structures found in many of our surviving mainframes running on COBOL code. To take an analogy of the real world representing on-premises infrastructure and virtual reality representing the Cloud, learning to fly an aeroplane in the real world or learning with a very good simulator still requires you to learn how to fly the damned aeroplane regardless of its environment.

Third-party SaaS (software as a service) solution providers including Microsoft, Google, Snowflake, Amazon, and many others in their approach to ween and indoctrinate entire businesses to take up their subscription-based products have demonstrated this successful strategy for the last ten years or thereabouts. Lesser-known outfits such as Alteryx and Knime who sell *low-code* subscription-based products in the data science and data migration space command extraordinarily high licence fees, some in the five-figure territory per user. The mantra here is to sell a product which requires less technical training for the user leading the way down the path of further abstracting our IT

workforce away from the ‘nuts and bolts’ that lie underneath. Those who sell these subscription-based products are trained accordingly and tend to focus with laser-like precision to those more senior positions in the industry who hold decision-making influence and have knowledge at *awareness* rather than technical proficiency level. Selling such solutions to those who are technically trained at developing code at grass roots level using, for example, open-source languages like Python, cheap but effective add-ons within the Microsoft Visual Studio ecosystem like SSIS, or through Linux-based operating systems like Ubuntu would be like selling refrigerators to Eskimos. To quote the evil Dick Jones in the 1987 film, [*Robocop*](#), ‘*Good business is where you find it*’. A somewhat corny and vague mantra, as so many are in the corporate world.

I once approached a client on a solution for shifting data from one datasource to another, a term called ETL, or *extraction, transform and load*, and popped the question on the issue of long-term flexibility and portability. Rather than build custom components within Microsoft’s Azure Data cloud environment like Data Factory, build them *outside* the environment using standalone SSIS packages, a sort of wrapped up bit of code you can build using Microsoft’s excellent Visual Studio environment. These packages can be uploaded into the Cloud or simply run on premises. The bonus, of course, is that these packages are totally portable and *yours* to keep without paying an ongoing subscription. I’m not suggesting the Cloud doesn’t have a purpose. Uploading the compiled packages can be triggered in the Cloud and seamlessly integrated with other services. But once you start building the components *in the Cloud*, it is seldom possible to migrate them to a format which is easily portable *out of the Cloud*.

The main issue with subscription-based Cloud services for data management is the sheer cost of running them. Growing up in a world of business where CAPEX (capital expenditure) was good and OPEX (operational expenditure) was bad, any model which promotes continual subscription costs was frowned upon. Yet, in today’s world of IT, so many have been bought into the narrative that vast savings and better efficiency can be made by shifting everything into the Cloud promising that nothing needs to be done with regard to equipment support, software updates and security patches. That may be all well as good; however, most businesses tend to employ *external* third parties to administer their Cloud services, often, at significant costs. Many businesses simply do not have the expertise, or worse, the trust of their own employees, to administer

their own Cloud services, which, sort of defeats the exercise of simplicity in a roundabout kind of way.

As for subscription costs, a typical resource group in an Azure environment with a couple of databases, a data factory, and a storage facility can easily set the business back three grand a month in Australian dollars. One comment often asked of Microsoft is why it costs so much, the answer being that it can be switched off to save money. Personally, I've never come across a business running databases in the Cloud that switch them off at quiet times to save money. The whole point of a database is that it is available at *all* times.

Especially in today's climate of flexible working hours. I came across an interesting [post in Quora](#) where somebody asked the question why Azure SQL databases are so expensive. One responded that they saved a company nearly \$130k in five years by purchasing the equipment and software and installing it at a colo centre. The monthly subscription for the colo centre, the initial cost of the equipment and licences, and maintenance and upgrading of equipment was significant cheaper than the *equivalent power* of the Azure subscription model.

Readers at this stage may think that I'm anti-Cloud but rest assured I only seek the best solution for any given circumstance. There may be a case for a full-on Cloud solution, an on-premises solution, or a combination of both. If someone says to me, 'The Cloud is the way of the future', or some other phrase drummed up by the 'Cloud orthodoxy', I'll swallow the red pill and think out of the box.

Listening to music

Here's an example of Cloud lunacy in the world of entertainment, in this case, listening to music.

For those who know me, I love music. Particularly electronic and classical music. Moreover, I am an audiophile, which means that I want the highest possible quality playback. Therefore, Spotify will not do in its present guise although they promise a higher quality sound service. However, there are others like Tidal which *do* provide very good sound quality. I digress, however,

My music collection consists of LPs, CDs, thousands of electronic music files, in FLAC format, of course, and a subscription to Tidal Hi-Fi tier. The heart of my music system is a piece of software called [Roon](#) which acts as a server which sits on a NAS drive at home. It also seamlessly integrates with Tidal which is a bonus. What it does is to deliver my *locally* hosted electronic music

files from my Synology NAS server to my stereo, which it does admirably. It's a fantastic product. If the Internet goes down, which it does on occasion, you can still play your locally hosted files. Tidal, or other integrated services like Qobuz, will, of course be unavailable.

Now this is the thing. The developers have undertaken a major revision and update which includes the addition of an app which can access your Roon server remotely, called [Roon ARC](#). Sounds promising, except the major issue which the Roon developers very soon after encountered is that not everyone has access to the Internet at all times. What the development team did to the major update was this. Despite the improvements to the search algorithm and the introduction of RoonARC, they rendered Roon useless to play your own *locally* hosted collection of music if the Internet goes down! Naturally, a torrent of concerns, some very vocal and angry, were raised on the [Roon Community website](#), but it seems that the developer and co-owner of Roon, a very clever but rather arrogant guy called Danny, was unmoved, claiming that most people simply streamed their music rather than collecting it. That may be true, but those who bought the original product did so *because* they had their own collection. As a stopgap solution, Roon then released a *legacy* version of the software which doesn't require a continual Internet connection but it will be no longer supported after December 2022.

Not only does this display the most utmost of arrogance and inconsideration to those who have patchy Internet, but the sheer shortsightedness of designing a product even *less* resilient to the Internet is astonishing. Imagine that you need an active Internet connection to play your own local files. Not surprisingly, many who have monthly subscriptions to Roon have sought alternatives that don't require a continuous active Internet connection.

Purchasing stuff from retailers

The last example of when we become too reliant on being electronically connected is in the retail trade. If you remember the days of the manual credit card machines, the ones where you swipe the credit card with a handheld machine which imprints in triplicate the proceeds of the sale, you will also remember that you don't need an active line of communication to proceed with the sale. I haven't seen any for quite some time nor do I know if they are even supported anymore by the credit card companies. But I have been in several situations in the more remote of areas in Australia where the credit card

facilities were unavailable and I had to resort to cash. Again, this is all well and good, but those ‘hole in the wall’ cash machines are disappearing at an alarming rate. Our local shopping mall had three major banks, and now there is none. Moreover, we are being coerced into a cashless society, so we have become even more dependent on carrying pieces of plastic or using our phones. But without cash or some other manual way of doing a purchasing transaction, we are completely reliant on the Internet or, at least, an active phone line.

Final thoughts

I predict there will be a trend in re-introducing on-premises equipment in light of the exponential rise in data theft and hacking. Furthermore, with each spawning of some new premium Cloud-based service bringing in a flurry of excitement, I believe there will, likewise, be a revival in the world of open source products beckoning those with core programming skills, many of which are sorely needed in today’s IT market.

There are so many high-level low-code products on the market today that it is nigh impossible for anyone to know them all. Most of these products require an extensive knowledge of how to navigate through the menu structure and understand the graphical user interface, each of them, often, decidedly different. Sometimes deliberately different, as was the case with SAP when it was introduced many years ago. This creates a bit of a problem for recruiters who struggle to identify very specific skills in an ever-diluting market of competing products. Conversely, it may present issues for job seekers who have these specific skills to identify an employer who needs them.

Another trend I predict is more emphasis on teaching some of the hardcore programming skills to school and college students such as C++, Python, SQL, PHP, Java, and, wait for it, COBOL, that old dinosaur with 800 billion lines of code used by organisations and institutions worldwide as of 2022. Anyone armed with familiarity with some or all of the above will, most certainly, be a prized asset in the IT industry regardless of having any Cloud experience. Most certainly, such extensively portable skills are being snapped up by those ‘master’ industries creating these lucrative Cloud-based low-code solutions, while businesses, ‘the slaves’, who were spruiked into purchasing the product just needs those skills of the SaaS vendor on knowing how to use them.

We also assume that most everybody has access to the Internet, and with the case of music and video, more of us are streaming rather than collecting material. But this is getting interesting because many of us are subscribing to too many services to get the content we want, something [I previously wrote about during 2019](#). Again, I've noticed a trend in the growing collectables market, particularly with music LPs and CDs. Many have come frustrated to find, for example, that their favourite record or movie is no longer available on their streaming services, usually due to some licencing arrangement. And as for being a retailer out 'in the sticks' when communications are down, surely one would want the ability to conduct a simple manual credit card transaction.

If we do not want to become slaves to the Cloud or the Internet, we need to make ourselves as resilient as possible, but we must act preventatively and not reactively.