



Meets Community event
Windows Virtual Desktop

The Ultimate WVD Partner Cheat Sheet

Bas van Kaam

April 28th, 2020

Online globally, using Teams with 1000+ attending **#EatingTheirOwnDogFood**

Bas van Kaam (41)

Sr. Cloud Technologist en Business Consultant

Personal

Velserbroek

Engaged to Tineke

Member of team...



Team van Kaam



Julia



Sophie



Mex



Tineke

Bas van Kaam (41)

Sr. Cloud Technologist en Business Consultant



Personal

Velserbroek

Engaged to Tineke

Member of team...

Hobby's

Spending time with kids

Blogging / witting

Running **STRAVA**

Community

Books

Hundreds of blogs

Presentations

Podcasts


@BasvanKaam socials

Twitter

LinkedIn


facebook



			
Compute / virtual machines :	EC2, Amazon Elastic Compute 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Azure Virtual Machines. 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Compute Engine. 3 different types of machines, but
Machine type pricing/billing options :	On-Demand, Spot Instances, Reserved Instances, and Dedicated Hosts	On-Demand a.k.a. Pay as you Go, and Reserved Virtual Machine Instances	Pay as you Go, Preemptible, and Commitment. How on resource (vCPU and memory
Load Balancing / Auto scaling :	Elastic Load Balancing, Auto Scaling	Azure Load Balancer and Auto Scale, VM Scale sets, Application Load Balancer	Cloud Load Balancer, Instar
Kubernetes / Docker :	ECS, EC2 Container Service, Firecracker, Fargate	Azure Kubernetes Service, Azure Container Instance	Kubernetes Engine, Containa
Serverless :	Lambda	Azure Functions	Cloud Functions
Management, monitoring, and automation :	AWS Management Console, CLI, API, CloudWatch, CloudTrail, CloudFormation (YAML, JSON)	Resource Manager, Cloud Shell, API, Azure Monitor, Log Analytics, Network Watcher, Application Insights, Automation (JSON)	Cloud Console, Cloud Shell, API, Google Stack
Authentication / authorization :	Identity and Access Management, Active Directory	(Azure) Active Directory, Active Directory Premium	
Object based storage :	S3 (Buckets), Simple Storage Service	Object based Blob Storage	
Block based storage :	EBS, Elastic Block Storage	Storage Disk Page Blobs, Premium Storage Disks	
File based storage :	Elastic File System, FSx hybrid Windows file storage	Azure Files, NetApp Files (Beta), Filestore (Q1 2019)	
Archive storage :	S3 Infrequent Access, Glacier, Data archive	Cool Storage, Storage (Standard Archive)	
Hybrid storage options :	Storage Gateway	SterSimple, Data Box	
	<small>Server and Client-side execution options (for managed) EBS Volume Encryption</small>	<small>Server and Client-side execution options (for managed) BitLocker (Disk) Azure</small>	

Windows Virtual Desktop partner cheat sheet 1.0

WVD Partner:	What they offer:
	PeopleTech has a dedicated team of Cloud Strategists, Azure Solution Specialists, Developer WVD movement right from the start. PT developed an Azure Cloud Product called "HelloRD according to PT. It's a fully managed and automated webportal for WVD infrastructure man VM imaging, OMS Log Analytics, VM resizing, delegated access control, session and host (pc desktop management).
	Liquidware Stratusphere UX gathers and provides user experience metrics to support the d Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current t prepare for a smooth migration to Microsoft WVD. Administrators can orchestrate workspr ProfileUnity offers features that support ongoing management of user profiles, policies, use also allows users to co-exist and move across physical, virtual, RDS, and mixed Windows O virtualization, RDS, Server 2016) environments.
	Together with Samsung (joint effort) Microsoft offers support for DeX. It offers a Windows firstline workers on their Samsung mobile devices. A full screen Windows 10 and Office 365 mobile devices, providing the Windows Virtual Desktop experience on an Android endpoint Fi 6 for faster speeds and reduced latency.
	As a Microsoft partner and service provider Cloud Jumper offers a fully managed service th Their CWMS is a cloud-based platform for application service enablement, Desktop as a Ser orchestration, providing management and access to the productivity tools needed to run b developed features helping customers to optimize Cloud services utilization and costs whi
	As a launching partner Lakeside assists customers in two ways: during the pre-rollout phas Software's Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data anal data about end user environments. This on-demand tool provides IT with a self-service pla infrastructure requirements in order to successfully transform a desktop environment.
	Citrix "extends" WVD in multiple ways. To start, they will offer the Citrix Managed Desktop the second half of 2019. A managed DaaS offering which will allow you to leverage the Win Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citri XenApp and XenDesktop). Only to be used on Azure, of course. Early 2019 Citrix officially b
	Printing has always been, and continues to be an issue when "remote" locations are involve ezeep - a cloud-based printing solution for Windows Virtual Desktop, ensuring secure and environments and printing from any device. Ezeep will be available directly through the Az Directory, making it available to your entire enterprise. Management is done from a web co
	VMWare will "extend" the Windows Virtual Desktop proposition through their VMWare Ho include the Windows 10 multi-user Operating System, optimizations for Office 365 ProPlus environments— in addition to the value-added services that VMWare Horizon Cloud provid as a tech preview by the end of calendar year 2019.

	Description
General Mgmt:	WVD will be controlled, configured, and monitored through an Azure based management control panel – the technology formerly known as RDMI. A new WVD GUI management section, within the Azure portal is being worked on. No time lines as of yet. The WVD control panel houses the Broker, Web Access, Diagnostics, the Gateway role, and Load Balancing (which is part of the Broker, by the way, it's not a separate role). The Azure management control panel will be, provisioned, maintained, etc. by Microsoft.
Mgmt. tools:	ARM Templates will be made available through GitHub – manually editable. Microsoft offers Rest API's and PowerShell (to Rest) support. WVD, from start to finish can be completely managed through PowerShell and/or REST. Using both Microsoft's SCCM and/or Intune (part of MS 365) is optional as well. SCCM can be used to manage your server operating systems, while Intune can be used to manage your desktop operating systems. Microsoft's new Diagnostics service can be used to troubleshoot errors on the WVD platform – end to end.
Supported OS's:	Windows 10 Enterprise multi-session and single user. Windows 7 (free extended support till 2023). Windows Server 2012 and upwards. Win 10 single and multi-session as well as Windows 7 will require one of the following licenses: Microsoft 365 E3, E5, A3, A5, Business or Windows E3, E5, A3, A5. For Windows Server

Windows Virtual Desktop Microsoft Ignite announcements cheat sheet

WVD announcement	What it does / how it works / what it will do...
WVD on premises	Wait, what? Do you mean Windows 10 Multi-Session as well? Yes. It took a while before this became clear but as it turns out WVD, including Windows 10 Multi-Session, or EVD will become available on-premises through Azure Stack Hub. Rumors at first, now soon to be a reality. Take note though, the management plane (Connection Broker, Web Access, Gateway etc.) will remain in Azure. Your Host pools / Session Hosts, however, will be allowed to run on Azure Stack Hub. A good start, hopefully more on-prem options will follow since not many companies leverage ASH today and I can't see them investing in ASH just for WVD purposes. Sign up for the preview here .
WVD through Linux	Another big announcement was around the Microsoft - IGEL partnership. Since WVD has been available (in preview and GA) there hasn't been a Linux based WVD client available. Well, now there is and IGEL takes full credit, which are in place, of course. Microsoft will also release a separate SDK allowing other third-party developers to have a go as well. The news that WVD supports Thin Clients isn't that big of a deal if you ask me, it's just another "computer" it's the software that makes this happen. Microsoft refers to IGEL as being a hardware partner, I think they prefer to be seen as a software driven company, which I think they are, or more than hardware anyway.
New WVD RDP client	And by the way, a new WVD RDP client is on its way, find out more here .
WVD Migrate Scenario	I mentioned Lakeside in one of my earlier sheets as well. Azure has a couple of "key migration" scenarios (through Azure Migrate) and now WVD is one of them as well or will be soon. The Lakeside software (SysTrack) will be used under the hood for this. This is from my earlier sheet . Lakeside's Software's Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data analytics solution that enables IT to capture metrics and data about end user environments. This on-demand tool provides IT with a self-service platform to assess and quantify user, application and infrastructure requirements.
New Azure Regions	As you might know, WVD is actually a management plane (service) hosted in Azure (PaaS) allowing us to build Host Pools that in turn hold one or multiple Sessions Host machines. After WVD went GA the WVD service became available from multiple locations across the globe. Japan is the latest addition and regions like Australia, Brazil, Asia Pacific, and India are on the shortlist / roadmap . These are expected to be ready by the end of next year. Have a look here for an overview, including all RRT's in MS.
Microsoft Endpoint Manager	Microsoft announced the merge of Intune and SCCM, which they branded: Microsoft Endpoint Manager. As announced earlier, Intune is/will be able to manage your WVD hosts going forward. Azure AD support plays a role in this as well. A cool announcement, one to keep an eye on. Read more here .
WVD GUI	They demooed a preview the new Azure management portal for WVD making it easier to add users and/or groups of users. This wasn't possible before, not even with PowerShell. Of course, there is a lot more coming since most of the work that needs to be done when setting up WVD is still done manually, through PowerShell, for example. Note that there already are multiple partners which have already taken care of this for you. Go to the partner page to have a look. New partners are added ongoing.
Microsoft Teams	Microsoft Teams has been optimized for Windows Virtual Desktop use-cases. Have a look at this Microsoft Mechanics clip on YouTube explaining it in detail.
MSIX app attach	MSIX app attach (I wrote about this extensively here) is available for testers, go here to sign up. It is expected to be part of Windows as of March 2020. Multiple demoes were given. They're experimenting with a new read-only file system, faster than VHD's, which will consume less RAM and CPU, enabling more concurrent sessions with MSIX app attach. MSIX application state information will be saved into your FSLogix profile container, persisting your application state.
App Azure	Microsoft's applications compatibility promise will be extended to Windows 10 EVD Multi-Session. Virtualized apps that run on Server 2019 RDSH will run on Windows 10 EVD Multi-Session as well. When you run into issues Microsoft will be there to have your back.
(Community) Tools	RDPsoft released a free WVD management tool named: Remote Desktop Commander Lite for Windows Virtual Desktop Preview. Go here to read more and download. @MathiasSchlimm is the founder of the Base Image Script Framework (BIS-F). On E2EVC he announced support for WVD as well as Nutanix Frame. Visit his website here . @MarcelMeurer is working on a free WVD management tool, which will be released shortly. You'll find more information on this website .
VMWare Horizon	In other news. WVD support for Horizon Cloud on Azure has been announced as well. Coming soon in 2020. Here's the link .
NVv4 GPU	The public preview of NVv4 virtual machines with partitioned GPU's have been announced. They should be available as of 18 November 2019. Windows 10 EVD, as part of WVD is one of the supported Operating Systems. Read more about this announcement here .
Win 10 EVD performance	Not announced at Ignite but talked about and partly shown at the E2EVC conference in Lisbon. It seems that Windows 10 EVD handles graphical workloads a bit better than its older and bigger brother, Windows Server 2019. There was a short clip shown on Twitter. Less CPU resources are needed to encode the RDP protocol stream, and Win 10 EVD offered more frames per second – thank you, Benny Tritsch for doing the research on this. See accompanying blogpost for Twitter discussion – interesting.
Various!	Microsoft have put together a WVD architecture post, download it here . Multi-Media Redirection for WVD is being worked on, which will lead to less CPU resource consumption. Personal Desktops can be directly assigned through PowerShell. A preview of a migration script helping you migrate from UPD to FSLogix Profile Containers was shown and a preview will be released soon. All WVD Ignite sessions are now online, got watch them here . Per machine installation of OneDrive is generally available. Native Domain Controller (AD) support with Azure File Storage, will soon be with us – PaaS based storage for MSIX app attach and FSLogix profiles. Office 365 ProPlus will be supported on Windows Server 2019 till 2025. No expiration date on Win10 Entp. Multi-Session. Keep an eye on Azure Arc , especially when it comes to hybrid WVD management. Last but not least... don't forget about Ignite on Tour. For the Dutch among us, Amsterdam will be on the 11th of March 2020, find the schedule here .

	amazon web services	Azure	Google Cloud Platform
Compute / virtual machines :	EC2, Amazon Elastic Compute. 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Azure Virtual Machines. 6 different types of machines from general purpose to GPU, Memory and CPU optimized	Compute Engine. 3 different types of machines, but
Machine type pricing/billing options :	On-Demand, Spot Instances, Reserved Instances, and Dedicated Hosts	On-Demand a.k.a. Pay as you Go, and Reserved Virtual Machine Instances	Pay as you Go, Preemptible, and Commitment. How on resource (vCPU and memory
Load Balancing / Auto scaling :	Elastic Load Balancing, Auto Scaling	Azure Load Balancer and Auto Scale, VM Scale sets, Application Load Balancer	Cloud Load Balancer, Instar
Kubernetes / Docker :	ECS, EC2 Container Service, Firecracker, Fargate	Azure Kubernetes Service, Azure Container Instance	Kubernetes Engine, Contain
Serverless :	Lambda	Azure Functions	Cloud Functions
Management, monitoring, and automation :	AWS Management Console, CLI, API, CloudWatch, CloudTrail, CloudFormation (YAML, JSON)	Resource Manager, Cloud Shell, API, Azure Monitor, Log Analytics, Network Watcher, Application Insights, Automation (JSON)	Cloud Console, Cloud Shell, API, Google Stack
Authentication / authorization :	Identity and Access Management, Active Directory	(Azure) Active Directory, Active Directory Premium	
Object based storage :	S3 (Buckets), Simple Storage Service	Object based Blob Storage	
Block based storage :	EBS, Elastic Block Storage	Storage Disk Page Blobs, Premium Storage Disks	
File based storage :	Elastic File System, FSx hybrid Windows file storage	Azure Files, NetApp Files (Beta), Filestore (Q1 2019)	
Archive storage :	S3 Infrequent Access, Glacier, Data archive	Cool Storage, Storage (Standard Archive)	
Hybrid storage options :	Storage Gateway	StoreSimple, Data Box	
	Server and Client-side encryption options (for managed) EBS Volume Encryption	Server and Client-side encryption options (for managed) BitLocker (Disk) Azure	














	Description
General Mgmt:	WVD will be controlled, configured, and monitored through an Azure based management control panel – the technology formerly known as RDMI. A new WVD GUI management section, within the Azure portal is being worked on. No time lines as of yet. The WVD control panel houses the Broker, Web Access, Diagnostics, the Gateway role, and Load Balancing (which is part of the Broker, by the way, it's not a separate role). The Azure management control panel will be, provisioned, maintained, etc. by Microsoft.
Mgmt. tools:	ARM Templates will be made available through GitHub – manually editable. Microsoft offers Rest API's and PowerShell (to Rest) support. WVD, from start to finish can be completely managed through PowerShell and/or REST. Using both Microsoft's SCCM and/or Intune (part of MS 365) is optional as well. SCCM can be used to manage your server operating systems, while Intune can be used to manage your desktop operating systems. Microsoft's new Diagnostics service can be used to troubleshoot errors on the WVD platform – end to end.
Supported OS's:	Windows 10 Enterprise multi-session and single user. Windows 7 (free extended support till 2023). Windows Server 2012 and upwards. Win 10 single and multi-session as well as Windows 7 will require one of the following licenses: Microsoft 365 E3, E5, A3, A5, Business or Windows E3, E5, A3, A5. For Windows Server

Windows Virtual Desktop partner cheat sheet 1.0

WVD Partner:	What they offer:
	PeopleTech has a dedicated team of Cloud Strategists, Azure Solution Specialists, and WVD movement right from the start. PT developed an Azure Cloud Product called HelloRD according to PT. It's a fully managed and automated webportal for WVD infrastructure man VM imaging, OMS Log Analytics, VM resizing, delegated access control, session and host (po desktop management).
	Liquidware Stratusphere UX gathers and provides user experience metrics to support the d Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current t prepare for a smooth migration to Microsoft WVD. Administrators can orchestrate workspr; ProfileUnity offers features that support ongoing management of user profiles, policies, use o allows users to co-exist and move across physical, virtual, RDS, and mixed Windows O; alization, RDS, Server 2016) environments.
	Partner with Samsung (joint effort) Microsoft offers support for DeX. It offers a Windows workers on their Samsung mobile devices. A full screen Windows 10 and Office 36; n services, providing the Windows Virtual Desktop experience on an Android endpoi; F; faster speeds and reduced latency.
	As a Microsoft partner and service provider Cloud Jumper offers a fully managed service th Their platform is a cloud-based platform for application service enablement, Desktop as a Ser orchestrate providing management and access to the productivity tools needed to run b; development services helping customers to optimize Cloud services utilization and costs wh
	As a launch partner Lakeside assists customers in two ways: during the pre-rollout phas Software's Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data anal; data about end user environments. This on-demand tool provides IT with a self-service pla; infrastructure requirements in order to successfully transform a desktop environment.
	Citrix "extends" WVD in multiple ways. To start, they will offer the Citrix Managed Desktop the second half of 2019. A managed DaaS offering which will allow you to leverage the Win; Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citri; XenApp and XenDesktop). Only to be used on Azure, of course. Early 2019 Citrix officiall; b
	Printing has always been, and continues to be an issue when "remote" locations are involve ezeep - a cloud-based printing solution for Windows Virtual Desktop, ensuring secure and environments and printing from any device. Ezeep will be available directly through the Az; Directory, making it available to your entire enterprise. Management is done from a web co
	VMWare will "extend" the Windows Virtual Desktop proposition through their VMWare Ho include the Windows 10 multi-user Operating System, optimizations for Office 365 ProPlus environments— in addition to the value-added services that VMWare Horizon Cloud provid; as a tech preview by the end of calendar year 2019.











Windows Virtual Desktop Microsoft Ignite announcements cheat sheet

WVD announcement	What it does / how it works / what it will do...
On premises	Wait, what? Do you mean on-premises? Well, it took a while before this became clear but as it turns out WVD, including Windows 10 Multi-Session, or EVD will become a reality. Take note though, the management plane (Connection Broker, Web Access, Gateway, and Load Balancing) will be hosted on Azure Stack Hub. A good start, hopefully more on-prem options will follow. Many companies leverage ASH today and I can't see them investing in ASH just for WVD purposes. Sign up for the preview here .
through Linux	Another big announcement was around the Microsoft - IGEL partnership. Since WVD has been available (in preview and GA) there hasn't been a Linux based WVD client available. Well, that's about to change. Microsoft will also release a separate SDK allowing other third-party developers to have a go as well. The fact that WVD supports Thin Clients isn't that big of a deal if you ask me, it's just another "computer" it's the software that makes this happen. Microsoft refers to IGEL as a hardware partner, I think they prefer to be seen as a software driven company, which I think they are, or more than hardware anyway.
WVD RDP client	And by the way, the WVD RDP client is on its way, find out more here .
Migrate Scenario	I mentioned last time one of the key migration scenarios (through Azure Migrate) and now WVD is one of them as well or will be soon. Under the hood for this. This is from my earlier sheet . Lakeside's Software's Windows Virtual Desktop Assessment tool that enables IT to capture metrics and data about end user environments. This on-demand tool provides IT with a self-service migration and infrastructure requirements.
Azure Regions	As you might know, WVD is actually a managed service hosted in Azure (PaaS) allowing us to build Host Pools that in turn hold one or multiple Sessions Host machines. Microsoft GA the WVD service because it's available in multiple locations across the globe. Japan is the latest addition and regions like Australia, Brazil, Asia Pacific, and India are on the shortlist / roadmap. These are expected to be ready by the end of next year. Have a look here for an overview, including all RRT's in MS.
Microsoft Endpoint manager	Microsoft announced the merge of Intune and SCCM, which will be replaced by Microsoft Endpoint Manager. As announced earlier, Intune is/will be able to manage your WVD hosts going forward. Azure AD support plays a role in this as well. Keep an eye on this announcement, one to keep an eye on. Read more here .
WVD GUI	They demoed a preview the new Azure management portal for WVD. Making it easier to add users and/or groups of users. This wasn't possible before, not even with PowerShell. Of course, there is a lot more coming since most things that need to be done when setting up WVD is still done manually, through PowerShell, for example. Note that there already are multiple partners which have already taken care of this for you. Go to the partner page to have a look. New partners are added ongoing.
Microsoft Teams	Microsoft Teams has been optimized for Windows Virtual Desktop. Have a look at this Microsoft Mechanics clip on YouTube explaining it in detail.
MSIX app attach	MSIX app attach (about this extensively here) is a great alternative to VHD's, which will consume less RAM and CPU, enabling more concurrent sessions with MSIX app attach. MSIX app attach information will be saved to a Logix profile container, persisting your application state.
App Azure	Microsoft's app attach capability promise will be available for Windows 10 EVD Multi-Session. Virtualized apps that run on Server 2019 RDSH will run on Windows 10 EVD Multi-Session. Microsoft will be there to have your back.
Community) Tools	RDPsoft released a new tool, Remote Desktop Commander Lite for Windows Virtual Desktop Preview. Go here to read more and download. @MathiasSchlimm is the author of the Remote Desktop Framework (BIS-F). On E2EVC he announced support for WVD as well as Nutanix Frame. Visit his website here . @MarcelMeurer is working on a free WVD management tool, which will be released shortly. You'll find more information on this website .
VMWare Horizon	In other news. WVD support for Horizon Cloud on Azure has been announced as well. Coming soon in 2020. Here's the link .
NVv4 GPU	The public preview of NVv4 virtual machines with partitioned GPU's have been announced. They should be available as of 18 November 2019. Windows 10 EVD, as part of WVD is one of the supported Operating Systems. Read more about this announcement here .
Win 10 EVD performance	Not announced at Ignite but talked about and partly shown at the E2EVC conference in Lisbon. It seems that Windows 10 EVD handles graphical workloads a bit better than its older and bigger brother, Windows Server 2019. There was a short clip shown on Twitter. Less CPU resources are needed to encode the RDP protocol stream, and Win 10 EVD offered more frames per second - thank you, Benny Tritsch for doing the research on this. See accompanying blogpost for Twitter discussion - interesting.
Various!	Microsoft have put together a WVD architecture post, download it here . Multi-Media Redirection for WVD is being worked on, which will lead to less CPU resource consumption. Personal Desktops can be directly assigned through PowerShell. A preview of a migration script helping you migrate from UPD to FSLogix Profile Containers was shown and a preview will be released soon. All WVD Ignite sessions are now online, go watch them here . Per machine installation of OneDrive is generally available. Native Domain Controller (AD) support with Azure File Storage, will soon be with us - PaaS based storage for MSIX app attach and FSLogix profiles. Office 365 ProPlus will be supported on Windows Server 2019 till 2025. No expiration date on Win10 Entp. Multi-Session. Keep an eye on Azure Arc , especially when it comes to hybrid WVD management. Last but not least... don't forget about Ignite on Tour. For the Dutch among us, Amsterdam will be on the 11th of March 2020, find the schedule here .

WVD Partner:	What they offer:
	<p>Cloud Jumper offers a fully managed service through their Cloud Workspace Management Suite. Their CWMS is a cloud-based platform for application service enablement, Desktop as a Service (DaaS) and Workspace as a Service (WaaS) orchestration, providing management and access to productivity tools. From a single pane of glass, IT can provision, manage, and optimize infrastructure for user workspaces. CloudJumper APIs allow further extensibility and integration with other enterprise systems.</p>
	<p>Citrix “extends” WVD with their Citrix Managed Desktop service. A managed DaaS offering which will allow you to leverage the Windows 10 multi-user image as part of Windows Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citrix Virtual Apps and Desktop services.</p>
	<p>Lakeside assists customers in two ways: during the pre-rollout phase and with ongoing monitoring. Lakeside Software’s Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data analytics solution that enables IT to capture metrics and data about end user environments. This on-demand tool provides IT with a self-service platform to assess and quantify user, application and infrastructure requirements.</p>
	<p>Printing has always been, and continues to be an issue when “remote” locations are involved. With WVD this is no different. ThinPrint offers ezeep – a cloud-based printing solution for Windows Virtual Desktop, ensuring secure and easy (no VPN) connectivity to existing print environments and printing from any device. With ezeep services and software, existing print infrastructure can be utilized to print documents from the cloud.</p>
	<p>Liquidware Stratusphere UX gathers and provides user experience metrics to support the design of desktop images and infrastructure for Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current user profile environments and applications to prepare for a smooth migration to Microsoft WVD. All managed and controlled from a single console.</p>
	<p>VMWare will “extend” the Windows Virtual Desktop proposition through their VMWare Horizon Cloud offering on Microsoft Azure. This will include the Windows 10 multi-user Operating System, optimizations for Office 365 ProPlus, and support for RDS environments.</p>
	<p>From the ControlUp console, IT gets end-user environment visibility to effectively monitor and troubleshoot performance issues. An intuitive dashboard provides insights and analytics for virtual desktop deployments, as well as options for automated reporting enriched with community benchmarks. ControlUp can manage multiple data sources and types, organizing them in high-performance data sets aggregated across compute, storage, and WVD.</p>
	<p>deviceTRUST enables conditional access enabling secure access to Windows Virtual Desktop, conditional application access within Windows Virtual Desktop as well as conditional Windows Virtual Desktop policies without any additional infrastructure.</p>
	<p>Customers moving their on-premises business services to Windows Virtual Desktop use Login VSI Enterprise Edition to evaluate and maintain optimal performance, scalability, and availability of Windows 10 Enterprise multi-session, Windows 10 Enterprise, and Windows 7.</p>
	<p>Nerdio provides the knowledge and technology to deploy, price, package, manage, and optimize customers’ Azure deployment. Nerdio extends the value of Windows Virtual Desktop by making it easy to provision Azure resources and streamline deployment, including a straightforward GUI. With Nerdio for Azure, IT can automatically deploy and manage a complete Azure environment, including WVD, in under two hours.</p>
	<p>Use PolicyPak are to remove local admin rights and overcome UAC prompts, block Ransomware, manage multiple browsers, manage Internet Explorer’s Enterprise and Compatibility modes, reduce the number of GPOs, manage Windows 10 File Associations, manage Windows 10 Start Menu and Taskbar, and manage Windows 10 Features and Optional features.</p>
	<p>PL empowers IT professionals to eliminate all print servers and deliver a highly available serverless printing infrastructure. Available as SaaS or as a web stack in your own private cloud, the PrinterLogic platform ensures users always have the right printers they need in their virtual sessions based on user ID, device name or location. Complemented by features such as print tracking and reporting, mobile printing, and secure badge release printing.</p>
	<p>Workspot extends the value of Windows Virtual Desktop by simplifying the provisioning process of cloud desktop infrastructure. Resources can be easily scaled up and down to meet the needs of different users and uses cases. Infrastructure provisioning is automated, which means users can access their Windows Virtual Desktop environment from anywhere around the world with high availability.</p>

WVD Partner:	What they offer:
	<p>Cloud Jumper offers a fully managed service through their Cloud Workspace Management Suite. Their CWMS is a cloud-based platform for application service enablement, Desktop as a Service (DaaS) and Workspace as a Service (WaaS) orchestration, providing management and access to productivity tools. From a single pane of glass, IT can provision, manage, and optimize infrastructure for user workspaces. CloudJumper APIs allow further extensibility and integration with other enterprise systems.</p>
	<p>Citrix “extends” WVD with their Citrix Managed Desktop service. A managed DaaS offering which will allow you to leverage the Windows 10 multi-user image as part of Windows Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citrix Virtual Apps and Desktop services.</p>
	<p>Lakeside assists customers in two ways: during the pre-rollout phase and with ongoing monitoring. Lakeside Software’s Windows Virtual Desktop Assessment with its Trackr is a cloud hosted data analytics solution that enables IT to capture metrics and data about end user environments. This on-demand tool provides a service for IT to assess and monitor user environments, including hardware, software, and configurations. It can identify issues before they become a problem. With WVD, users can print from any device. With zero services and software, existing print infrastructure can be utilized to print documents from the cloud.</p>
	<p>Liquidware Stratusphere UX gathers and provides user experience metrics to support the design of desktop images and infrastructure for Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current user profile environments and applications to prepare for a smooth migration to Microsoft WVD. All managed and controlled from a single console.</p>
	<p>VMware will extend Windows Virtual Desktop on their VMware Horizon 7.14. VMware Cloud on AWS offering on Microsoft Azure will allow Windows 10 multi-user desktops to be optimized for VMware Horizon 7.14. VMware Cloud on AWS offering on Microsoft Azure will allow Windows 10 multi-user desktops to be optimized for VMware Horizon 7.14.</p>
	<p>ControlUp provides insights and analytics for virtual desktop deployments, as well as options for automated reporting enriched with community benchmarks. ControlUp can manage multiple data sources and types, organizing them in high-performance data sets aggregated across compute, storage, and WVD.</p>
	<p>DeviceTrust generates reports on user access to local and cloud applications within Windows Virtual Desktop. DeviceTrust provides visibility into user access to local and cloud applications within Windows Virtual Desktop.</p>
	<p>LoginVSI provides a comprehensive suite of tools to help IT provision, manage, and maintain optimal performance, scalability, and availability of Windows 10 Enterprise, multi-session Windows 10 Enterprise, and Windows 7.</p>
	<p>Nerdio provides the knowledge and technology to deploy, price, package, manage, and optimize customers’ Azure deployment. Nerdio extends the value of Windows Virtual Desktop by making it easy to provision Azure resources and streamline deployment, including a straightforward GUI. With Nerdio for Azure, IT can automatically deploy and manage a complete Azure environment, including WVD, in under two hours.</p>
	<p>Use PolicyPak are to remove local admin rights and overcome UAC prompts, block Ransomware, manage multiple browsers, manage Internet Explorer’s Enterprise and Compatibility modes, reduce the number of GPOs, manage Windows 10 File Associations, manage Windows 10 Start Menu and Taskbar, and manage Windows 10 Features and Optional features.</p>
	<p>PL empowers IT professionals to eliminate all print servers and deliver a highly available serverless printing infrastructure. Available as SaaS or as a web stack in your own private cloud, the PrinterLogic platform ensures users always have the right printers they need in their virtual sessions based on user ID, device name or location. Complemented by features such as print tracking and reporting, mobile printing, and secure badge release printing.</p>
	<p>Workspot extends the value of Windows Virtual Desktop by simplifying the provisioning process of cloud desktop infrastructure. Resources can be easily scaled up and down to meet the needs of different users and uses cases. Infrastructure provisioning is automated, which means users can access their Windows Virtual Desktop environment from anywhere around the world with high availability.</p>

<https://docs.microsoft.com/en-us/azure/virtual-desktop/partners>

WVD Partner:	What they offer:
	Cloud Jumper offers a fully managed service through their Cloud Workspace Management Suite. Their CWMS is a cloud-based platform for application service enablement, Desktop as a Service (DaaS) and Workspace as a Service (WaaS) orchestration, providing management and access to tools. From a single pane of glass, IT can provision, manage, and optimize infrastructure for user workspaces. CloudJumper APIs allow further extension and integration with other enterprise systems.
	Citrix "extends" WVD with their Citrix Managed Desktop service. A managed DaaS offering which will allow you to leverage the Windows 10 multi-user image as part of Windows Virtual Desktop. Windows 10 multi-user will also be available in combination with the Citrix Virtual Apps and Desktop services.
	Lakeside assists customers in two ways: during the pre-rollout phase and with ongoing monitoring. Lakeside Software's Windows Virtual Desktop Assessment with SysTrack is a cloud hosted data analytics solution that enables IT to capture metrics and data about end user environments. This on-demand analytics platform allows IT to self-serve the platform and quickly identify application and infrastructure issues.
	Liquidware Stratusphere UX gathers and provides user experience metrics to support the design of desktop images and infrastructure for Windows Virtual Desktop on Azure. Liquidware ProfileUnity and FlexApp harvest current user profile environments and applications to prepare for a smooth migration to Microsoft WVD. All managed and controlled files are synchronized to the cloud.
	ControlUp provides insights and analytics for virtual desktop deployments, as well as options for automated reporting enriched with community benchmarks. ControlUp can manage multiple data sources and types, organizing them in high-performance data sets aggregated across compute, storage, and WVD.
	deviceTRUST provides a cloud-based platform for managing and controlling files and applications in preparation for a smooth migration to Microsoft WVD. All managed and controlled files are synchronized to the cloud.
	Nerdio provides the knowledge and technology to deploy, price, package, manage, and optimize customers' Azure deployment. Nerdio extends the value of Windows Virtual Desktop by making it easy to provision Azure resources and streamline deployment, including a straightforward GUI. With Nerdio for Azure, IT can automatically deploy and manage a complete Azure environment, including WVD, in under two hours.
	Use PolicyPak are to remove local admin rights and overcome UAC prompts, block Ransomware, manage multiple browsers, manage Internet Explorer's Enterprise and Compatibility modes, reduce the number of GPOs, manage Windows 10 File Associations, manage Windows 10 Start Menu and Taskbar, and manage Windows 10 Features and Optional features.
	PL empowers IT professionals to eliminate all print servers and deliver a highly available serverless printing infrastructure. Available as SaaS or as a web stack in your own private cloud, the PrinterLogic platform ensures users always have the right printers they need in their virtual sessions based on user ID, device name or location. Complemented by features such as print tracking and reporting, mobile printing, and secure badge release printing.
	Workspot extends the value of Windows Virtual Desktop by simplifying the provisioning process of cloud desktop infrastructure. Resources can be easily scaled up and down to meet the needs of different users and uses cases. Infrastructure provisioning is automated, which means users can access their Windows Virtual Desktop environment from anywhere around the world with high availability.



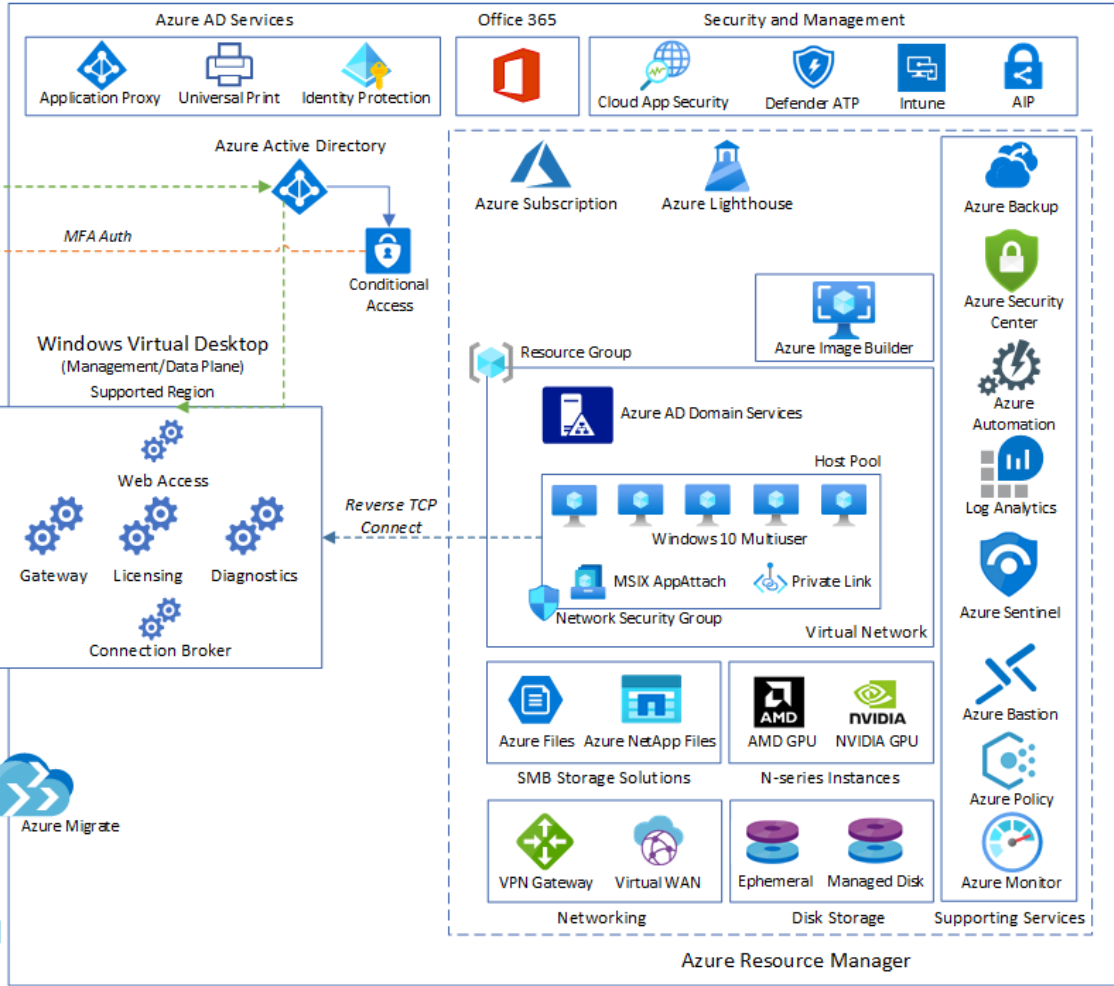
<https://docs.microsoft.com/en-us/azure/virtual-desktop/partners>

- Citrix
- VMware
- 10ZiG
- Cloudhouse
- CloudJumper
- ControlUp
- deviceTRUST
- HP
- IGEL
- Ivanti
- Lakeside Software
- Liquidware
- Liquit
- Login VSI
- Nerdio
- Numecent
- PolicyPak
- PrinterLogic
- Printix
- RDPSoft
- sepageo
- ThinPrint
- Tricerat
- Workspot
- Next steps

They are not in alphabetical order
And not in chronological order either
Or ordered by solution type
Names don't make sense

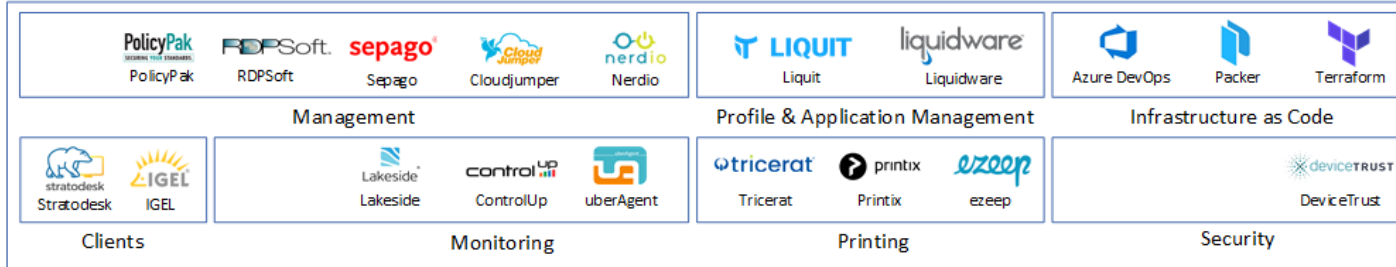


Microsoft Services



<https://msandbu.org/windows-virtual-desktop-ecosystem/>

3.Party Services and addons



1

**DaaS and Workspace
Management**

2

**Application delivery
and security**

3

**Monitoring, testing,
and migration**

4

**Hardware,
consultancy, and
printing**

1

CITRIX[®]

Cloud Jumper



Workspot

LIQUIT

PolicyPak
SECURING YOUR STANDARDS.

nerdio

ivanti

liquidware[™]

vmware[®]

2

Cloudhouse[™]
Compatibility · Container

vmware[®]

CITRIX[®]

numecent[®]
CLOUDPAGING DELIVERS

device**TRUST**

liquidware[™]

3

control **UP**

Lakeside[®]
SysTrack.

RDPSSoft

vast **LIMITS**

LOGIN VSI

liquidware[™]

4

10ZiG[®]



printix



PrinterLogic

ThinPrint[®]

IGEL[®]

tricerat[®]

sepago[®]

Today

Security



DaaS



- Endpoints and other hardware
- Monitoring. Optimizing
- Workspace (and image) management. Testing
- Data / profile migration
- Applications, printing, scanning, other...
- WVD deployment. Infrastructure, golden image, auto scaling + FSLogix
- Data inventory / sizing assessments / general recommendations



Consultancy / guidance

Daas

CITRIX[®]

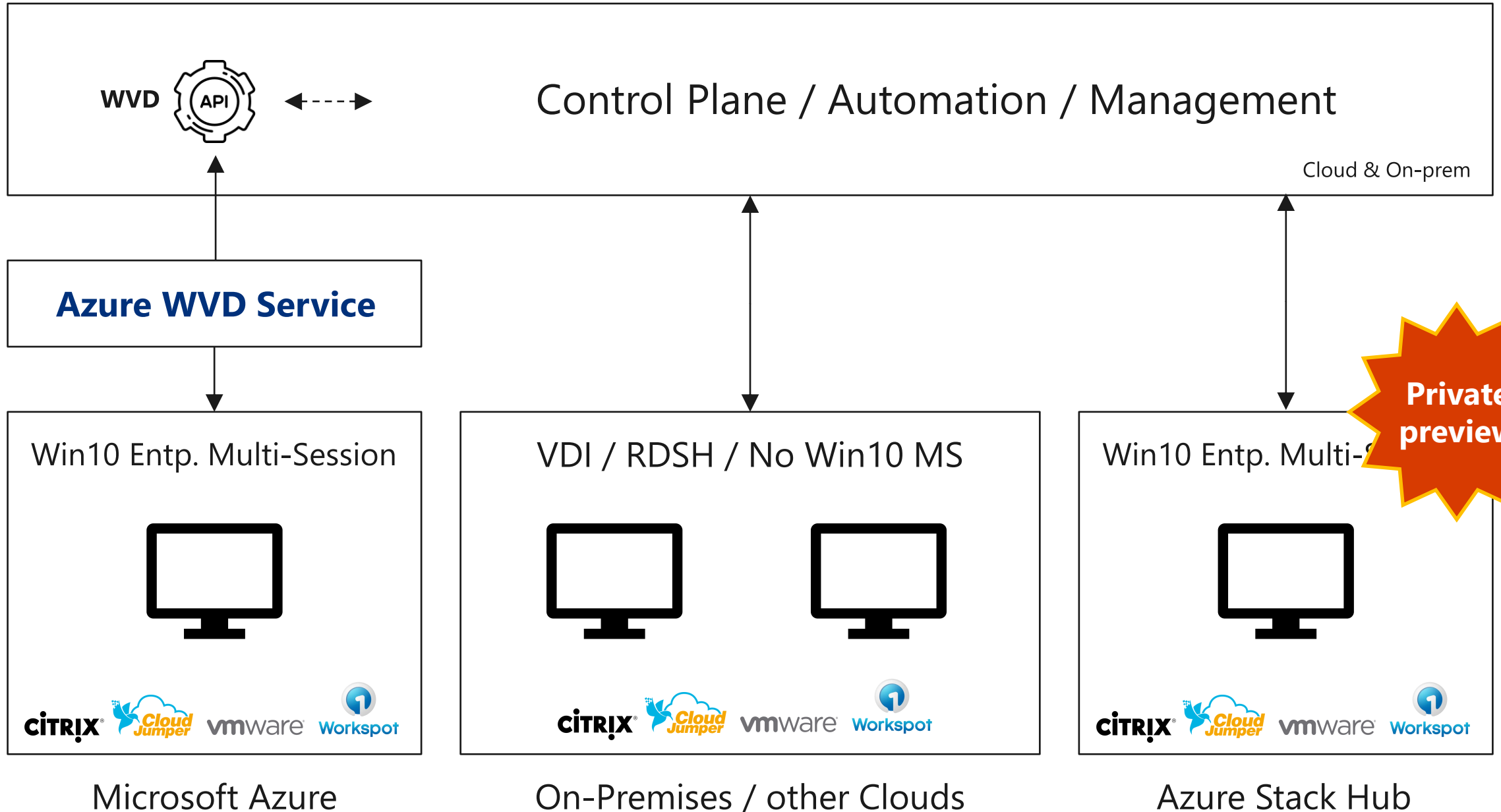
vmware[®]



Workspot



DaaS Solution Provider



Assessments

And general recommendations

WVD right-sizing assessments

Readiness recommendations for Windows 10

Current Operating System composition details

UX and performance monitoring on critical applications

Resource consumption (CPU, Mem, IOPS)



Plan for migrations

Capture usage data from every endpoint to assess migration readiness of workloads and apps to Windows Virtual Desktop.



Optimize resources

Measure the consumption of IT resources to help right-size for actual usage and prepare the environment for a switch to Windows Virtual Desktop.



Monitor user environment

Track resource utilization for Windows Virtual Desktop on Azure to gain visibility into consumption drivers and avoid unintended expenses.

WVD right-sizing assessment

Readiness recommendations Windows 10

Current Operating System composition

UX and performance monitoring critical applications

Resource consumption (CPU Mem IOP)

FREE



Plan for migrations

Capture usage data from any endpoint to assess migration readiness of workloads and apps to Windows Virtual Desktop.



Optimize resources

Measure the consumption of IT resources to help right-size for actual usage and prepare the environment for a switch to Windows Virtual Desktop.



Monitor user environment

Track resource utilization for Windows Virtual Desktop on Azure to gain visibility into consumption drivers and avoid unintended expenses.

Navigation: Desktop | Enterprise | Server | Risk | Virtual Infrastructure | **Persona**

Dashboard

Observations

- Persona Critical Applications
- User Critical Applications
- User Details
- User Resource Consumption
- User Systems

Analysis

Reporting

- Reports
- Dashboards
- Favorites

Average CPU (in MIPS) by Persona

Average Memory (in MB) by Persona

Average IOPS by Persona

Average Network (Mb/sec) by Persona

Average CPU (in MIPS) by Role

Average Memory (in MB) by Role

Average IOPS by Role

Average Network (Mb/sec) by Role

Average CPU (in MIPS) by Workstyle

Average Memory (in MB) by Workstyle

User Count by Role/Style

Workstyle	Power	Knowledge	Task
Deskbound	10	39	21
Non-Deskbound			1

Lakeside SysTrack Visualizer Current Group: All Systems

Navigation: Desktop | Enterprise | Server | Risk | Virtual Infrastructure | **Persona**

Dashboard

Observations

- Persona Critical Applications
- User Critical Applications
- User Details
- User Resource Consumption
- User Systems

Analysis

Reporting

- Reports
- Dashboards
- Favorites

User / Account Name by CPU Percentile, Memory Percentile, IOPS Percentile, Network Percentile

Perspective: Basic

Search: User / Account Name

User / Account Name	Full Name	Workstyle	Role	Overall Percentile (%)	CPU Percentile (%)	Memory Percentile (%)	IOPS Percentile (%)	Network Percentile (%)	Department	Location
US1000000	Heather Wilson	Deskbound	Power	100	100	97	87	91	Applied Engineering	San Jose
US1000001	Shafiqul Haque	Non-Deskbound	Power	98	98	87	97	73	Sales	Mountain View
US1000002	Ben Hough	Deskbound	Power	97	96	96	100	75	Business Development	San Jose
US1000003	Sam Wilson	Non-Deskbound	Power	96	95	90	98	85	Americas Sales and Business Development	Mountain View
US1000004	John Ben Hough	Deskbound	Task	95	97	32	92	97		
US1000005	Linda Tran	Deskbound	Power	93	82	98	90	86	Applied Engineering	San Jose
US1000006	John Conant	Deskbound	Power	92	90	91	86	83	Marketing	Mountain View
US1000007	Brandon Baker	Deskbound	Knowledge	91	32	75	96	100	Marketing	Mountain View
US1000008	Mark Wilson	Deskbound	Knowledge	90	88	40	93	96	US Sales	Mountain View
US1000009	Alan Brachman	Non-Deskbound	Power	88	80	100	88	55	Marketing	Mountain View
US1000010	Sam King	Deskbound	Knowledge	87	87	88	68	87		
US1000011	Charles Brown	Deskbound	Power	86	85	92	72	70	Technical Services	Mountain View
US1000012	Rob Robinson	Shared	Power	85	81	93	75	71	Americas Sales	

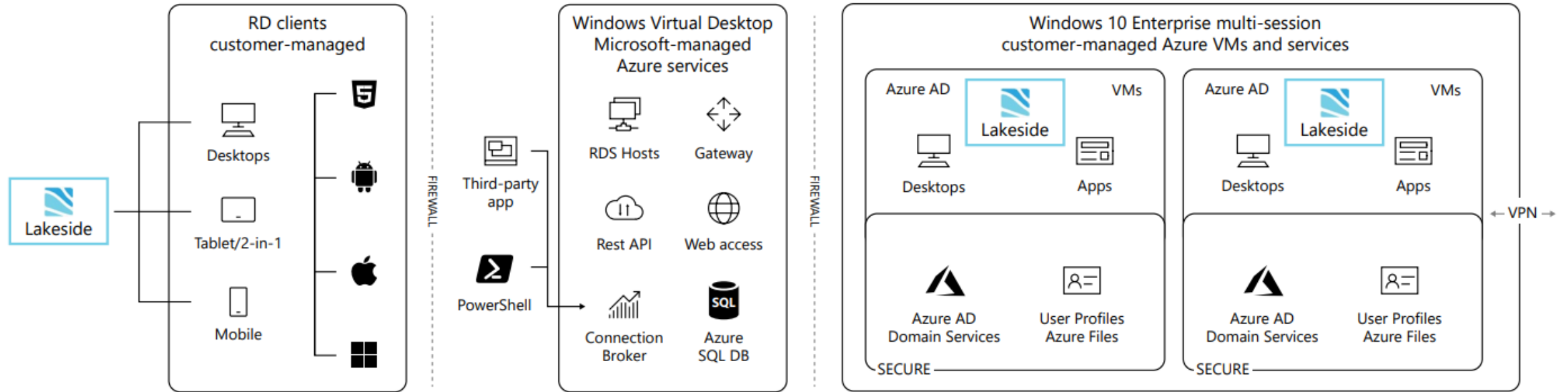
Lakeside[®]

SysTrack[®]



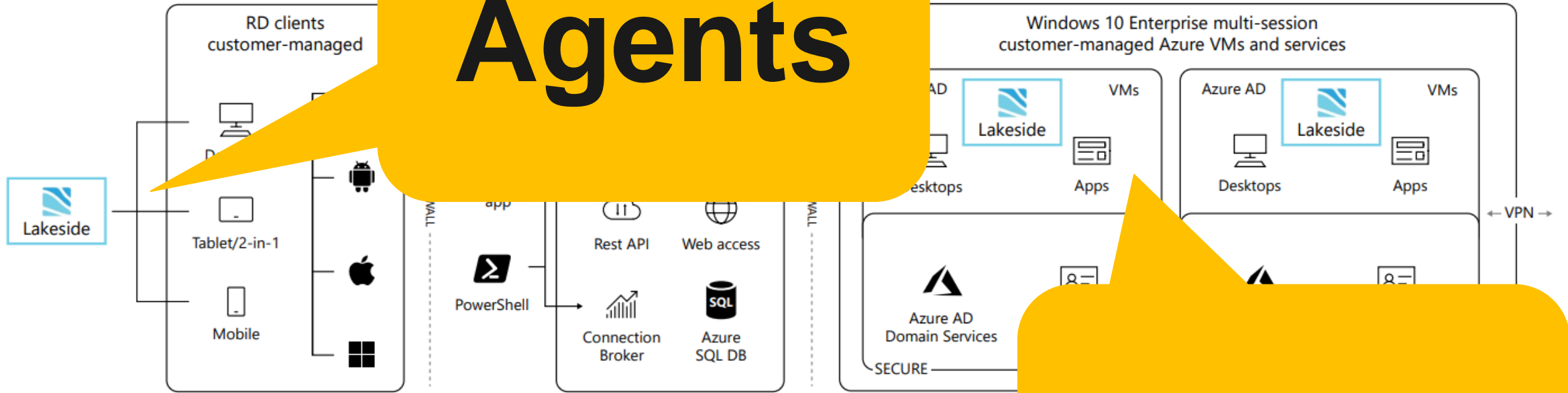
Microsoft Azure Migration

SysTrack and Windows Virtual Desktop integration



- **SysTrack agent on Azure VM's and endpoints**
- **Gather data and feed into Lakeside DataMine engine**
- **Plan, optimize and recommend continuously**

SysTrack and Windows



Agents

Agents

- **SysTrack agent on Azure VM's and endpoints**
- **Gather data and feed into Lakeside DataMine engine**
- **Plan, optimize and recommend continuously**

Userprofile & Data





UX and performance monitoring

Resource consumption (CPU, GPU, Mem, IOPS, network)

Harvest user profiles and personal data

Workspace management

Application Layering



Stratusphere UX

Monitor user metrics data and assess user environments to plan migration to Windows Virtual Desktop.



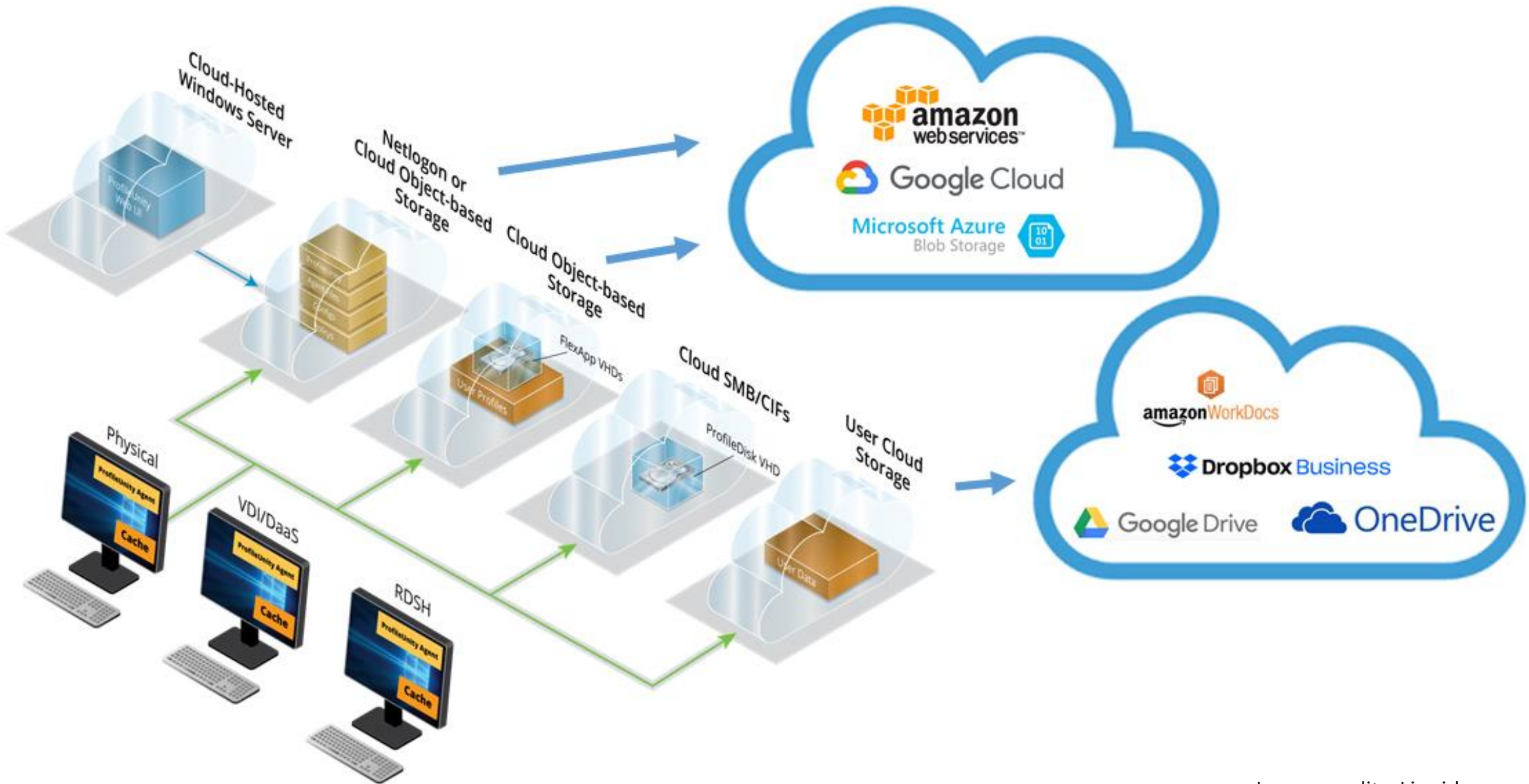
ProfileUnity

Harvest and reapply existing user profile, application, and policy data to Windows Virtual Desktops seamlessly.

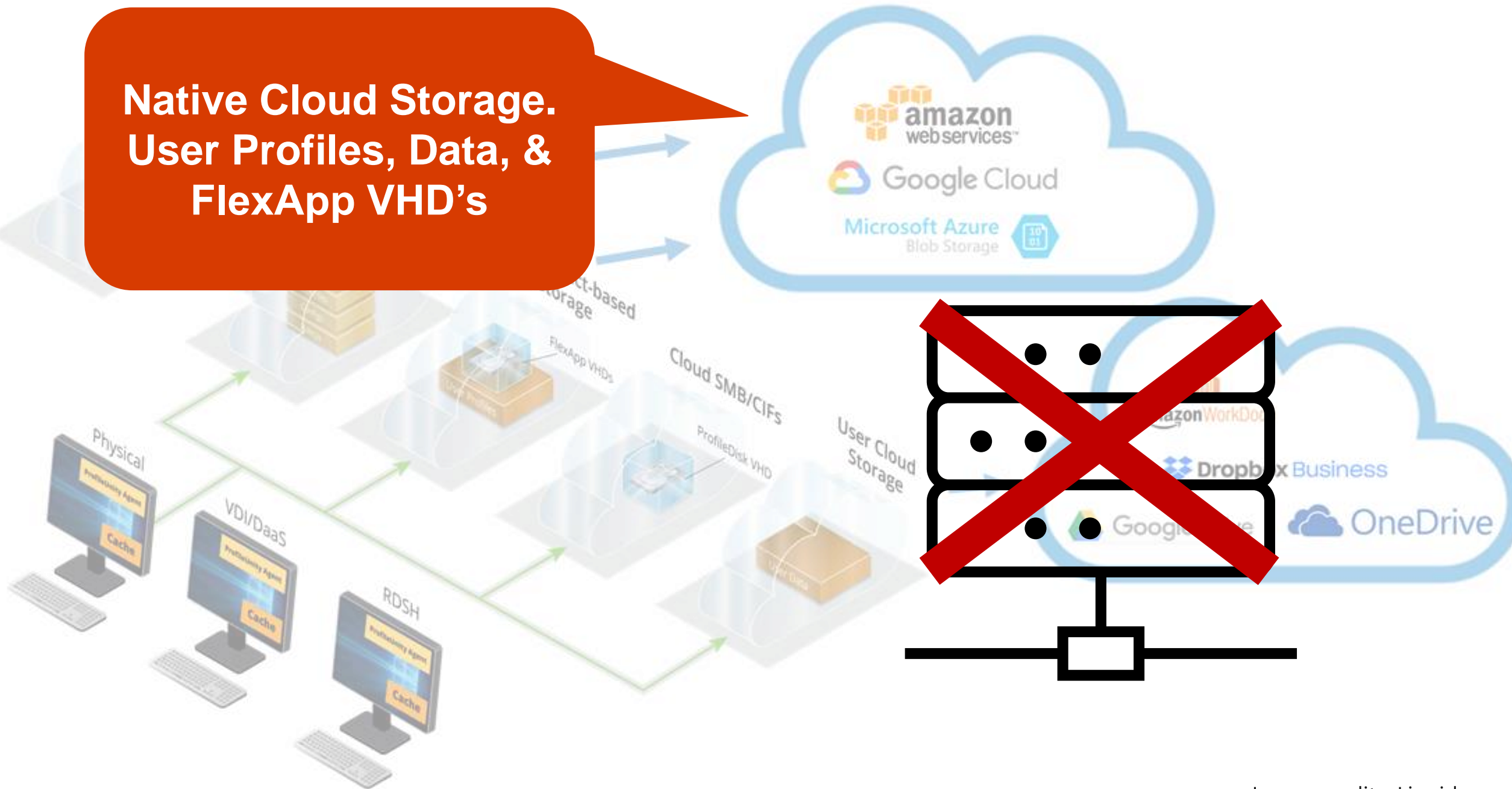


FlexApp

Streamline image management with application rights and delivery strategies.



**Native Cloud Storage.
User Profiles, Data, &
FlexApp VHD's**



Deployment

And (image) management

“ Nerdio is an **Azure IT automation** platform that makes it easy to deploy and manage Windows Virtual Desktop “



[CONTACT US](#)[AZURE](#)

Nerdio Manager for WVD

Empowering IT Professionals to Deploy
and Manage Windows Virtual De

WVD deployment, management, and autoscaling platform
Enterprise. Now available in the Azure Marketplace!

[GET IT NOW](#)[CONTACT US](#)

**Where the magic
happens**

- Available as an Azure application
- Supported in all regions globally
- Deployed within your own tenant
- Built-in FSLogix profile management
- Image & session host management
- Easy to use, no manual tasks
- Auto scaling made simple
- Auditing built-in



**Manager
for WVD**

Empowering IT Professionals to Deploy & Manage WVD

DEMO

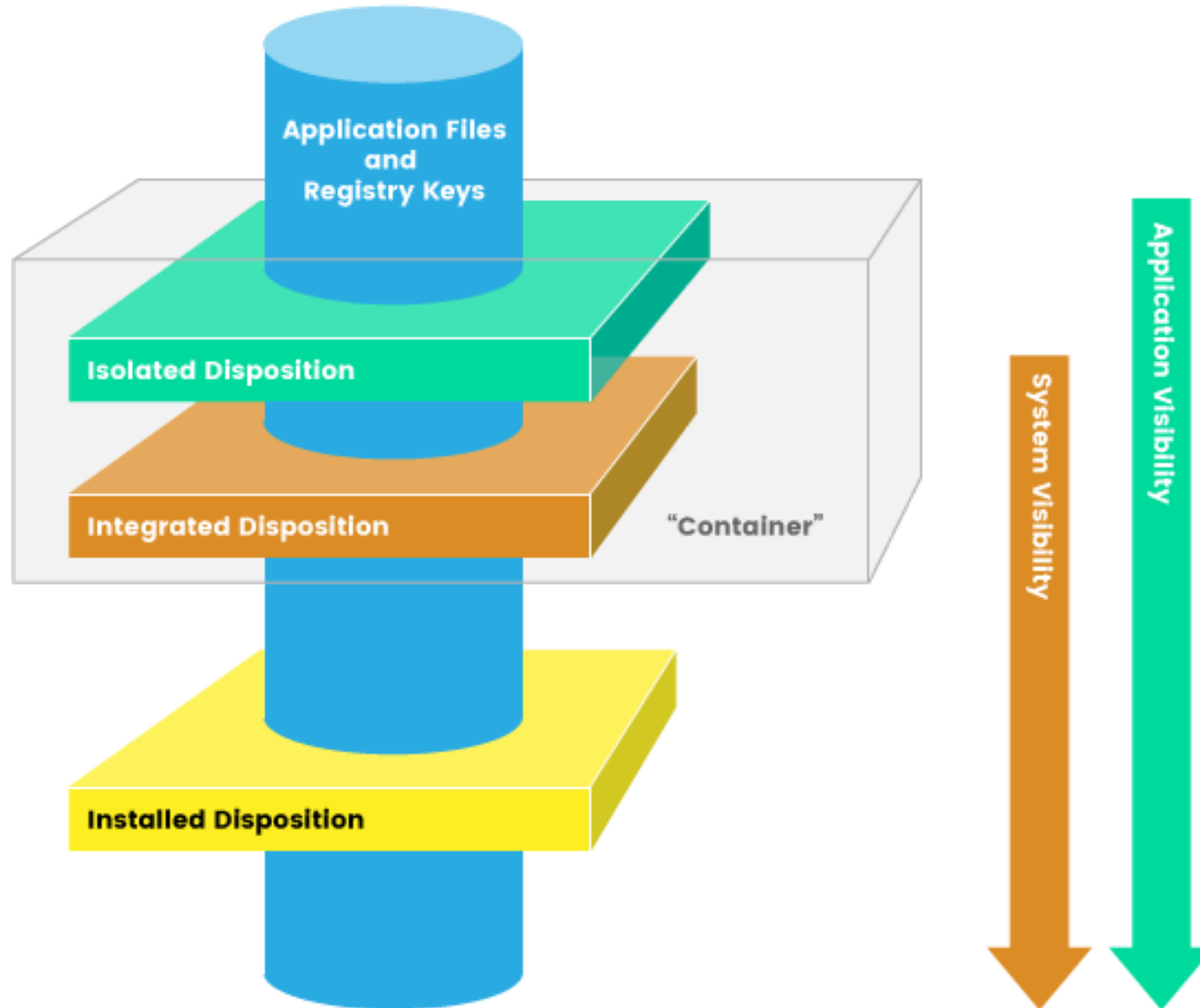


Applications



CLOUDPAGING™

A NUMECENT TECHNOLOGY



Reformat, pre-
virtualized instructions,
encryption, pages

Application Files
and
Registry Keys

Disposition

Integrated Disposition

Installed Disposition

Cloudified format, pages

System

Application Visibility

Virtual Memory
Management Unit



Cloudpaging Studio

PACKAGE



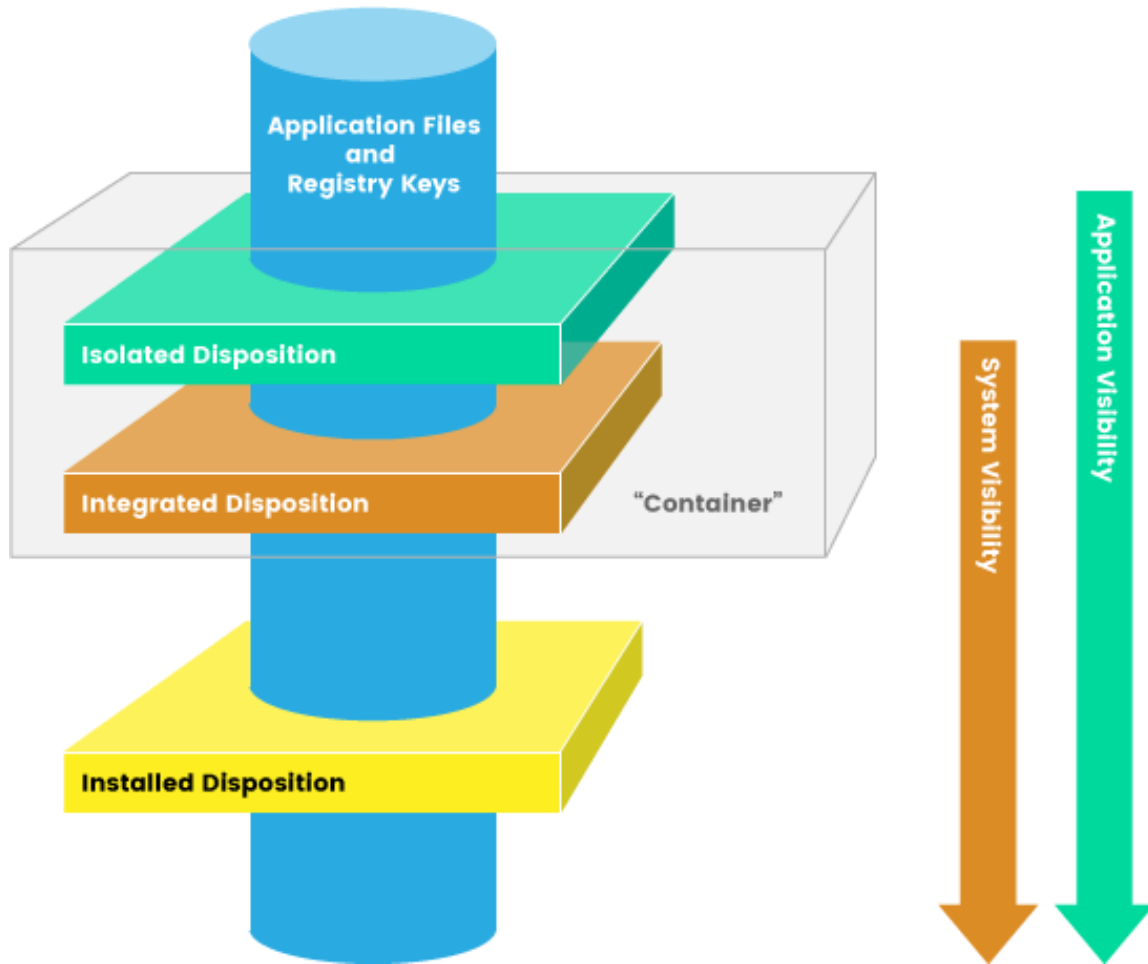
Cloudpaging Server

DELIVER



Cloudpaging Player

EXECUTE



- Not your traditional layers and containers
- Works for physical and virtual machines
- On all platforms, on-prem and Cloud
- high-latency Internet and WAN connections
- You can turn isolation features on and off
- Easy lifting and shifting



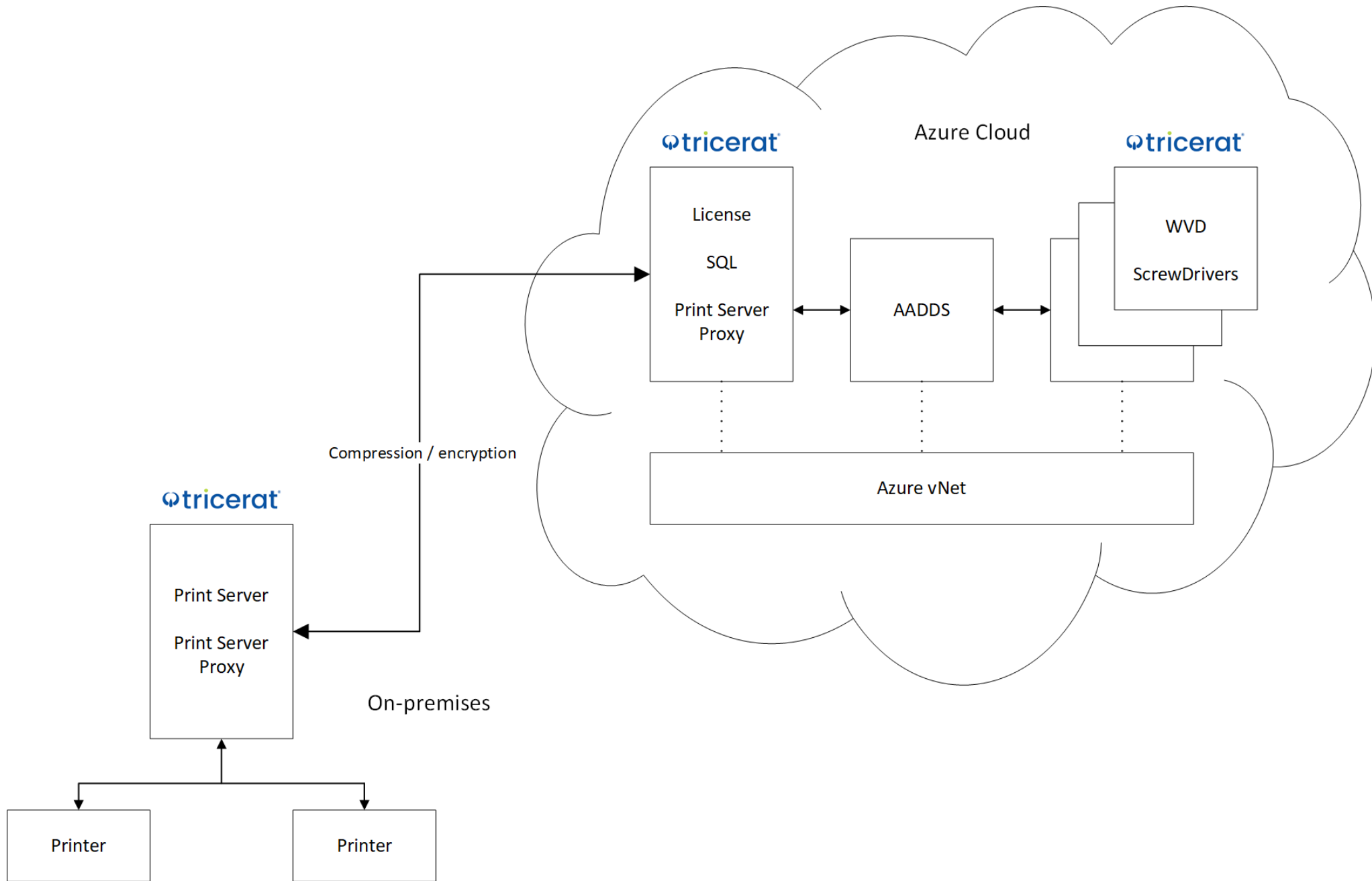
Printing

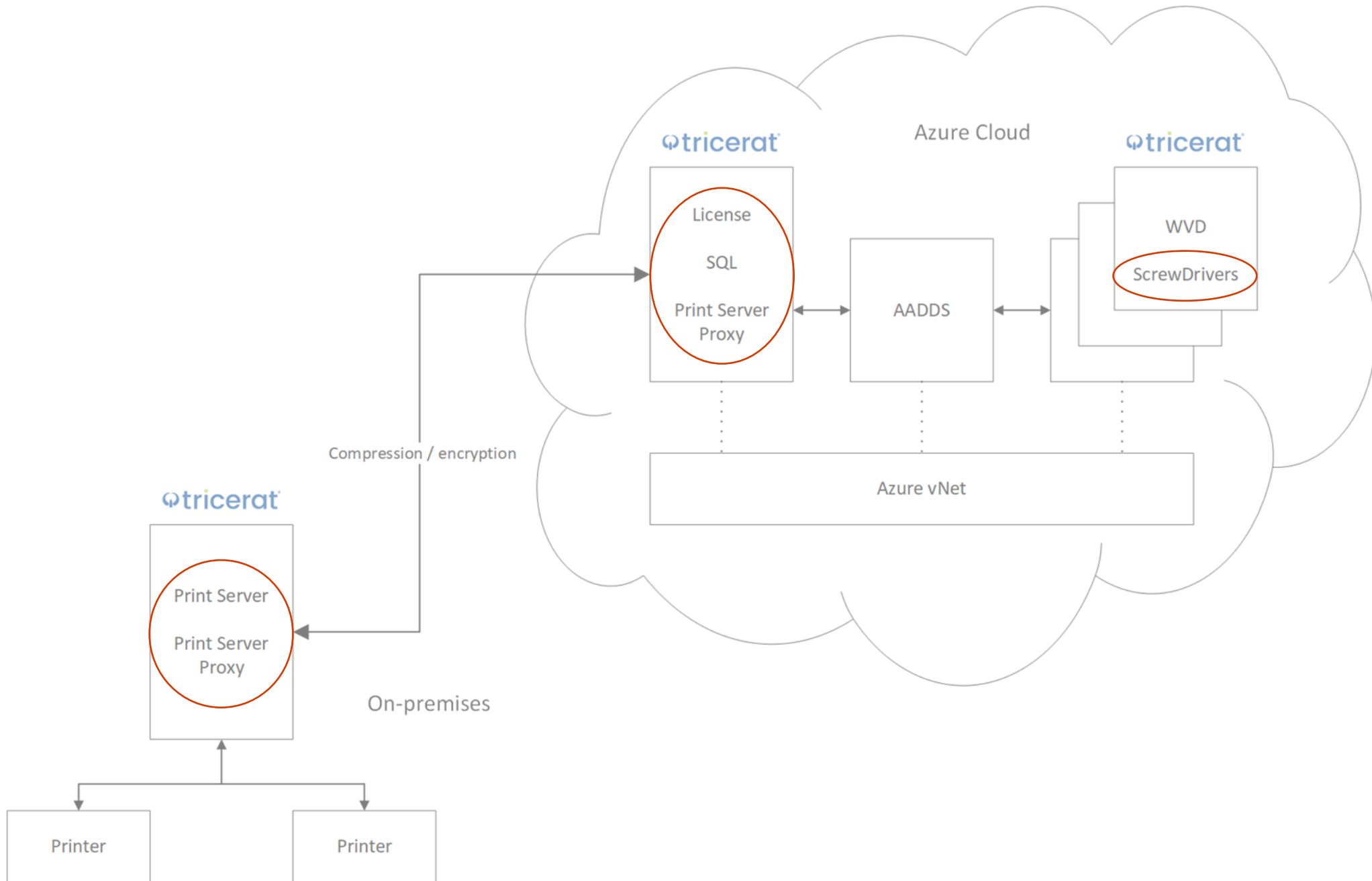
“ Printing can be hard. Especially when remote environments come into play ”

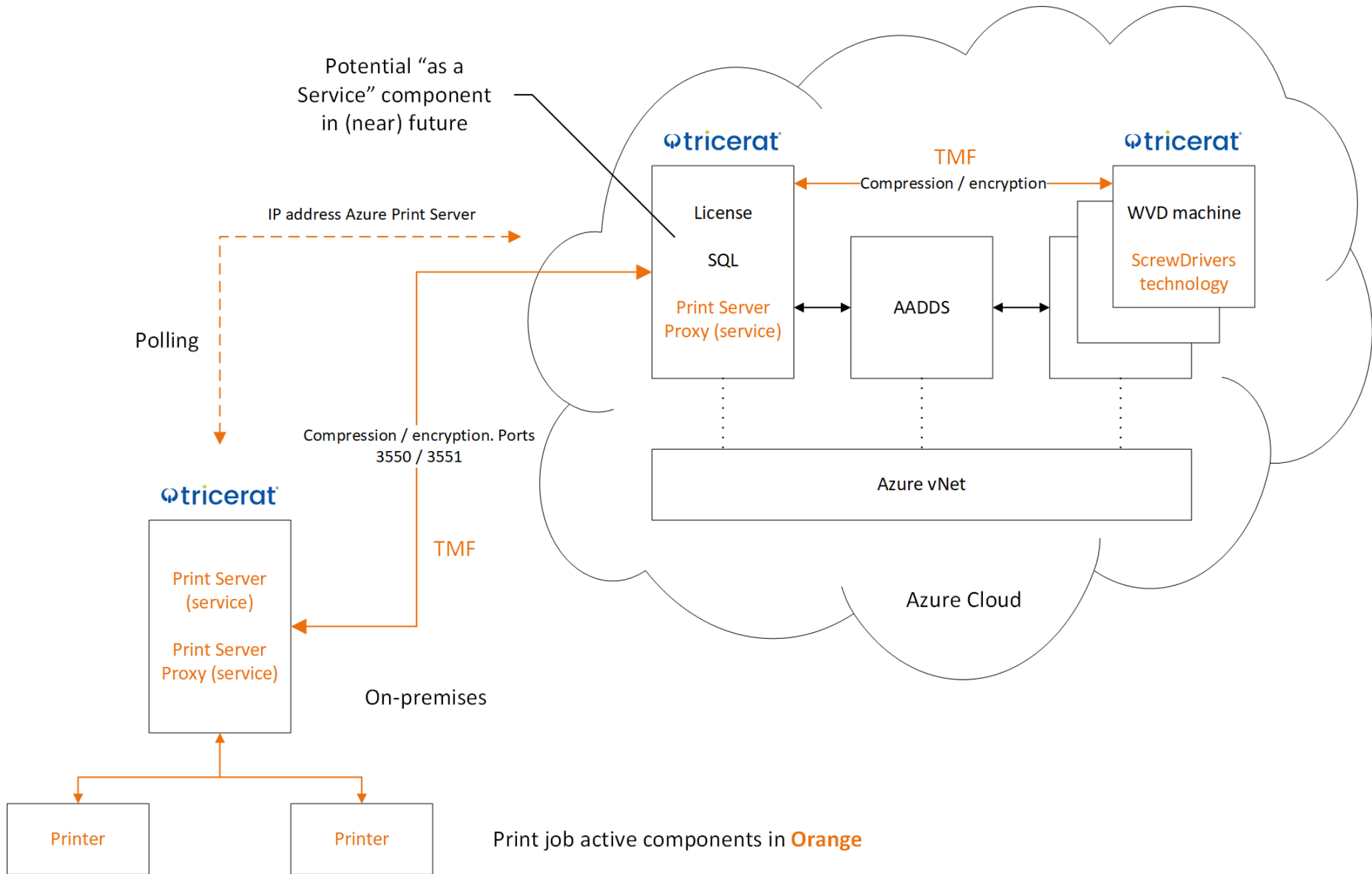
 tricerat[®]

- All remote working scenarios
- No drivers to install or maintain
- Support for all types of devices
- proprietary printing protocol
- Compression & encryption

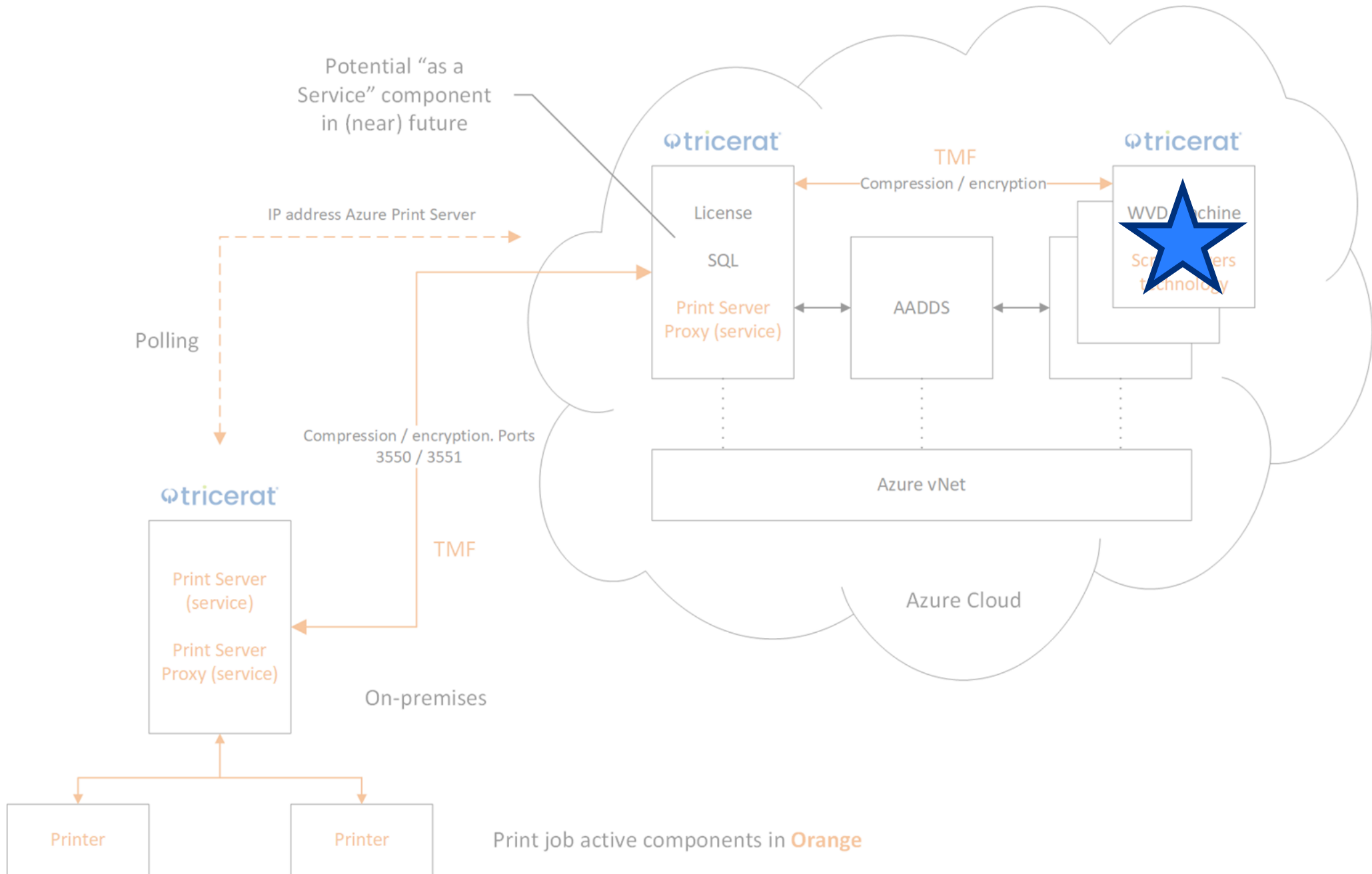


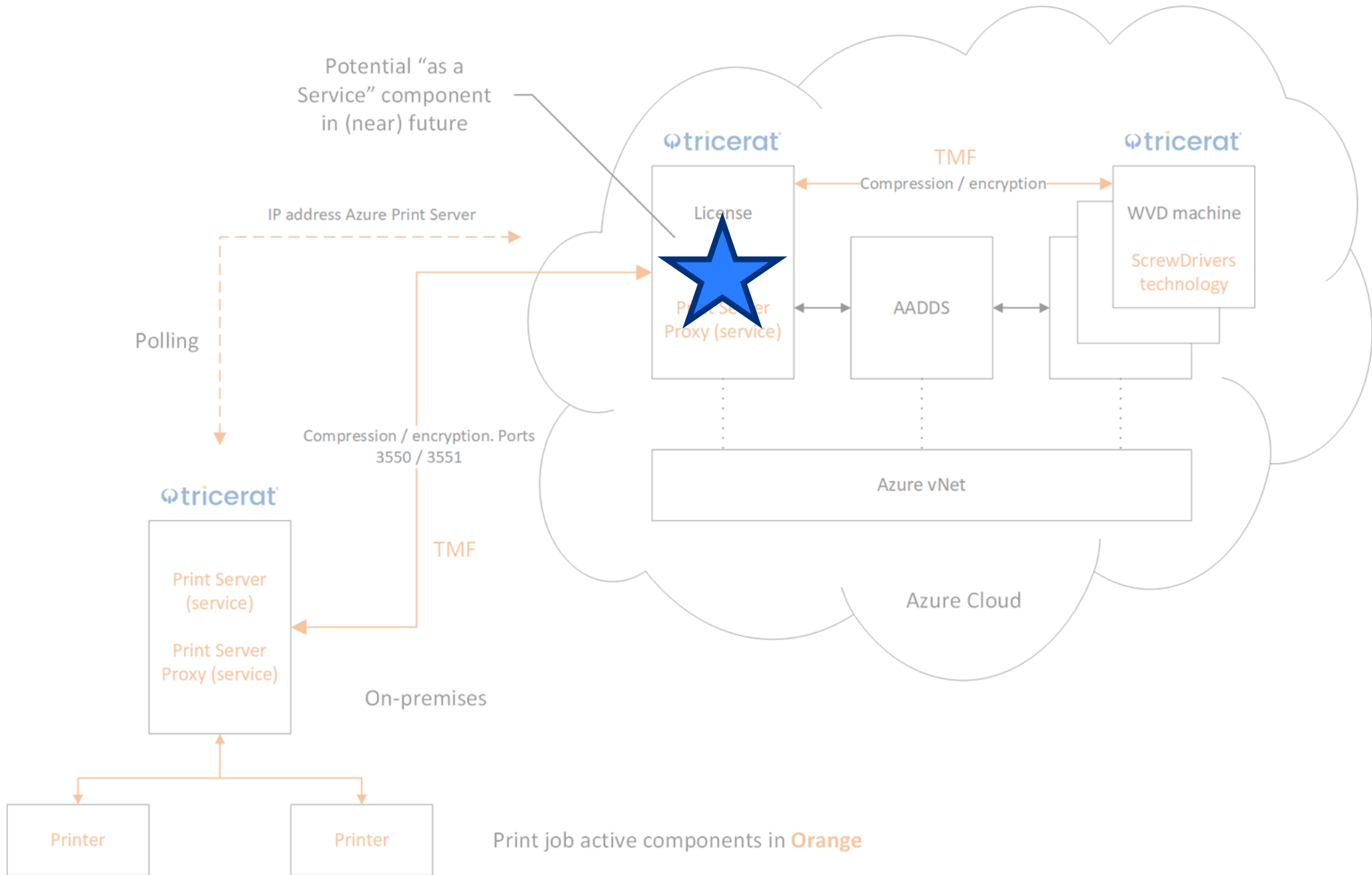


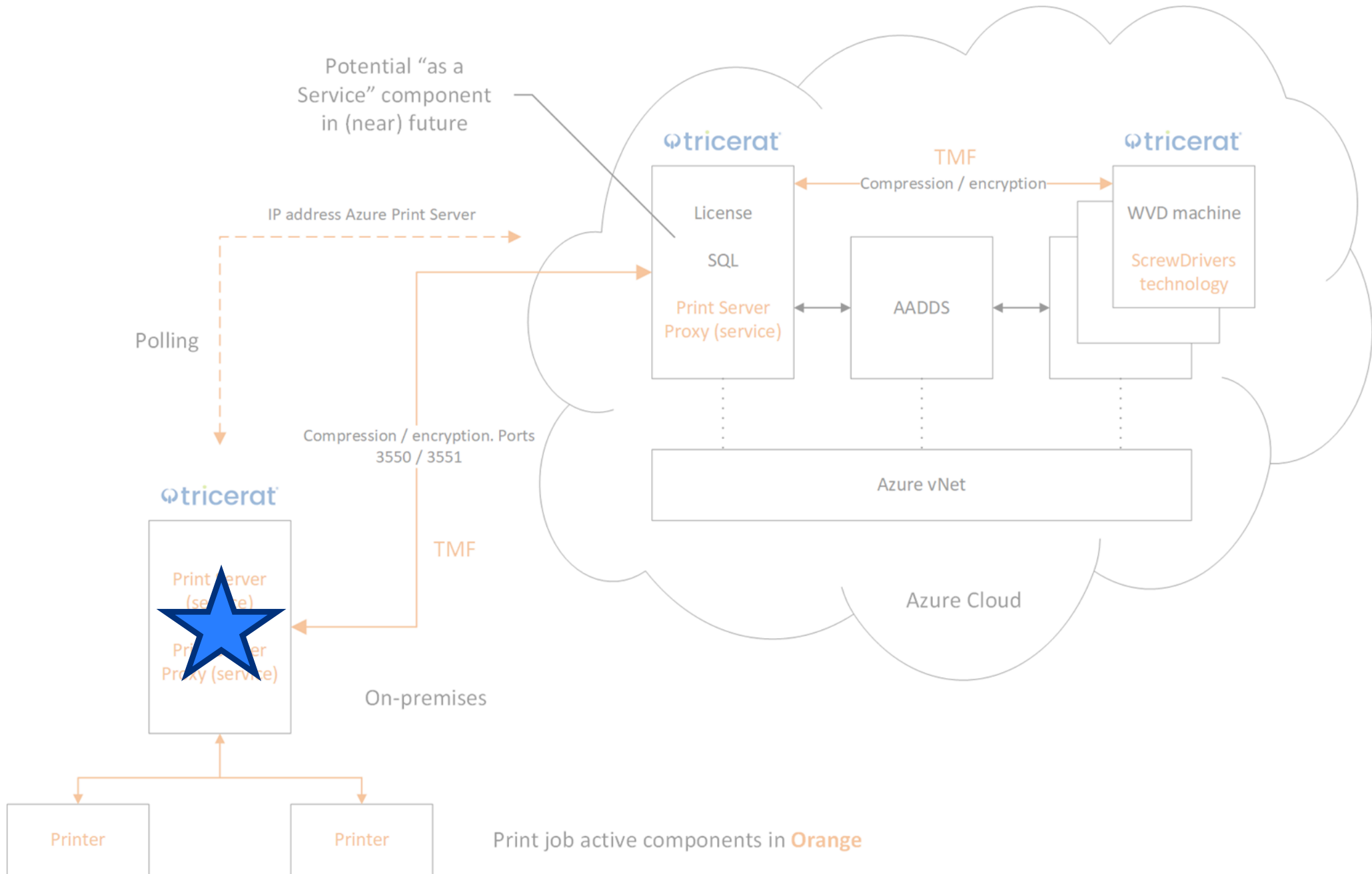


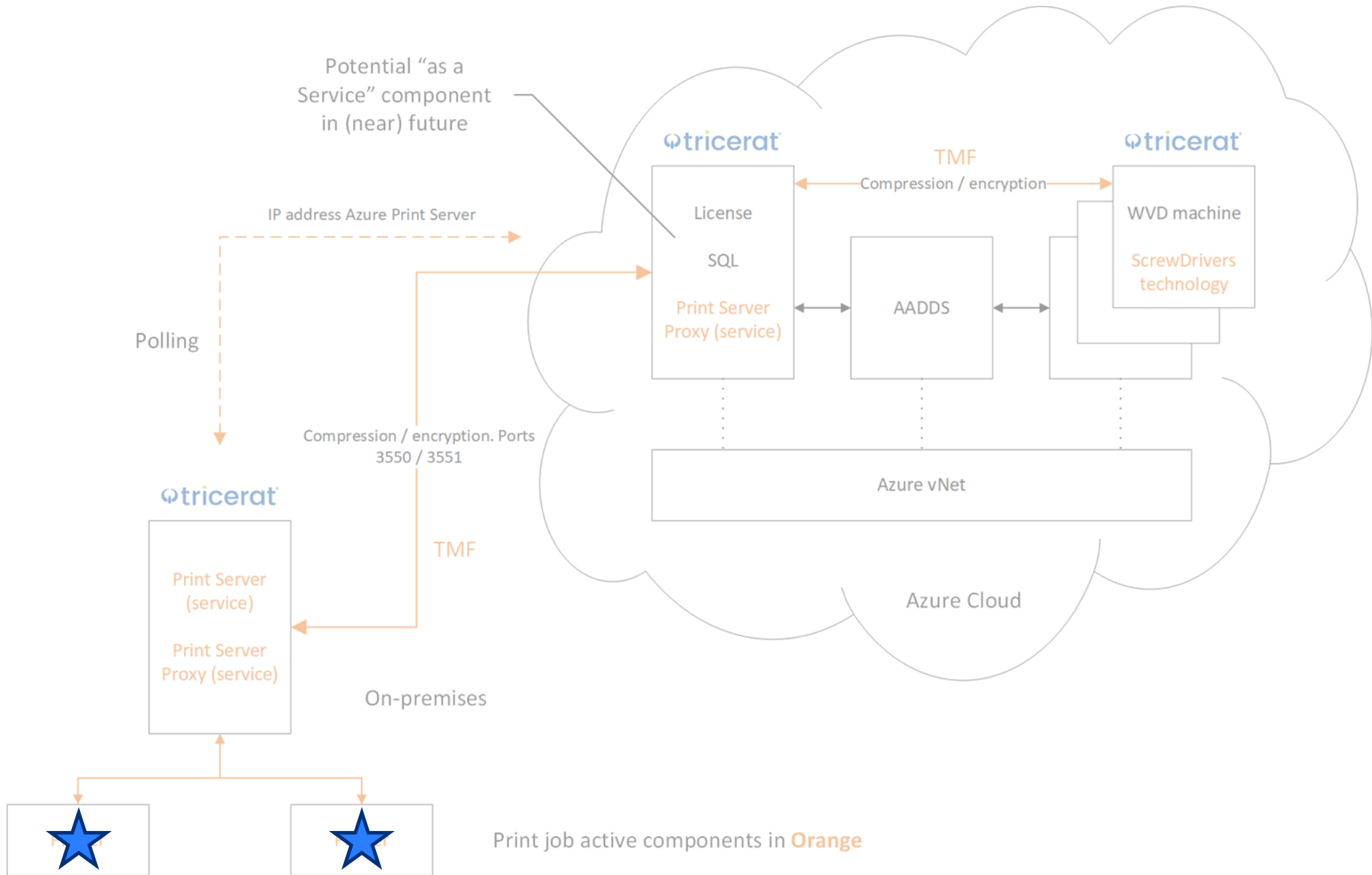


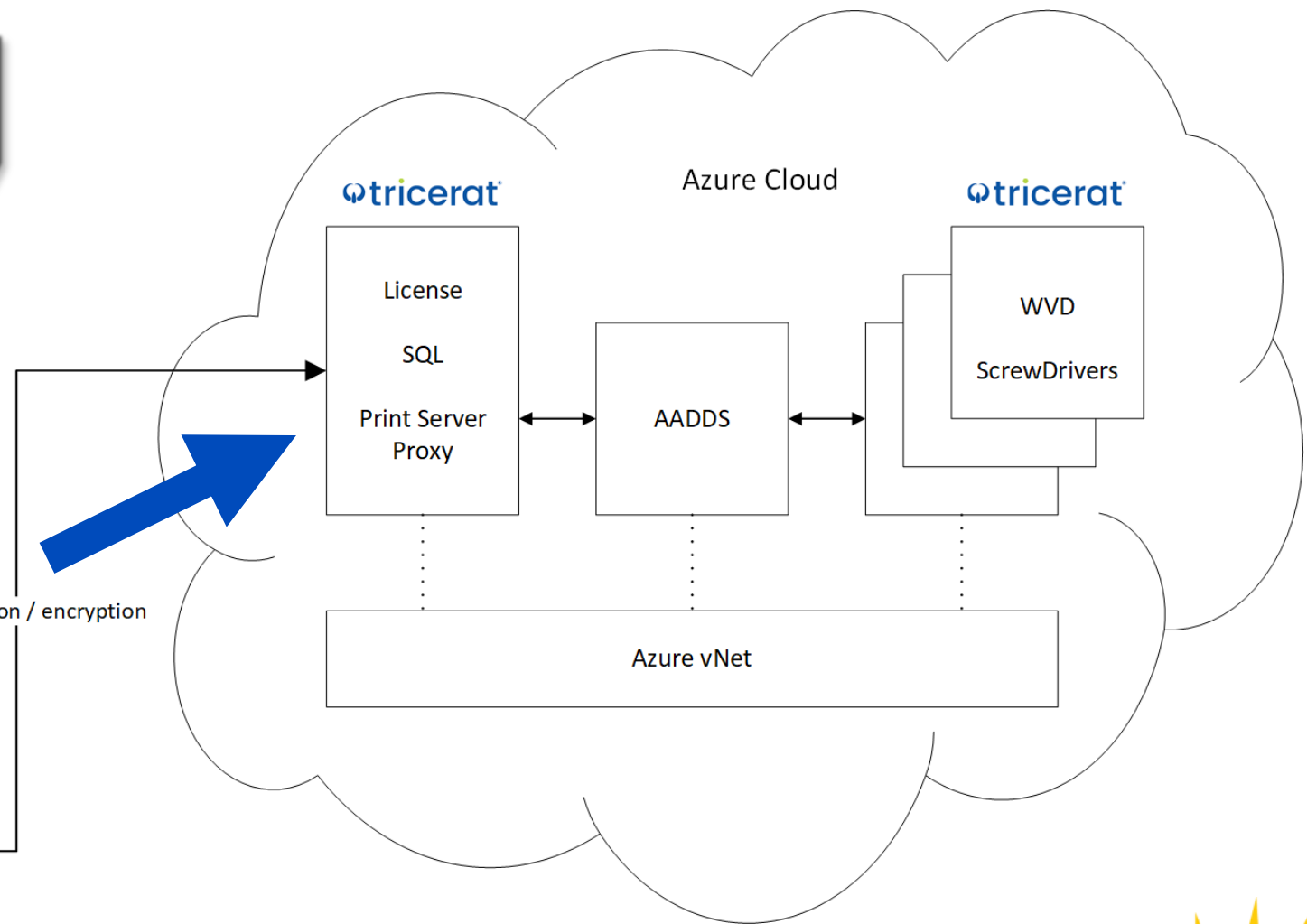
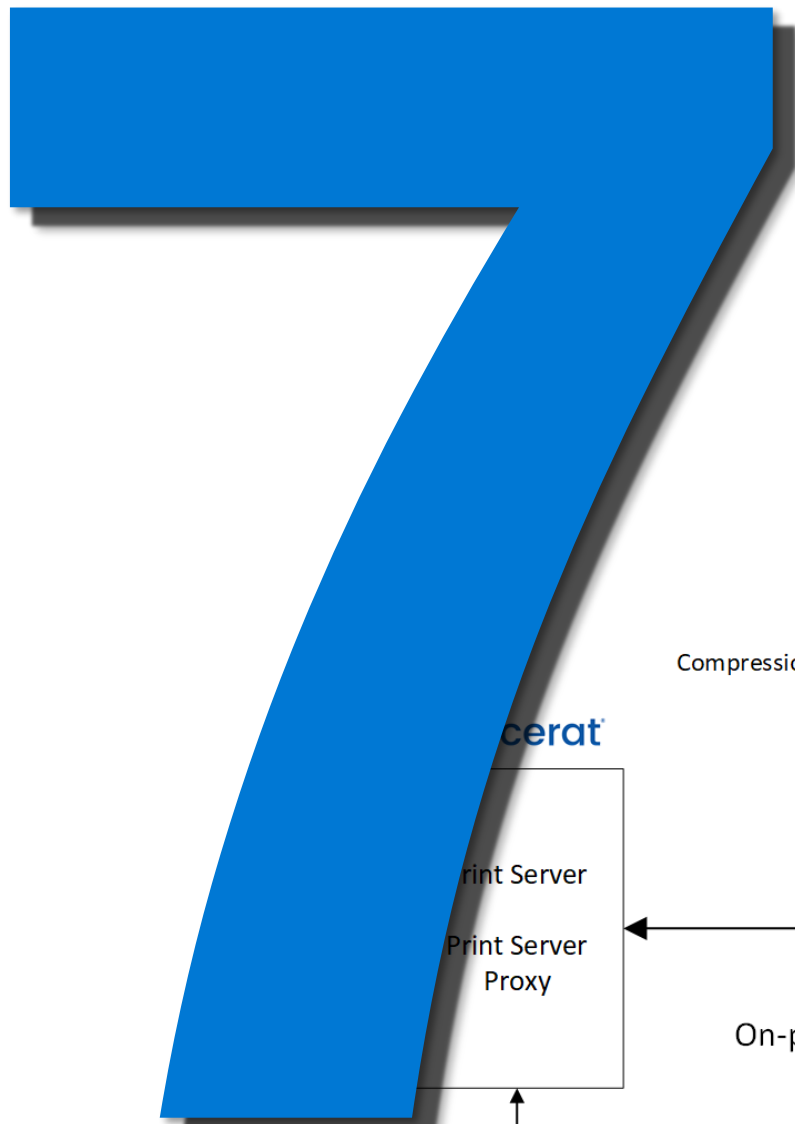
Print job active components in **Orange**





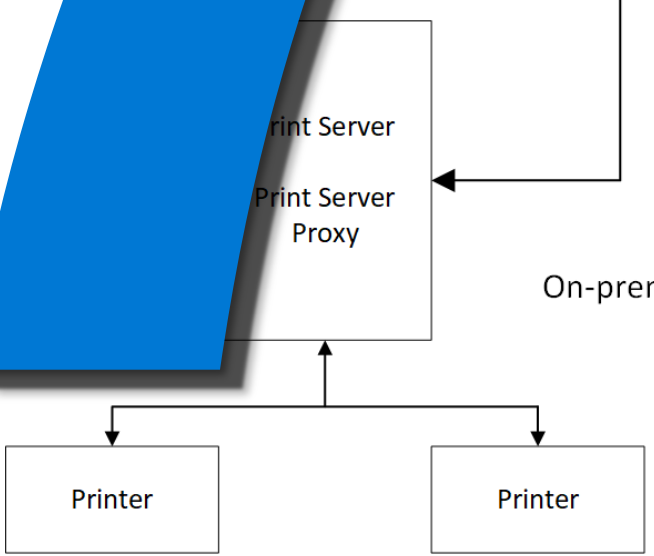




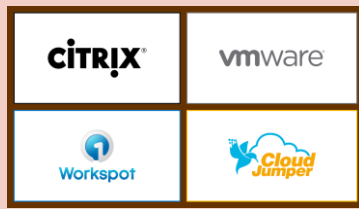


Compression / encryption

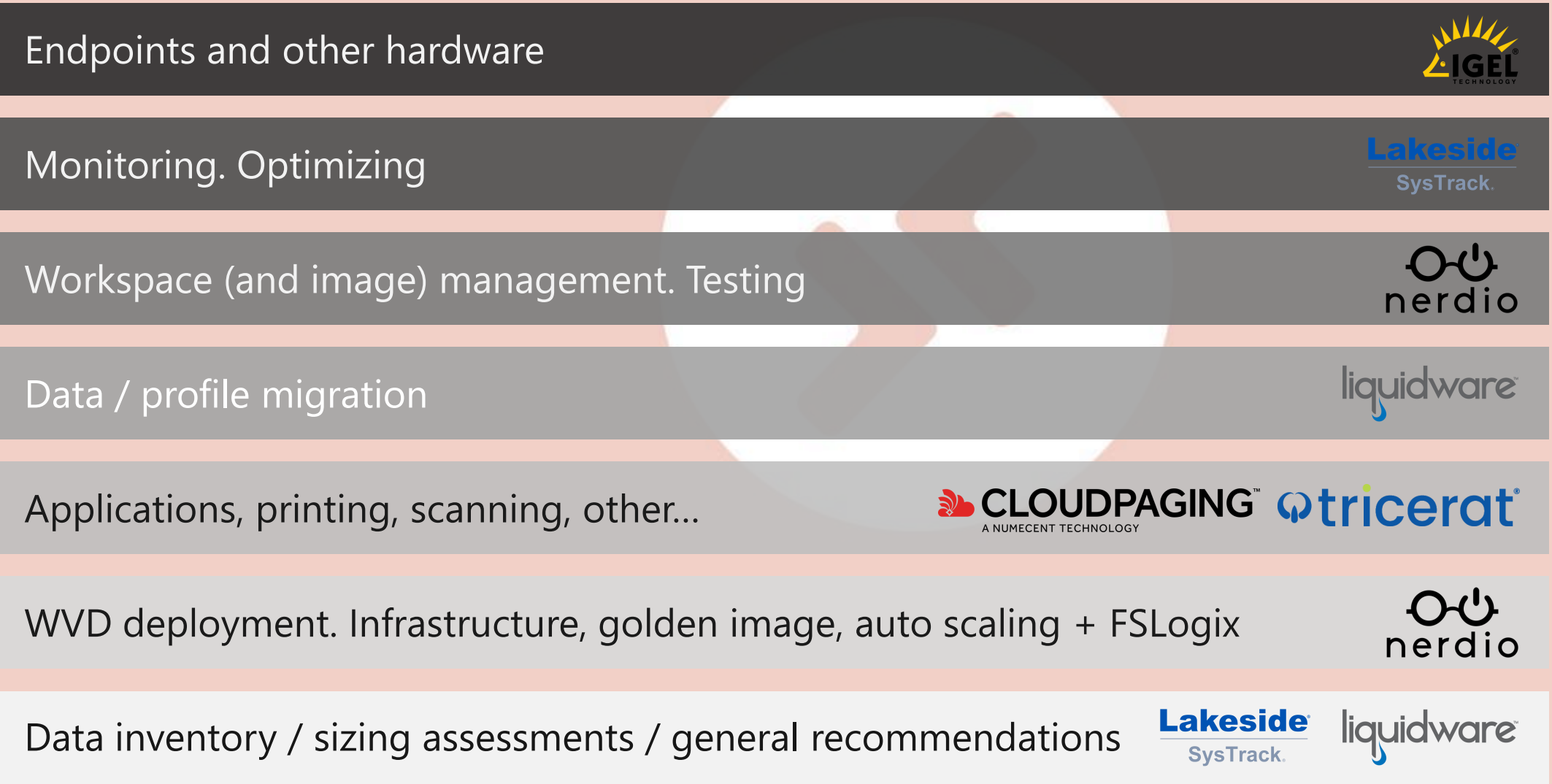
On-premises



Security



DaaS



Consultancy / guidance

WVD Community



Neil McLoughlin



- Weekly WVD newsletter
- The WVD Community initiative
- His own website

Some key takeaways

- **The partner eco-system is important to Microsoft. And vice-versa**
- **There is a (point) solution for (almost) everything (don't get carried away)**
- **Downside. You'll need to manage (and get to know) multiple solutions**
- **Keep an eye on the WVD Roadmap – <https://aka.ms/wvdroadmap>**
- **There's a ton of free content out there... Contribute if you can**

Slide-deck available on
basvankaam.com

Thank you!



basvankaam.com



[@BasvanKaam](https://twitter.com/BasvanKaam)