



Desktop and application
virtualization to
improve security
compliance



As businesses attempt to become more agile, global, mobile and secure, Virtual Desktop Infrastructure (VDI) has been gaining attention. Adding to the attraction of VDI has been the roles of cloud in lowering costs and of automation in speeding up deployment. Industries like Banking and Financial Services (BFSI), healthcare, telecom, manufacturing and support functions such as CRM have been leading VDI adoption. Among the most significant drivers of VDI has been the need for organizations to place vast amounts of data, graphical, visual and analytical information in the hands of their employees, regardless of where they are, without compromising on security and compliance. VDI can be used to do

all the heavy lifting for this, without having to invest in expensive end-point devices while ensuring data security. It is no surprise that the global VDI market, estimated to be \$4.98 billion in 2017, is expected to hit a staggering \$9.18 billion by 2023ⁱ.

VDI works by providing end-users with access to their applications and data hosted in a datacenter. The access can be enabled on any type of end-point device such as a desktop, laptop, tablet or a smartphone. Users can be granted access to complete desktop or limited set of applications and data required to perform their job function.

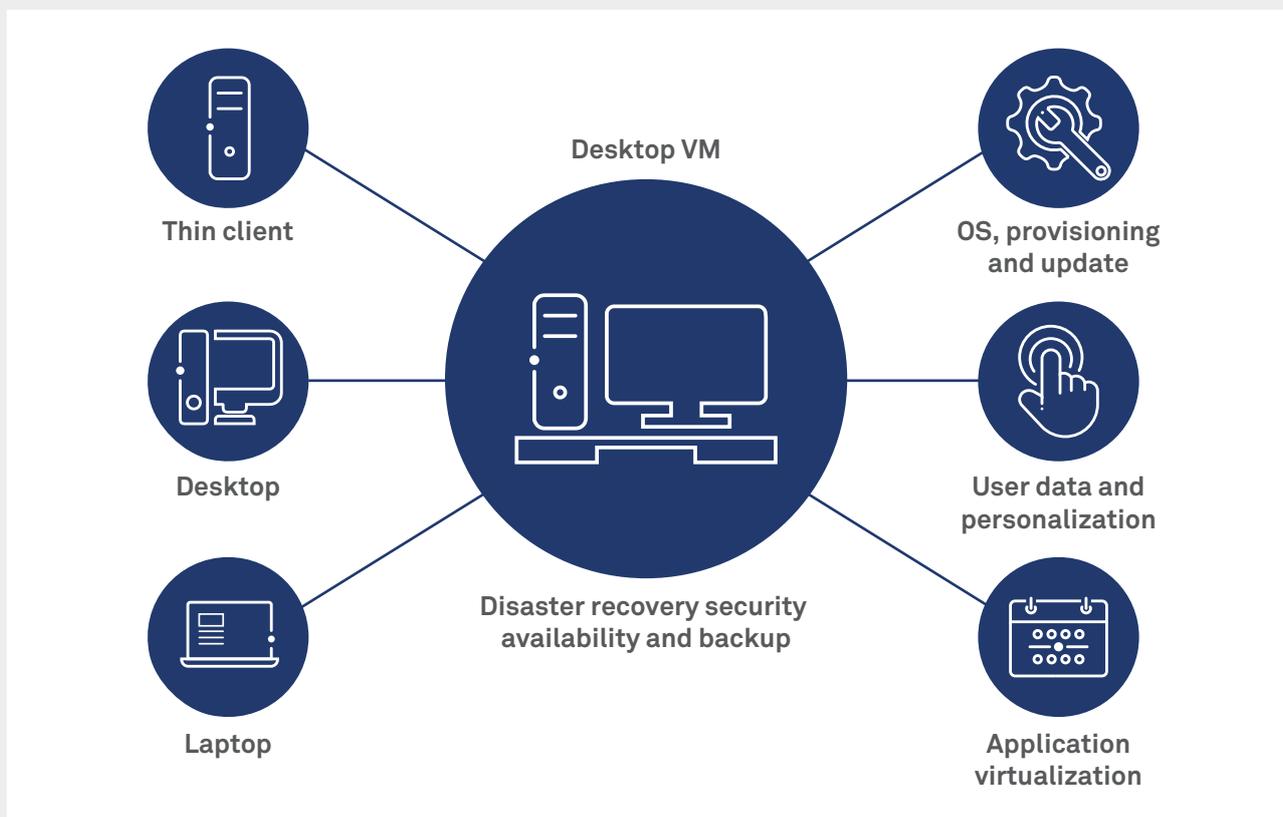


Figure 1: Virtual desktop environment

VDI is configured to ensure that access to applications and data can be provided dynamically, based on end-user roles, protocols and security policies of an enterprise. End users can be employees, partners, associates or customers. They can be located anywhere, and still get access to applications and data anytime they want, in a secure manner. By simply

virtualizing and centralizing the desktop environment, an enterprise can improve desktop, application maintenance and management, making an enormous impact on user experience, operational flexibility and productivity.



As information and data analytics become their digital trade secret, companies may actually look towards reducing IT outsourcing.

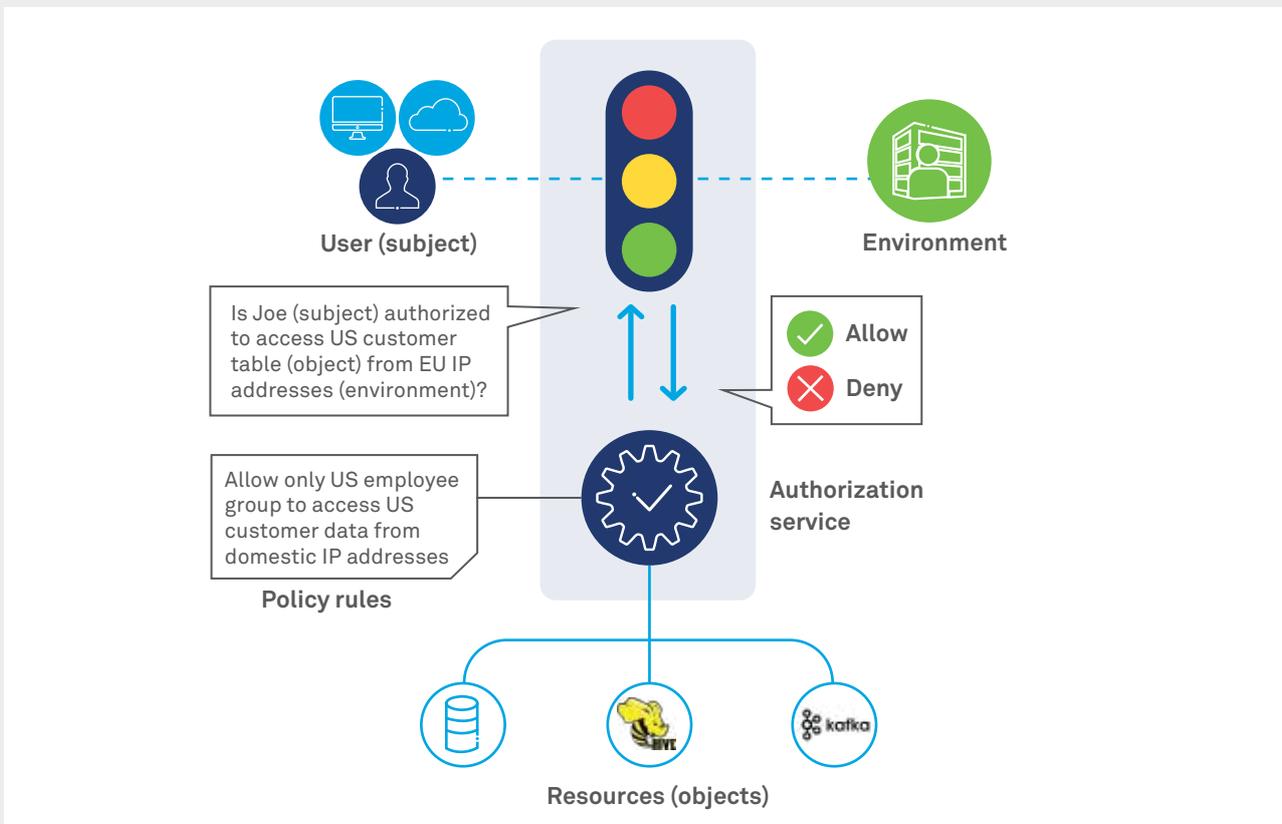


Figure 2: Enterprise data and application access control

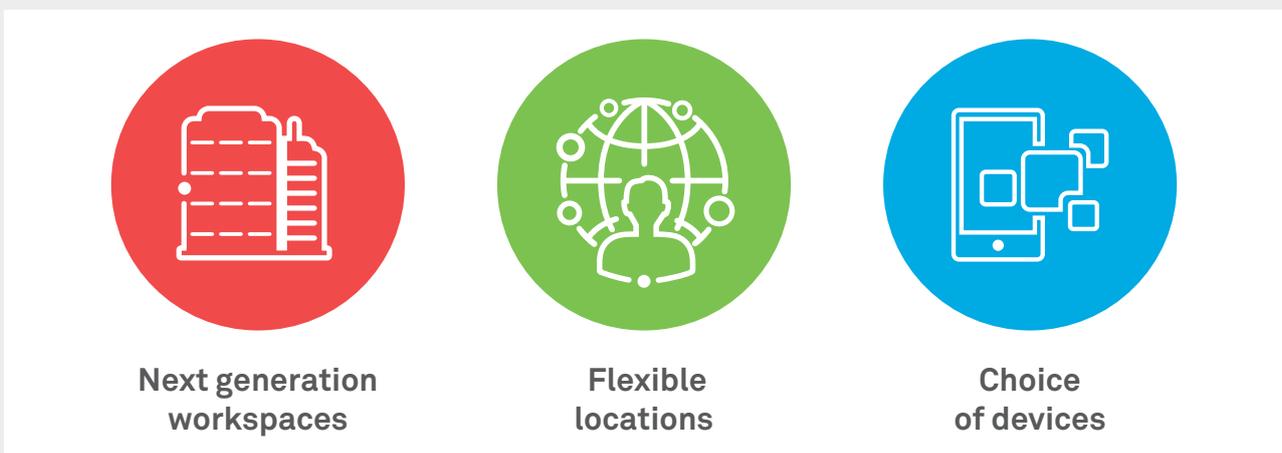


Figure 3: Next generation workspace attributes

VDI technology enables organizations to attract next generation talent by granting them access to applications and data from their choice of work location, using a device of their choosing as well. Enterprises can implement flexible and futuristic workspaces where they can save on expensive real estate by leveraging VDI technology.

VDI for BFSI

VDI technology is hard to resist. It has special appeal for the BFSI segment because of the extra layers of defense required for data and applications, while ensuring that user experience is maximized.

Let's examine the case of a broker trading in stocks. Normally, the broker would access real time information on a traditional laptop/desktop and then execute transactions online. The data and transaction details would have to traverse a number of networks—from the broker's laptop application to a gateway, and then perhaps across a handful of public networks, to the stock market and back—leaving it vulnerable to being compromised. However, in a VDI environment, the broker's applications and trading data could potentially reside in the datacenter and securely connected to that of the stock market. This would make the speed of access to data faster, improve speed of order execution as well as ensure the transactions are secure. Traders and advisors will find the speed and security a major advantage.

Improved security is the result of a simple fact: in a VDI environment, the data and applications

don't reside on the end-point device and therefore, there is no chance of a data leak. Users can access anything they want, work, and leave the system without having to worry about unauthorized access to their devices or device theft/loss. Instead, sophisticated security measures can be implemented at the data center hosting the VDI environment, ensuring protection from cyberattacks and intrusions. The centralized environment makes it easier for IT to detect intrusions and isolate viruses before they can cause widespread reputational, legal or financial damage. Even in the case of any data center eventuality, service can be restored from a backup location in the matter of minutes or hours based on active-active or active-passive standby solutions.

BFSI, which has always been at the forefront of technology adoption, will naturally find the high level of security and compliance that VDI provides to be especially advantageous.

In the case of the insurance industry, the advantages of VDI are amplified. Today, every insurer has employees using their own mobile devices for customer meetings and to acquire customer data. If the customer data were to reside on the employee's mobile device, it would present a major privacy and security concern. However, with VDI, the mobile device would not store the data; the data would be maintained at a datacenter with the VDI environment.

The upside of VDI is directly related to other reassuring security advantages for the BFSI segment.



VDI makes it simple to ensure that users have access to only authorized and licensed applications, thereby reducing legal and other operational complications.



IT administrators don't have to worry about end-point devices and their poor and often outdated firewalls and security measures; VDI allows this to be managed centrally.



Mobile users may want to use native apps that, without the right security solutions such as EMM, can become vulnerable; this is not the case with VDI where the app does not reside on the device.



Poor backup practices and crashes associated with desktops, laptops and smartphones can result in loss of critical files, records, etc. VDI environment ensures backups are created, eliminating risks from data corruption or an accidental wipe.

VDI is the recommended technology choice for security-sensitive Financial Services customers addressing regulatory and compliance requirements. These are businesses where it is imperative that customer data stays secure and employees be provided the freedom to work from anywhere, anytime and over any device. VDI provides a simple solution to storing data, using apps and preventing embarrassing and potentially damaging data leaks.

While VDI addresses several business challenges and compliance requirements of

BFSI customers, it is critical to design, implement and operate a VDI solution that meets business demands. Else, it can be counterproductive. Though there is initial excitement during VDI rollout, in most organizations user adoption is a challenge. Enterprises need to focus on following critical elements for successful VDI adoption and sustained usage in enterprise. Having a scalable solution with effective monitoring framework and evergreen VDI estate are critical for user adoption and stickiness.

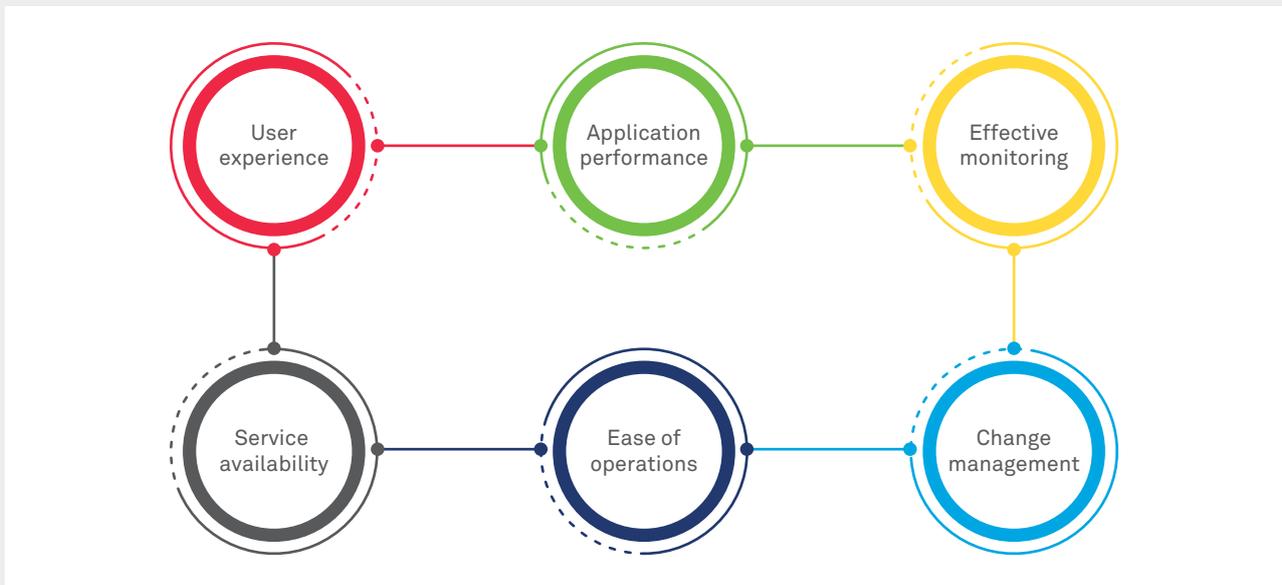


Figure 4: Critical factors for successful VDI adoption

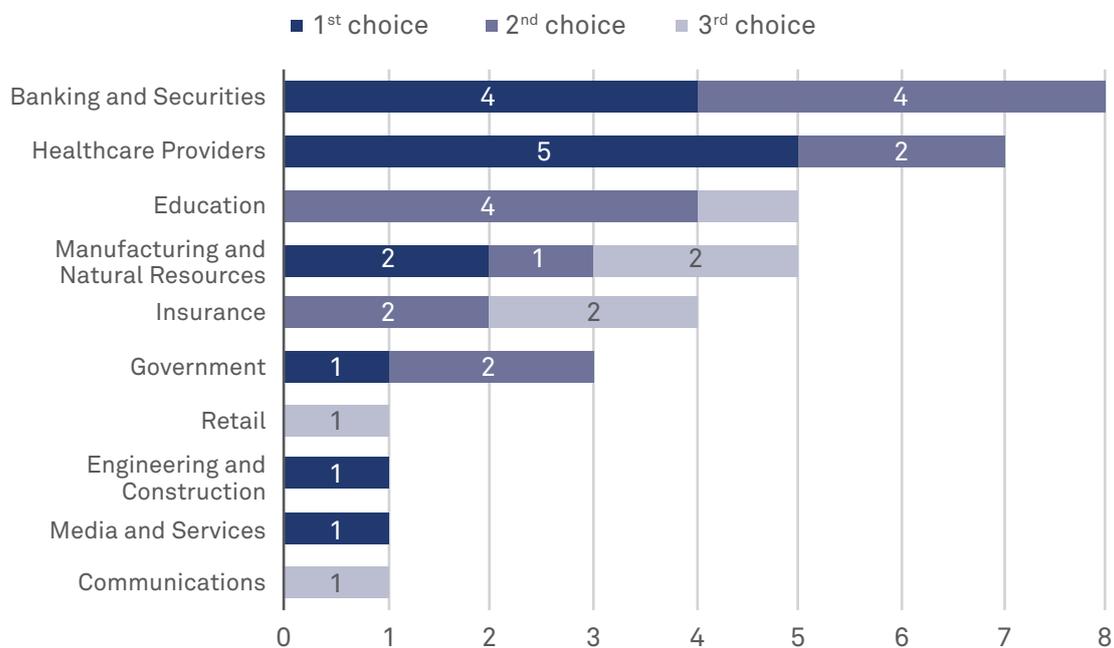


Total cost of ownership or return on investment

Most decision-makers tend to compare VDI Total Cost of Ownership (TCO) with Desktop/Laptop TCO, which isn't a fair comparison. We need to look at Return On Investment (ROI), as VDI delivers much higher business benefits in terms of data security, regulatory compliance, effective protection from external and internal threats, enabling cloud journey for end-user devices, applications, enabling critical HR processes to attract next generation talent like flexible working, global workforce, flexible

device policies, etc. TCO can be optimized with user profiling and providing the right quantity of resources that employees need instead of providing the configuration laptops/desktops for every employee. HW refresh cycles will be higher than desktop/laptop HW refresh cycles. With the right technology and design choices, like replacing user-based antivirus software with host-based software models, we can reduce cost as well as improve user experience.

DaaS providers' top industries by customer volume



Source : Gartner, Market Guide for Desktop as a Service, 28 June 2018²

Figure 5: Customer preference for VDI as-a-Service

As VDI adoption is increasing in the market, customers are looking for more standard solutions than bespoke VDI implementations. Per Gartner, BFSI is on top of the list where

customers are opting to consume VDI in As-a-Service model from a service provider.

Reference

¹<https://www.mordorintelligence.com/industry-reports/desktop-virtualization-market-industry>

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