

APPLICATION DELIVERY MODELS																
	Local Installation	Virtualisation Technologies (=Abstraction layer between user and resource)									Cloud Computing Service Models			Gateways	Workspaces	XaaS
	Local Desktop	Remote Desktop Service (RDS)	Host-based virtual machines	OS Streaming	Application Streaming	Client-based virtual machines	Virtual Desktop Infrastructure (VDI)	Container Virtualization	Windows Virtual Desktop (WVD)	Unified Endpoint Management (UEM)	Infrastructure-as-a-Service (IaaS)	Software-as-a-Service (SaaS)	Desktop-as-a-Service (DaaS)	Zero Trust / Secure Web Gateways	Other workspace providers	oneclick™ Platform
	The simplest solution but only suitable for few systems. Very labor intensive and error-prone with more extensive installations.	Host-based desktop virtualization is a concept where a shared operating system (OS) instance can be used by multiple clients over a network.	Each user connects to an individual VM hosted in a data center. The user can connect to the same VM (persistent desktop) or a random VM (non-persistent desktop) at any time.	The OS runs on local hardware, but the boot process works via a remote disk image on a network. Useful for desktop groups that use the same image. Many functions of an OS are seldom used, and pulling them on demand is more efficient in terms of server, client and network usage.	Only essential portions of an application's code need to be installed on the PC: while the end user performs actions in the application, the necessary code and files are delivered over the network.	A virtual machine that runs on a fully functional computer with a hypervisor. Client-based VMs can be managed by regularly synchronizing the image with a server.	A desktop that runs on a dedicated and isolated VM, which in turn runs on a server in a data center. The technology enables personalized desktops to be delivered to each employee through centralized management.	Several instances of an OS are run isolated from each other on a host system. It is not possible to run different OS or even different versions of the same OS at the same time. In contrast to virtualization using a hypervisor, this method needs much less resources.	Using WVD, enterprises can give their employees access to virtualized applications and remote desktops, including the ability to provide Windows 10 experiences	Acts as a single management interface for applications on mobile, PC and other devices. UEM unifies configurations, management profiles, device compliance and data protection. The process is significantly complicated when legacy applications are in place.	Provision of data center infrastructure by a cloud provider. The customer is responsible for the installation and maintenance of the software. Virtualization is often used to provide the infrastructure as a cloud service, but is not a mandatory requirement. Virtualization is one of several models to offer the infrastructure multi-client capable. Hardware resources can also be reserved exclusively for clients.	Software as a service (SaaS) is software that is delivered and managed remotely by one or more providers. The provider delivers software based on one set of common code and data definitions that is consumed in a one-to-many model by all contracted customers at anytime on a pay-for-use basis or as a subscription based on use metrics.	Cloud-based service under which the third-party service providers provide their customers with VDI-based virtual desktops over the Cloud.	A secure Web gateway is a solution that filters unwanted software/malware from user-initiated Web/Internet traffic and enforces corporate and regulatory policy compliance. These gateways include URL filtering, malicious code detection and filtering, and application controls for Web-based applications.	Unified workspace / workspace aggregator. Mostly offer a delivery layer only, without platform security and infrastructure automation. Need to be combined with other solutions.	As a central access and distribution platform in the cloud, oneclick™ combines SaaS, PaaS and IaaS from any on premises and cloud environment behind one web portal. oneclick™ enables central management and delivery of all resources via a workspace in the browser.
Year of Introduction																
		1998					2008	2013	2019		2010	2010	2014		2014	2018
Management Capability, Scope and Simplicity																
Instantly available	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No installation on servers	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No installation on client devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No need for application packaging	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
do w/o local IT team	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
no own special skills required	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Self-service / Shop system	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Infrastructure automation	X	X	X	X	X	X	X	X	X	n/a	X	X	X	X	X	X
Single Tenant	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Multi-Tenant	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Integrated analytics	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ease of Connectivity and Performance																
Only one connection for all endpoints	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Autom. connection setup to target infrastructure	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No access to whole corporate network	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Support of 3d applications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Works with low bandwidth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interoperability to work with other Systems																
Supports On-Premises Deployments	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Supports Cloud Deployments	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cross-Platform Servers	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cross-Platform End Devices	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Supports multiple protocols (RDP, VNC, SSH etc.)	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Supports other Authentication Providers	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Open API	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mobility, Usability and Degree of Personalization																
PC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thin Clients	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Zero Client	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tablet, Smartphone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No client software necessary	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No risks of VPN blocking from hotels / airports	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Personalized Desktops	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Offline applications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Offline data	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Security Posture and Control Sovereignty																
Encrypted Streaming	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Multi-factor authentication	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Single Sign-On	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IDS / IDP	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DDoS attack prevention	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Multi redundant (i.e. provider)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Disaster recovery	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Own control over hardware infrastructure	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Own control over application servers	n/a	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Own control over management layer	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ability to Opt Out																
do w/o initial investment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Scale up and down	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Shift to different countries	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
No vendor lock-in	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Target Organization Size																
Small	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Medium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Large	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Example Vendors																
	Windows, iOS, Android	Microsoft RDS	IONOS vServer	Puppet, Windows Deployment Services		Parallels RAS	VMware Horizon, Citrix XenDesktop, HP, and Microsoft	Docker, Kubernetes	Microsoft	Citrix Endpoint Management (XenMobile), VMware (AirWatch), mobileiron, Microsoft Intune, Matrix42	Microsoft Azure, Google Cloud, Amazon Web Services		VMware Horizon, Citrix XenDesktop, HP, and Microsoft, Paperspace, Frame	Zscaler, Symantec	Awing, Citrix Workspace, VMware Workspace One, Liquid, Workspot	oneclick™ Platform