

“A SINGLE CLOUD STRATEGY SOUNDS A LOT LIKE IGNORING LINUX 10 YEARS AGO”



There is always a way back from the cloud, but without proper preparation, the question is: how fast and at what cost. Suppose that due to the overwhelming success of AWS and Azure, certain infrastructure suppliers are no longer there, then you can go back, but where to? It is good to have part of your hybrid solution as a mature on-prem infrastructure and keep it, in our case with Equinix and as part of our cloud gateway, for things like identity monitoring, compute and storage for your “crown jewels”. A cloud integrator with the right knowledge is simply essential for determining the optimal balance, which creates a secure future.

PORTABILITY

You guys think in exit scenarios, you say. Why are exit scenarios so important?

We have seen in the past that new technological developments can disrupt markets and eliminate companies. When organisations in their data centres had just got it right, VMware came up with virtualization and it turned out that everyone had more hardware than they needed, or at least they could handle it more efficiently by abstraction. Then - after everyone was happy virtualizing everything - AWS came up with the cloud and everything was disrupted again. We have no control over these developments; they are not easy to predict. Now we are all going to the cloud, because it offers many advantages in terms of flexibility and scalability, but we don't know what new developments we can expect. What if VMware becomes the next Nokia and cloud the next-in-line VMware? Is it probable: no, it can happen: yes. So you have to be able to leave again.

To illustrate the importance of portability and exit: Facebook has removed Instagram from AWS and Whatsapp from SoftLayer to make more use of the Facebook IT ecosystem and save costs.

With the portability we achieve with our exit scenarios, we are anticipating new technological developments. We want a solution that can anticipate any possible change in the ratio on prem vs. cloud. If necessary, we want to be able to easily move back a certain workload to on-premise or inter-cloud.

So 100% cloud is a utopia?

In the long run nothing is impossible, but even if the cloud is your only target platform: with things like identities, patents, sensitive data in the broadest sense, things that are of great business interest, no risk should be run. In the cloud - unlike in your own data centre - you don't have complete control, there is a part that involves trust. The exit scenario is about that part.

Which data is strategically so important that it must be available outside the cloud.

Take the example of Dropbox. Dropbox has removed all data from AWS, they have a scalable front-end in AWS, but the data is in their own hands. Facebook is taking WhatsApp off of SoftLayer for that reason.

As MatrixMind, we promise to make the functionality of your initial situation available to the user when departing from the cloud: the technical infrastructure on-prem, all data, security policies, connection conditions and your identities. When you go to the cloud, we take a snapshot of the basic activities and agree on how to get them back at in the event of an exit. If you don't want to leave the cloud, but you do want to leave a particular provider (as it were also a form of exit, but with regard to the hyperscaler), this is possible because we make the accesses to all cloud providers at a neutral location and connectivity provider: equinix.

It's good that I can switch between providers and on/off prem, but how do I part with MatrixMind if I wanted to?

Every business issue nowadays is also an IT issue. Medium-sized organisations simply cannot invest as much in IT knowledge in a variety of areas as specific IT partners, let alone gain practical experience. In the cloud sector, things are even worse: developments are speeding up, AWS and Azure seem to be accelerating every year. Knowledge is the distinguishing element nowadays: which is why organisations are working with a cloud integrator.

But you with a cloud integrator, you also need to be able to get away easily. At MatrixMind, I want to be able to give customers who want to leave a hand and wish them success. You pay for what you use in the cloud, you can turn it on and off; even with your cloud integrator, you don't have to be tied to long-term contracts. At MatrixMind we therefore have a "free-to-go" clause. In order to be able to easily leave your cloud integrator as an organisation, you must also make a clear agreement with beforehand as to how long it will take to leave with which basic functionalities, what exactly you get back and at what cost. Discussing the divorce when you're not getting married doesn't seem logical, but in my opinion it is vitally important in IT. It is about awareness in particular: everything is vulnerable, and portability is therefore important.

ARCHITECTURE & TOOLING

What are important architectural considerations when using the cloud?

A bad architecture cannot be secured, so you choose an architecture in which good security is already an inherent element. The question is not whether one security product is better than another, but whether it integrates well with on-premise and the cloud. We work a lot with PaloAlto and Netapp for that specific reason.

You can choose the best building blocks in the cloud, but you won't save costs if you don't turn the cloud on and off as it is intended: so put the very thinnest resource reservation in auto-scaling mode. When do you have to turn processes' thin', when' thick' and when do you turn it off. Preferably automatically, without human intervention. If you don't do this intelligently, a cloud platform can quickly become more expensive than an investment on-premise. You have to dare to turn it off; I tend to notice that many organisations are reluctant in this respect, but not for valid reasons.

When comparing cloud-native building blocks and vendor solutions, you can't just simply say one is better than the other. You can use a preference policy: Cloud-native, unless' because, by definition, it is more scalable. One example is the cloud-native application Load Balancer, which can do almost anything a vendor solution can, but scales much better. But if you're looking for extra functionality, for example a full stack, next generation firewall, you have to use Palo Alto, because cloud-native is still insufficient here.

So you see open source as a preference policy?

Yes, with emphasis on preference and not default. When you turn away from open source, you sometimes have products five years later. Docker was an open source project in March 2013, Microsoft decided in 2014 to integrate it into Windows 2016 and a few weeks ago - four years later than it was available as open source! - Docker became cloud-native. Almost all firewalls in the cloud are built as open source Linux. The support is good, they are more scalable, they are robust products. Docker, Ansible, Hadoop and Cassandra: all open source projects. Simply put: the best people probably don't work for you. It is difficult to match the collective brainpower of the open source community as vendor.

As an example, with OpenStack at Equinix you can - just like with Stedin - go in all directions; with the Azure stack from Microsoft you can only go one way. You can choose for yourself.... You shouldn't look at vendors, but should think about what you want to have yourself. If we, as MatrixMind, think about how we can help companies, we really look at the applications - separately from a number of large packages such as Office 365 or SAP. The selection of inherent technology is important, we prefer open source, but that does not mean that we only want to work with open source products. We want to explore what we can adopt in terms of open source and what we can integrate well into our platform.

Don't forget, there is a big difference between absolute freedom to be able to choose from all open source solutions or to decide to use open source by preference. It's about not being locked in by a vendor. We no longer focus on contracts from vendors such as Oracle, Microsoft, IBM, etc. Vendors often sell tools that you don't even need in the open source community because there are cloud-native building blocks for them. This way you can save costs immediately.

STRATEGIC CHOICES

What do you think are other important strategic cloud choices?

“What I think is important when you go to the cloud is that you opt for a ‘multi cloud’ strategy to ensure portability and neutrality. Accepting a single cloud is comparable to ignoring Linux ten years ago. If you had told Microsoft at that time that you were doing something with Linux, you were out; now I am being paid for it because it is neutral. With a ‘multi cloud’ strategy, the choice of your data centre location is very important; not all data centres providers open up all the important cloud providers and offer a Self Service Portal.

Choose a data centre where you can easily switch between all cloud providers. I compare it to my electricity at home: I can switch between Eneco and Essent very easily within a day, but that is not because they are mature energy suppliers. This is because the network operator Stedin has set up the infrastructure and access to all suppliers well. MatrixMind is for the cloud what Stedin is for electricity. For this reason, we chose Equinix as a data centre provider because they are platform- and vendor-neutral and because they have well organised access to all cloud providers. In addition, they work with a ‘self-service portal’, which gives you as a customer access to your own cloud connections.

The choice of a cloud platform with a mature infrastructure is also essential for success in the cloud. A mature infrastructure means that there is a good integration between the SaaS solutions and the infrastructure, so that you don't experience any limitations when increasing scale. If you only choose SaaS solutions, the exchange of data with the legacy processes in your data centre is often quite a challenge.

If you have many infrastructural challenges (back-up, archiving, fast available computing capacity), choosing the right cloud provider can be decisive for a successful cloud strategy. Cloud providers differ in their focus on IaaS, PaaS and SaaS. In

addition, a number of providers are lagging behind with infrastructure integration of SaaS solutions from different vendors, for example when it comes to virtual firewalls (PAN-NSG), auto-scaling or the data layer of storage vendors.

Companies frequently choose Microsoft Azure because they purchase software from Microsoft and then - when choosing a cloud provider - they want to stay with the same supplier. There is nothing wrong with that as long as you have the opportunity to be able to continue to compare. MatrixMind is neutral; we look for the optimum balance with our customer and our gateway ensures that this balance can be shifted in the future in any way we wish.

Are there also choices that are more likely to be made below the surface and therefore less obvious for organisations, but that are extremely important?

Yes, for example, take the importance of automation and cloud consumption monitoring in connection with auto-scaling architecture and proper resource reservations. If you don't set this up properly, a cloud platform can quickly become more expensive than an investment infra-on-premise.

Or how about hardware choices: for a successful cloud strategy, I think it is important that the choice of hardware is left to the cloud integrator. As far as software is concerned, we at MatrixMind find it very important in terms of how consistent it is with regard to cloud applications and migration. You can say that we are looking for technological building blocks that we can place at Equinix on-prem, but that offer almost identical functionality in the cloud as soon as we move processes. We think in exit scenarios: if we have the same technology on-prem and in the cloud, we can move more easily. If you as a company want to determine which hardware and software is used, you are throwing away our knowledge and experience, as it were.

Another phenomenon that continues to amaze me is the issue of tendering. In the cloud world, it's not about who is best able to fill a spreadsheet with the right figures. It is about manoeuvrability and innovation, which calls for a certain mentality and a culture in which you can work energetically and pragmatically, something that you find difficult to understand in a RFP. If the most important question is not how to get into the cloud, but how to get out of it again, the organisation becomes more of a director. Buyers, however, still manage

procurement processes based on the philosophy of contract and vendor managers who manage a contact relationship with a provider, but later you will tend to manage much more the technical migrations. So choose someone that fits in culturally with you and not one that you don't have to explain to your boss.

FUTURE/INNOVATION

What are the new trends regarding the cloud and do you advise to go along with them?

The cloud is the first computer capacity to be offered via the Internet: IaaS, based on a 'pay-as-you-go' model, makes it more economical than hardware virtualization on-prem, if well used. 'Containers' were subsequently created: less complex, more granularity, more abstraction, etc. The latest trend is serverless computing, where the focus of application development is on functionality and not on the back-end infrastructure and processes; the infrastructure has become invisible, as it were.

One advantage of this philosophy is that the operating costs for non-stop environments are reduced. But beware: this ultimate granularity in the payment model that serverless in fact offers, can also result in nasty financial surprises if it turns out that you should have used it in one way or another anyway... An organisation that had built a survey on a serverless architecture, but had underestimated the number of participants and thus their budget, recently had to find this out the hard way. Sometimes the settlement of used resources is simply more favourable than paying for transactions.

An ideal solution can be a front-end serverless architecture and the other IT components at the back in a container architecture. Containers make it easy to exit from the cloud and switch between cloud providers. They are an enormous facilitator for relocations, back on-prem or to another cloud provider. Dropbox opted for such a hybrid approach: part of the service is placed in its own data centre, while the front side runs on AWS.

MatrixMind Modern Virtual Data Centre

Our Cloud Gateway combines the benefits of the public cloud with the strict security requirements of your own environment. We create a seamlessly integrated, secure stretched IAAS solution across your own location, co-location (Equinix) and public cloud. Based on state-of-the-art technology of Netapp, Palo Alto, AWS and Microsoft, placed in Equinix's most modern AMS4 DC, from which minimal latency can be guaranteed.

The benefits:

- ✓ No more investing in on-premise hardware
- ✓ Proven in the most complex environments
- ✓ Guaranteed exit (technical and contractual, cloud and service provider)
- ✓ Multi-cloud access (AWS, Azure, etc.)
- ✓ Real cloud unless: maximum migration to the cloud
- ✓ State-of-the-art security throughout the chain
- ✓ Fully managed



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