

Inside Citrix chapter three – The one with all the relevance

Let me explain what I mean by this. Today more and more companies are looking into cloud computing as a potential platform, or alternative to host their company workloads and data, including RDSH and VDI-based architectures. For example, with Citrix Cloud emerging, IT admins and architects can select and deliver complete Citrix-orientated workspaces (as a service) from any cloud with just a few mouse clicks (not entirely true, but you get my point) without having to design, manually install or update anything.

While there might still be some work left on your on-premises or cloud-based VDAs, although Citrix Lifecycle Management can help with this as well, it is getting easier by the day.

So why bother with learning the ins and outs when it comes to XenApp and/or XenDesktop, FMA-based (on-premises) environments? A fair question, and of course Citrix Cloud is just one example of a so-called PaaS (Platform as a Service) offering: there are multiple.

Next to PaaS we also have IaaS (Infrastructure as a Service) or DaaS (Desktop as a Service) and finally SaaS (Software as a Service): these are all cloud-based services which allow us to get up and running quickly without too much hassle, or at least so it seems.

If you have a look at the overview below, you will see a couple, or most, of the cloud options we have today. The darker grey fields indicate what will still need to be managed by our own IT departments.

| On Prem | IaaS | PaaS | SaaS |
|----------------|----------------|----------------|----------------|
| Applications | Applications | Applications | Applications |
| Data | Data | Data | Data |
| Runtime | Runtime | Runtime | Runtime |
| Middleware | Middleware | Middleware | Middleware |
| O/S | O/S | O/S | O/S |
| Virtualisation | Virtualisation | Virtualisation | Virtualisation |
| Servers | Servers | Servers | Servers |
| Storage | Storage | Storage | Storage |
| Networking | Networking | Networking | Networking |

Cloud services overview

While the ‘the cloud’ is becoming more popular by the day, I don’t believe most companies will have moved their (entire) on-premises datacentres into the cloud within, let’s say, five to ten years from now. A lot might, and thousands already have, sure, but far from all.

And even if they will there are multiple cloud flavours to choose from. I think most will agree that hybrid solutions and/or architectures will be the way forward, especially when it comes to the virtual desktop / workplace. The reasons for this will of course differ per company and use case, but to give you an idea...

- Company (-sensitive) data will always be an issue. Where is it stored, who has access etc.
- Not all applications function well, or well enough, when physically separated from their data. In practice applications are often separated from their data.
- Authentication. A lot of companies do not want user authentication to take place in ‘the cloud’. Although this isn’t always the case technically, this can be a tough one to get across/explain.
- Trust. Not only with regard to company data as mentioned above, but also regarding uptime, security breaches, SLAs, responsibilities etc. And what about performance and the overall user experience?
- Exit strategy. Companies are often worried that as soon as they have made the leap into ‘the cloud’ they can’t undo it. Or that it will be costly to do so.
- Control. A lot of companies do not want to rely on a third-party handling their infrastructure, data and/or applications. They want to be able to have full control when they want or need it.
- Internet connections. Your Internet connection(s) will become vital. For some it feels like putting all of their eggs into one basket.
- Costs. Hosting your infrastructure/data centre in the cloud isn’t cheap (at least not today). Also, making the transitions from on-premises to the cloud takes time, testing and careful planning. It’s not something you do overnight. 2018 update: if you think ‘the cloud’ will be cheaper, and this is your primary reason to consider migrating, you need to rethink your strategy.
- Security. The bigger cloud providers are not more secure by default. Sure, on average they invest more when it comes to security, but the bigger you are the more interesting you become. And eventually they will find a way.
- SaaS solutions are great, but they will only get you so far. We’re still dealing with tons of traditional (often referred to as legacy) Windows applications for many more years to come. 2018 update: the use of traditional Windows applications has grown over the past two years, not shrunk.
- The same applies to DaaS. For a lot of companies DaaS will be a great fit. However, there will also be a bunch of companies for which DaaS will be too restrictive or limited with regard to what they can do or control themselves.
- Besides all this, unless you go with a SaaS or DaaS solution, some monitoring, ongoing management, configuration tasks and troubleshooting will always be needed, even with Citrix Cloud.

- If supporting and managing your own on-premises virtual desktops / data centre is or becomes easier, cheaper and more flexible than its cloud counterpart, well... You have options.

These are a few reasons (can be plenty more) why companies might choose to stay with their on-premises datacentres or will only partly leverage cloud resources going forward.

I know I am making this all sound fairly negative, which is not my intention at all. The cloud offers just as many, if not more, advantages, and if we look at recent developments we can see that tens of thousands of companies have already made the transition and many more are on their way. I'm just saying that it is not for everybody, at least not the full package.

And if we fast-forward five to ten years from now I think there will still be plenty of on-premises and cloud-based data centres hosting RDSH and VDI (FMA) architectures for us to manage and maintain.

Another example is IaaS, which also tends to be a popular approach nowadays. Here you will still need to setup, configure and manage your own servers / Operating Systems. XenApp and/or XenDesktop would still need to be installed configured and managed by your local admin crew as well, including any data and applications, and this (configuration and ongoing management) goes for PaaS solutions as well, by the way.

And what if something goes wrong? You would still need to troubleshoot. Of course, the same rules apply when going hybrid: it certainly helps if you know how all components and services interact.

Even when you are not responsible for managing, upgrading and/or troubleshooting (when needed) your company's infrastructure, all this can still be valuable, fun and useful information.

So that is why I say, YES all this is still relevant!

Key takeaways

- When talking about cloud computing remember that there are multiple cloud services to choose from: it is not a one-size-fits-all solution.
- First define what type of cloud solution you are talking about (SaaS, DaaS, IaaS, etc). Only then you can discuss the advantages, disadvantages, pros, cons, and so on.
- Even when moving your entire on-premises infrastructure (or the biggest part) might be beneficial in the long run, it will still take careful planning and execution to get there.
- Start small and take it from there. Hybrid solutions are the way forward.
- A lot of companies benefit by leveraging the cloud for Burst Capacity and backup.
- Don't forget about printing and scanning when hosting your RDSH / VDI-based infrastructure in the cloud (bandwidth and latency limitations).
- True VDI (or DaaS) from the cloud, and with this I mean virtual machines with a desktop Operating System installed, assigned on a one-to-one basis, are still hard to achieve. This is mainly because of Microsoft's licensing restrictions – 2018 update: this is no longer true, see next bullet as well.
- Most DaaS solutions are based on RDSH / XenApp in the back-end, meaning you will share your 'desktop' with multiple users – 2018 update: today this can be Windows 10 as well. Think about the Windows 10 Microsoft CSP licensing model.
- The cloud will no doubt have a major impact on how we configure and manage our future infrastructures going forward. However, on-premises RDSH and VDI infrastructures are here to stay for at least another five to ten years, if not longer (my guess is longer).