Software defined data centers, with hybrid cloud, eases the challenge

What makes the Software Defined Data Centre so important? Why should IT professionals be paying attention to software defined data centre in context of Public/Private/Hybrid Cloud?.

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ONE OF THE MOST interesting impacts of the Cloud has been that users now have access to Technology platforms without waiting for In House IT to deliver these platforms. So in a world where “I want it now” is an acceptable business line; the flexibility of the cloud and the agility it brings to a business, is a major factor in how a User selects where/how to consume technology services.

This is one of the big reasons why the SDD becomes so important. An Enterprise Strategy Consultant told me “The Software Defined Data Centre is the underpinning of the cloud.” He continues “Public Cloud vendors who operate at hyper-scale use Software Defined Data Centre principles to reduce cost and increase flexibility and scalability.”

This links well into a point raised by a CEO of an applications based company in the UK. “As a cloud consumer (be it an enterprise/ SME/SOHO infrastructure buyer) you’d expect pretty much unlimited infrastructure being available to you from your cloud provider, without long term contracts. You just pay as you go - and you’re only charged for what you actually use”.

When users/businesses go to a Cloud service, they are telling internal IT something and internal IT needs to listen. Users are customers. And if you fight your customer, you will lose your customer. So to meet demand, many internal IT departments are beginning to offer their own user’s a private cloud.

This provides users with that agile “I want it now” capability, whilst maintaining critical controls across services such as security, governance and of course visibility of overall cost. But note, often we are seeing organisations recognise that public cloud services are very much part of the service mix.

The Storage Networking Industry Association (SNIA) website provides a wealth of information and vendor-neutral education on Software Defined Storage. The site describes under the heading Introduction to Software Defined Storage: Software Defined Storage has been proposed as a new category of storage software products. SDS can be an element within a Software Defined Data Centre but can also function as a stand-alone technology.

The term Software Defined Storage is a marketing “buzzword” that is a follow-on to the term Software Defined Networking, which was first used to describe an approach in network technology that abstracts various elements of networking and creates an abstraction or virtualized layer in software.

There is also work going on to define Software Defined Compute. The software defined approach abstracts and simplifies
the management of networks into virtual services. In networking, the control plane and the data plane have been intertwined within the traditional switches that are deployed today, making abstraction and virtualization more difficult to manage in complex virtual environments. Network capabilities are now just catching up with capabilities that have been offered in the storage industry for over a decade. SDS does represent a new evolution for the storage industry for how storage will be managed and deployed in the future.

Whilst the SNIA site has more, and I encourage you to visit the site, extending a definition to the whole Data Centre is a big step. A friend of mine described how the whole concept of abstracting not just Storage, but Compute and Network, away from the physical hardware layers “allows applications and their data to be fully virtualized from the host environment and migrated and scaled at will, providing the potential for rapid provisioning and resource alignment.” I particularly like how this links between applications and data. Surely this is critical.

Software Defined Data Centres, with hybrid cloud, eases the challenge of delivering applications/services that are transportable between platforms—regardless of location. Remember, users may not care too much about any specific data centre. They are interested in the service.

Here is something to leave you with. What is a young person’s view of Software Defined Data Centre and Cloud? My teenage son replied to my question; “Dad; a Data Centre is a centre – full of data.” This at first made me chuckle, then the reality of what he said hit me. Data is essentially computer code, sometimes known as software. (Is software the end product of code? Or is code the definition of software—another discussion for another time I think). We could argue that a data centre has always been about software. Sure—IT Professionals need think about the components and internal infrastructure, security, power cooling and such. But in the age of software defined this can distract us from the purpose of a Data Centre. The clue is in the name. I will leave these last words with you, “Data is a precious thing and will last longer than the systems themselves.”

SNIA Europe advances the interests of the storage industry by empowering organizations to translate data and information into business value by promoting the adoption of enabling technologies and standards.

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