

February 7, 2024

**Azure Virtual Desktop &
Windows 365
Story Telling**

Diego Lens
Cloud Enablement
Ingram Micro Cloud BeNeLux

MORE AS A SERVICE

!! COURSE WILL START AT 14h00 !!!

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1

February 7, 2024

**Azure Virtual Desktop &
Windows 365
Story Telling**

Diego Lens
Cloud Enablement
Ingram Micro Cloud BeNeLux

MORE AS A SERVICE

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2



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MICRO

Diego Lens

- 24 Years working in Distribution
- Cloud Enablement
- Sales/Technical Trainings
- Microsoft Azure
- Microsoft 365
- Azure Virtual Desktop

- diego.lens@ingrammicro.com
- [linkedin.com/in/diegolens](https://www.linkedin.com/in/diegolens)

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Modern Cloud Platforms



24-Jan



6-Feb



22-Feb

● Sales

● Tech

● Both

👤 Hands-On



6-Mar



20-Feb



21-Mar

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Seamless Security

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31-Jan 28-Feb 27-Mar





27-Feb 21-Feb 20-Mar

- Sales
- Tech
- Both
- ✋ Hands-On

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Connected Workplace




7-Feb 19-Apr



29-Mar

- Sales
- Tech
- Both
- ✋ Hands-On

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Business Performance & Artificial Intelligence



17-Apr

- Sales
- Tech
- Both
- ✋ Hands-On

29-Feb



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Ingram Micro Cloud



16-Jan
26-Mar

9-Feb

- Sales
- Tech
- Both
- ✋ Hands-On

8-Feb



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8



AGENDA

- Desktop Virtualization : Historical Overview
- Windows 365
- Windows 365 Business
- Windows 365 Enterprise
- Windows 365 Business vs Enterprise
- Azure Virtual Desktop : What is New ?
- Azure Virtual Desktop : Sizing & Pricing
- When proposing Azure Virtual Desktop ?
- Managed Service with Azure Virtual Desktop / Windows 365
- Wrap-Up

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9

9

Desktop Virtualization : Historical Overview



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10

Two Different Desktop Virtualizations

RDS

VDI

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11

11

Two Different Desktop Virtualizations

RDS

VDI

Windows Server
Desktop Experience

Windows 10
Enterprise

Remote Desktop Services

Virtual Desktop Infrastructure

Windows Server O/S

Windows Desktop O/S

Multiple sessions (**Pooled**)

Single session (**Personal**)

Citrix Virtual Apps

Citrix Virtual Desktops

(XenApp)

(XenDesktop)

70% market-share

30% market-share

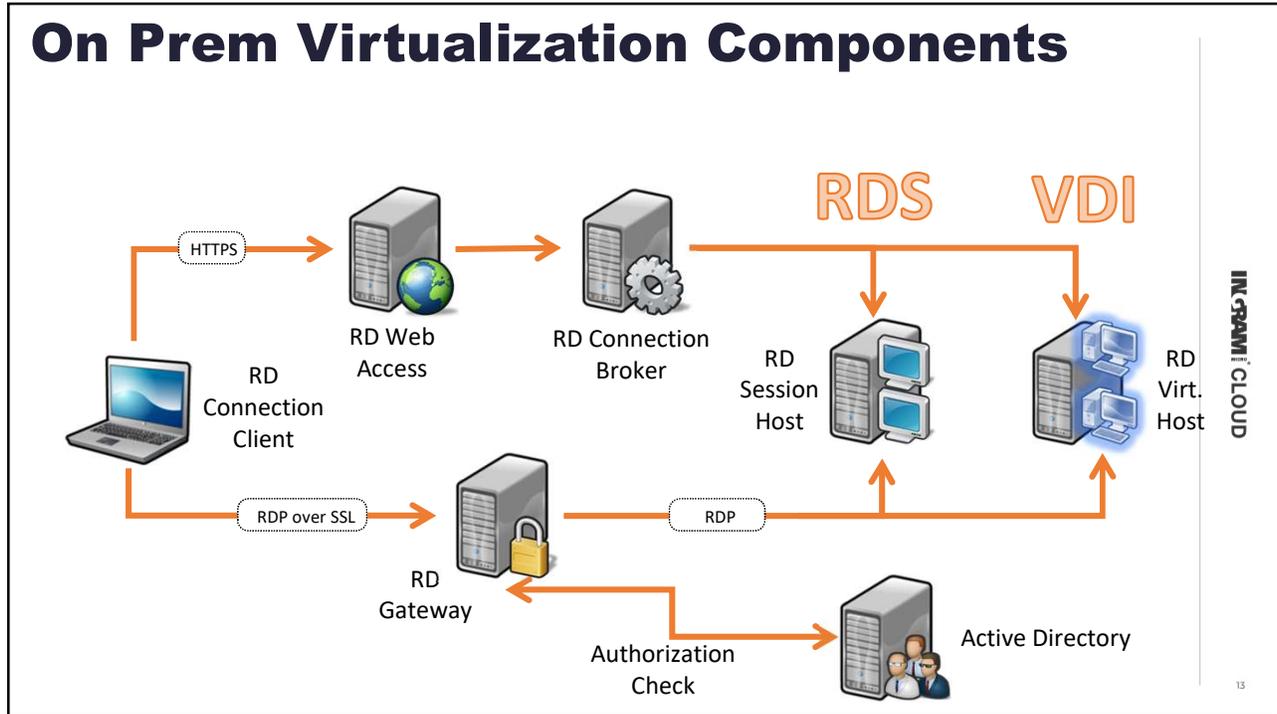
Applications installed by Administrator

User can install own applications

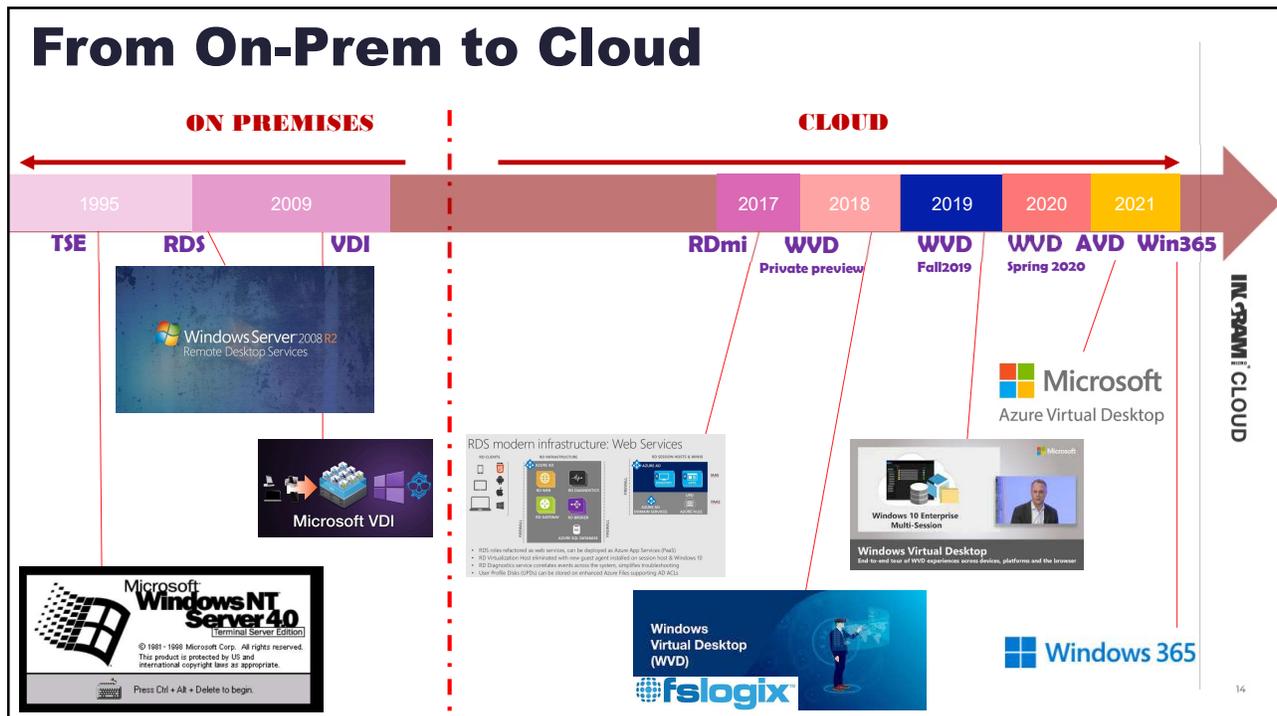
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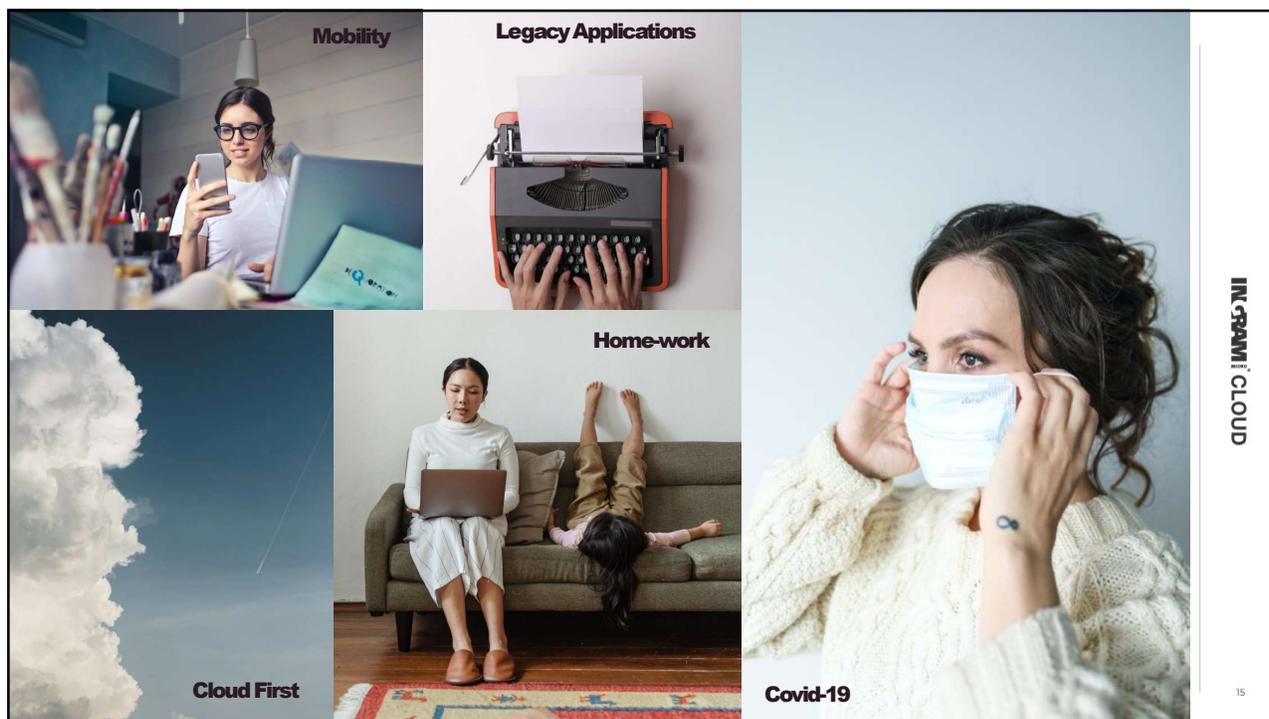
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13



14



15

Cloud Licensing

- Subscription Based Licensing
 - Price per User per Month
- Consumption Based Licensing
 - Pay as you use

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16

16

Cloud Licensing

- Subscription Based Licensing

Price per User
per Month

 Microsoft 365

- Consumption Based Licensing

Pay as you
use

 Microsoft Azure

17

Desktop Virtualization in the Cloud

- Subscription Based Licensing

Price per User
per Month

- Consumption Based Licensing

Pay as you
use

18

Desktop Virtualization in the Cloud

- Subscription Based Licensing

Price per User
per Month

- Consumption Based Licensing

Pay as you
use

 Microsoft
Azure Virtual Desktop

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19

19

Desktop Virtualization in the Cloud

- Subscription Based Licensing

Price per User
per Month

 **Windows 365** NEW

- Consumption Based Licensing

Pay as you
use

 Microsoft
Azure Virtual Desktop

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20

20

Windows 365

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 **Microsoft**

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21

Cloud Licensing

- Subscription Based Licensing
 - Price per User per Month
- Consumption Based Licensing
 - Pay as you use

 **Microsoft 365**
SaaS

 **Microsoft Azure**
IaaS/PaaS

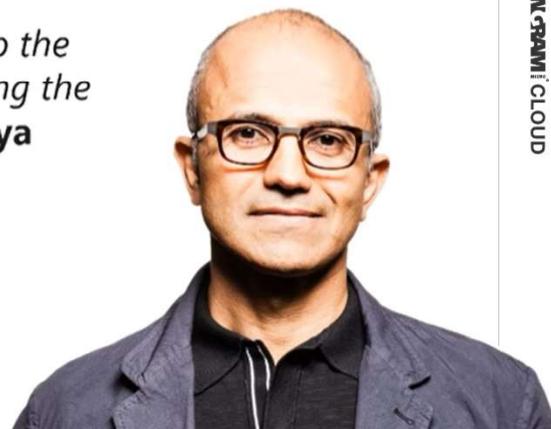
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22

*"With **Windows 365**, we're creating a new category: the Cloud PC.*

*Just like applications were brought to the **cloud** with **SaaS**, we are now bringing the operating system to the cloud" - **Satya Nadella, CEO Microsoft***



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23

Desktop Virtualization in the Cloud

- Subscription Based Licensing



 **Windows 365**
SaaS

NEW

- Consumption Based Licensing



 **Microsoft**
Azure Virtual Desktop
IaaS

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24

24



25

Windows 365

- Embrace Flexibility in how, when and where you work
- Streaming your personalized Windows Experience
- Your Cloud PC is always Current
- Integrated Management & Security
- Scale On Demand
- A few Clicks to Deploy
- Hybrid Windows for a Hybrid World



 Windows 365

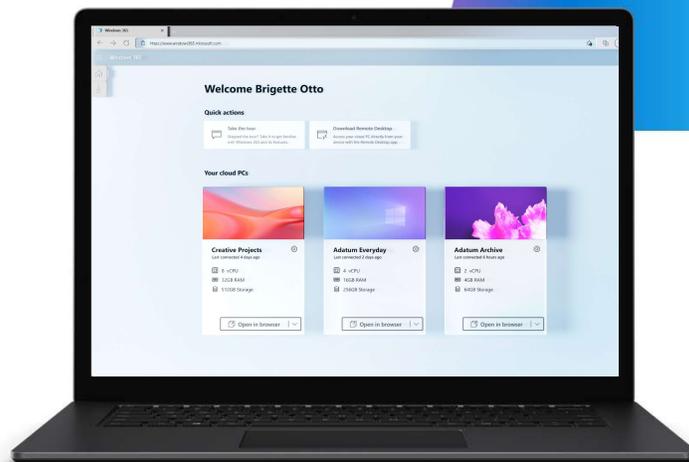
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26

26

Windows 365

Hybrid Windows for a hybrid world



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27

27

Today's hybrid workforce

A new solution to meet your worker's needs



Data security

Improve regulatory compliance and IP protection via data centralization and a reduced threat surface.



High-capacity computing

Cloud-scale compute and storage to support specialized workloads like design and development.



BYOPC programs

Enable secure cloud PCs, even on personal devices.



Disaster recovery

Help ensure continuity and access for your workforce and company data even in the most challenging circumstances.



Temporary/New workforces

Simplify and accelerate the onboarding and offboarding process for elastic workforces.



Mergers & Acquisitions

Provide seamless transitions and access for growing businesses.

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28

28

Welcome to your Windows 365 Cloud PC

A new solution for today's hybrid workforce



Your content
wherever you go



Compute options
for different users



Consistent settings
across devices



The **apps** you need,
when you need them



Scalable storage
based on your needs



Integrated **unified security** and **identity management**

29

Integrated with Microsoft cloud services

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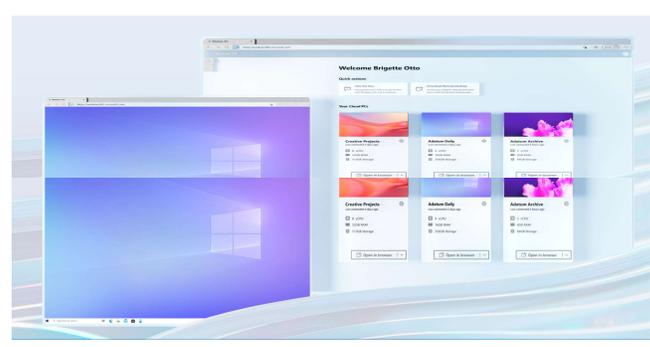
30

30

Windows 365 Cloud PC

Windows 365 Business

Windows 365 Enterprise



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31

31

Windows 365 Demo

DEMO TIME



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32

32

Windows 365 Business

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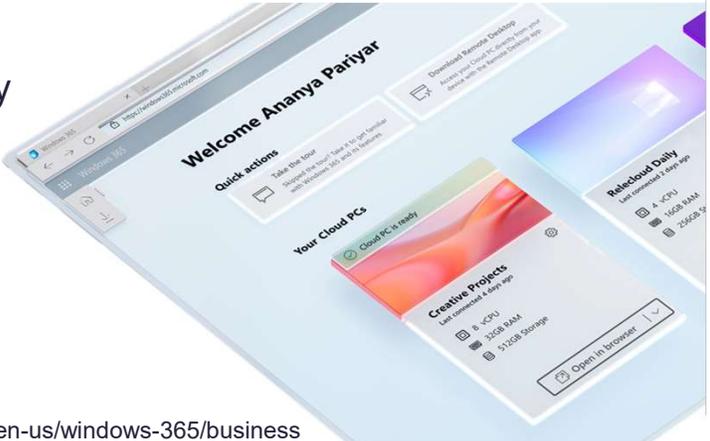
CLOUD
Microsoft

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33

Windows 365 Business

- Based on Azure Virtual Desktop technology
- Subscription Based personal Desktop
- Up to 300 Users
- Work anywhere
- Simple to buy and deploy
- Minimize risk
- Manage costs
- Get started fast
- Streamline IT
- Scale for your needs

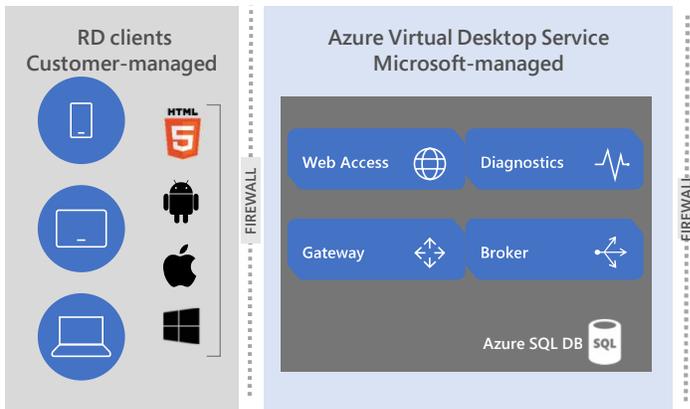


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<https://www.microsoft.com/en-us/windows-365/business>

34

Shared Technology with AVD

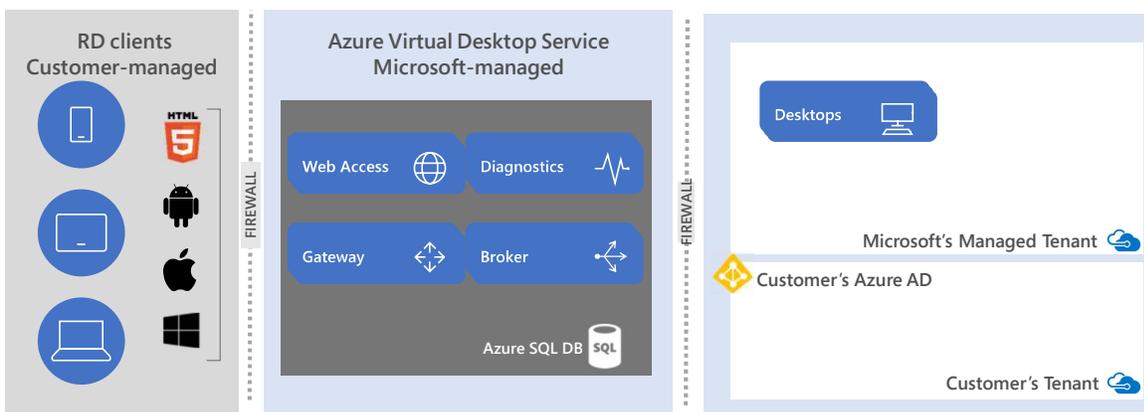


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35

Windows 365 Business : VDI Only Solution



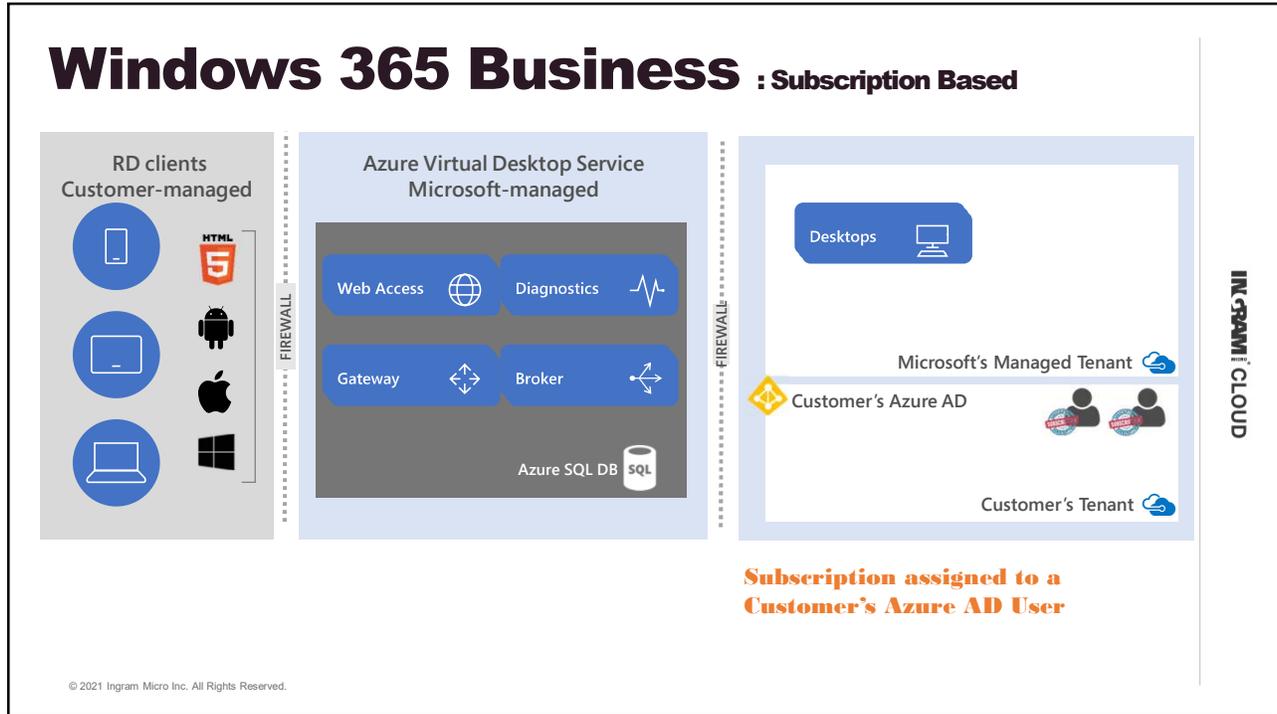
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- ~~Windows 10 Multi-Session~~
- ~~RDS is possible~~
- **VDI only is possible**

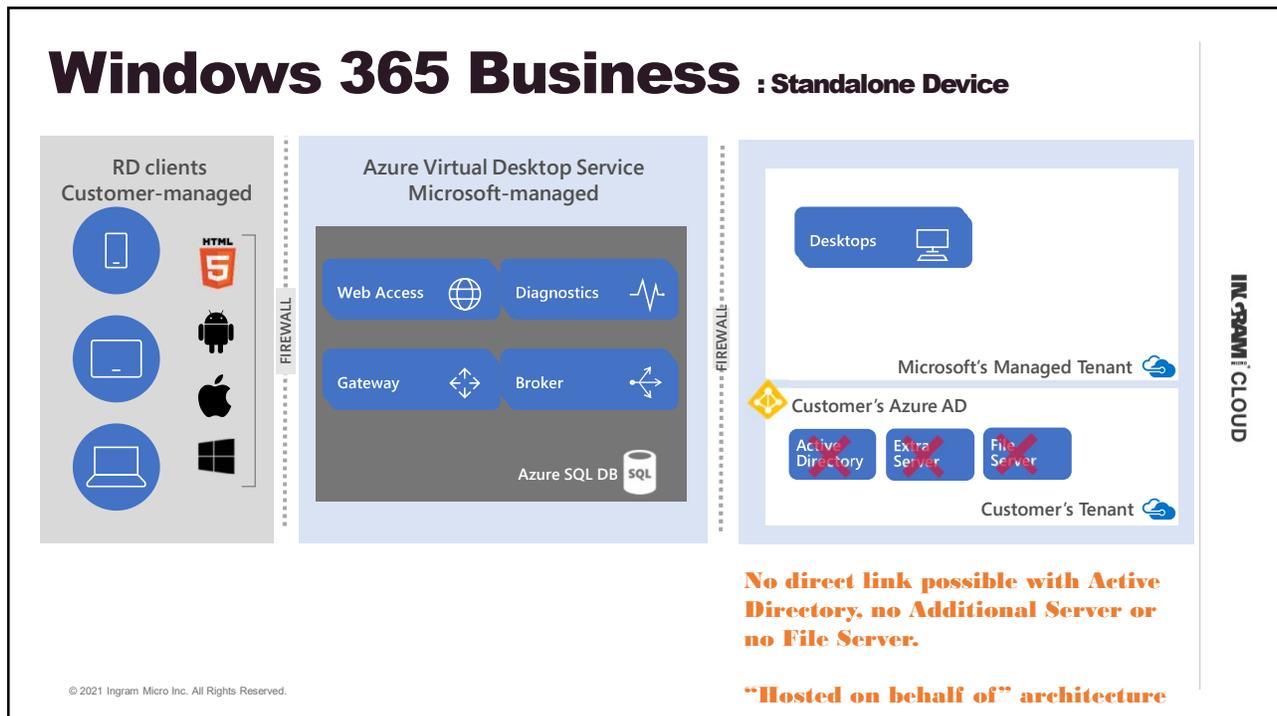
Only VDI Remote Desktops possible. The Desktop is always running

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36

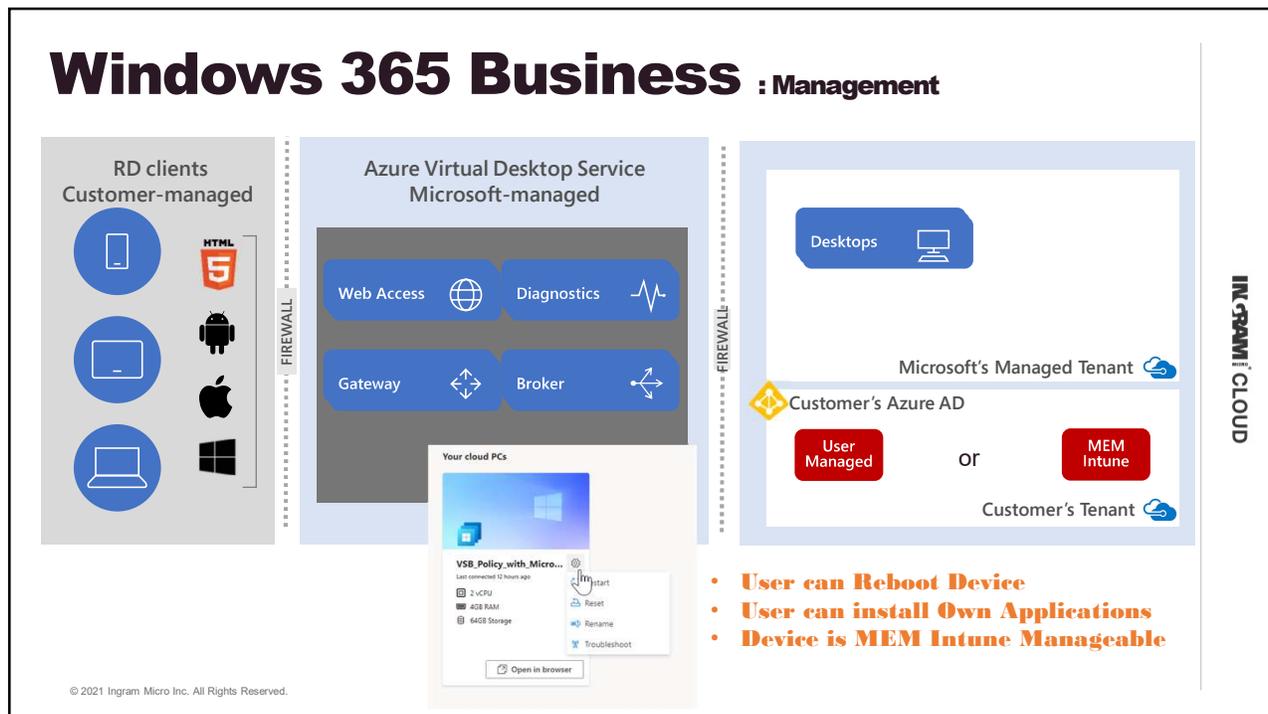


37



38

Windows 365 Business : Management



39

Windows Hybrid Benefit



Windows 365 Business— Save up to 16% with Windows Hybrid Benefit

With Windows Hybrid Benefit, customers who have Windows 11 Pro or Windows 10 Pro qualify for discounted pricing on Windows 365 Business.²

[Learn more >](#)

<https://www.microsoft.com/en-us/windows-365/all-pricing>

<https://www.microsoft.com/en-us/windows-365/faq#coreui-collapsibledrawer-w56p8sc>

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40

Windows 365 Business Overview

	Windows 365 Business (with Windows Hybrid Benefit)	Windows 365 Business (without Windows Hybrid Benefit)
Connecting Device	The User is the primary user of his PC with Windows 10 Pro installed	Any
Pricing Model	Subscription Based (price / User / Month)	
Prerequisites	None	
Tenant	Microsoft Tenant	
Identity	Azure Active Directory	
Desktop Management	User Self Service or optional MEM Intune Managed	
Application Management	User Installed Applications or optional MEM Intune Managed	
PC Storage	Included in Fixed Price	
PC Compute	Included in Fixed Price	
PC Networking	Included in Fixed Price with limitations (20GB-2CPU / 40GB-4CPU / 70GB-8CPU)	
1vCPU, 2GB RAM, 64GB DSK	€ 18,20	€ 21,90
2vCPU, 4GB RAM, 64GB DSK	€ 25,50	€ 29,10
2vCPU, 4GB RAM, 128GB DSK	€ 28,20	€ 31,90
2vCPU, 4GB RAM, 256GB DSK	€ 36,40	€ 40,10
2vCPU, 8GB RAM, 128GB DSK	€ 37,30	€ 41,00
2vCPU, 8GB RAM, 256GB DSK	€ 45,50	€ 49,20
4vCPU, 16GB RAM, 128GB DSK	€ 60,10	€ 63,80
4vCPU, 16GB RAM, 256GB DSK	€ 68,30	€ 72,00
4vCPU, 16GB RAM, 512GB DSK	€ 92,00	€ 95,60
8vCPU, 32GB RAM, 128GB DSK	€ 112,00	€ 115,70
8vCPU, 32GB RAM, 256GB DSK	€ 120,20	€ 123,90
8vCPU, 32GB RAM, 512GB DSK	€ 143,90	€ 147,50

* Prices : Monthly Payment / Monthly Subscription

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41

41

Windows 365 Enterprise

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42

Desktop Virtualization in the Cloud

- Consumption Based Licensing

- Subscription Based Licensing


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43

43

Desktop Virtualization in the Cloud

- Consumption Based Licensing

- Subscription Based Licensing

- Consumption + Subscription Based Licensing


Combined



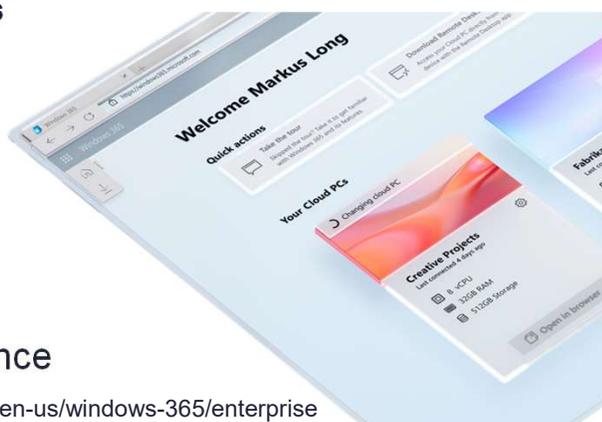
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44

Windows 365 Enterprise

- Based on Azure Virtual Desktop Technology
- Enable flexibility for hybrid work
- Simplify management
- Customize to meet your needs
- Rely on the Microsoft Cloud
- Ensure business continuity
- Scale as needed
- Easy deploy and manage
- Protect your data
- Increase security and compliance



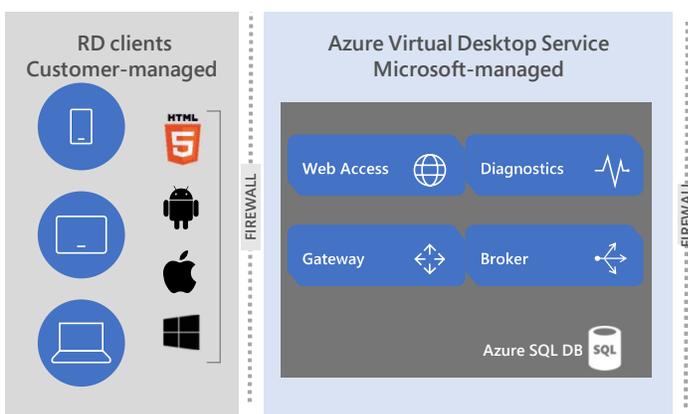
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45

<https://www.microsoft.com/en-us/windows-365/enterprise>

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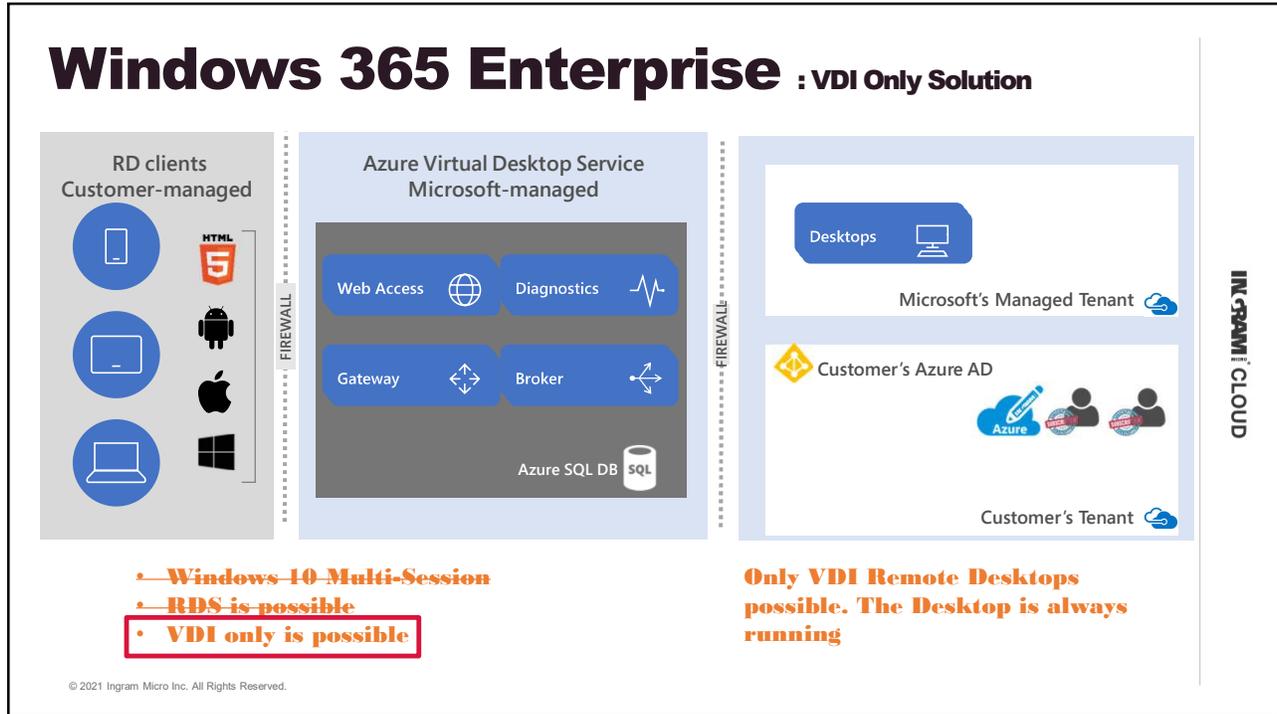
Shared Technology with AVD



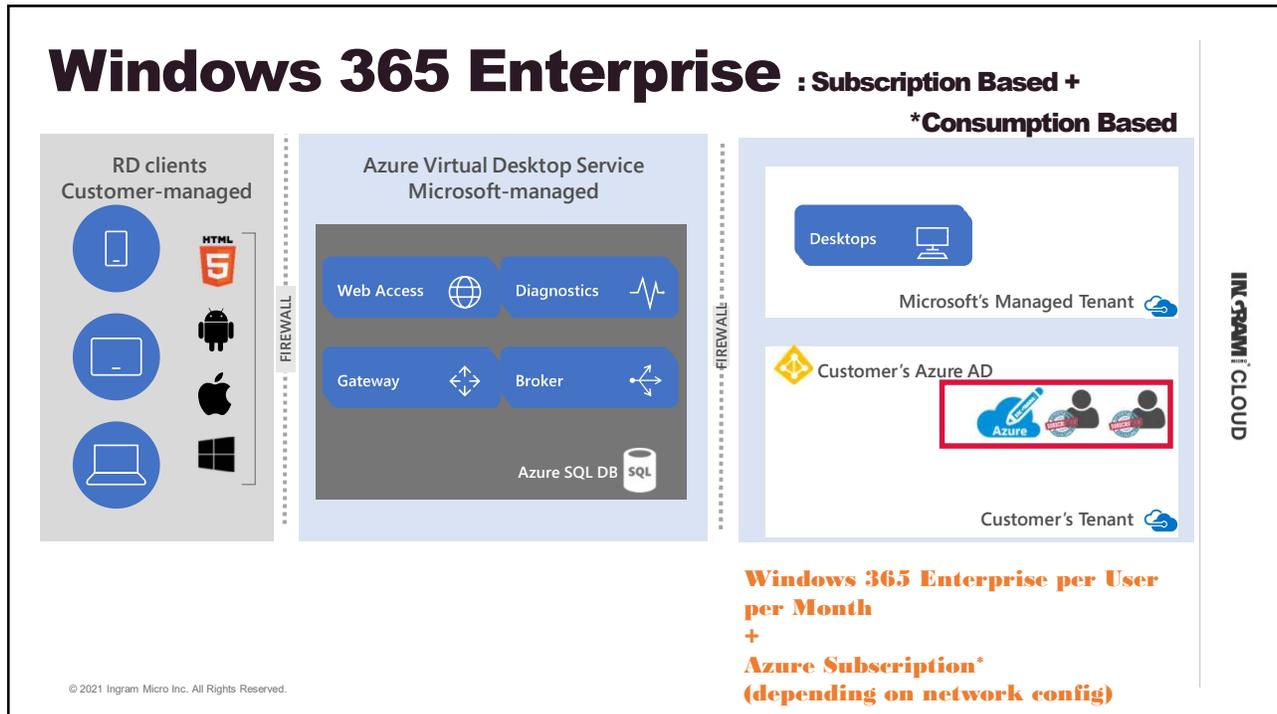
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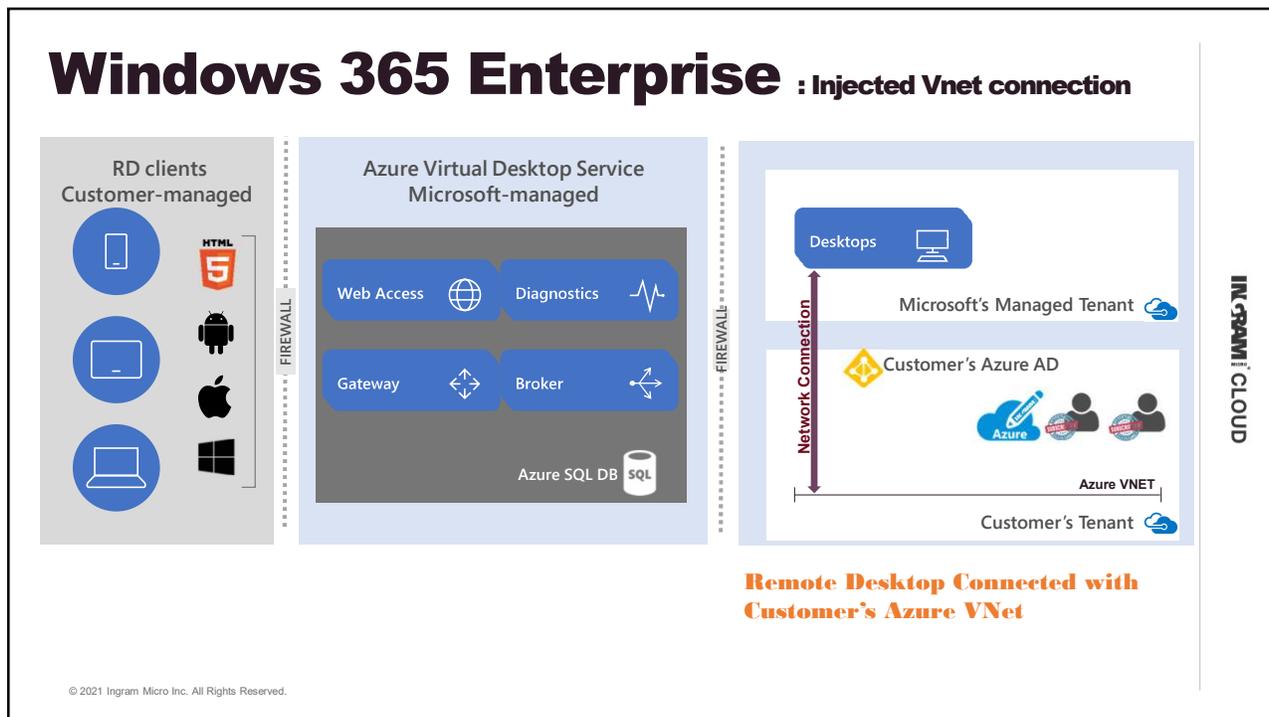
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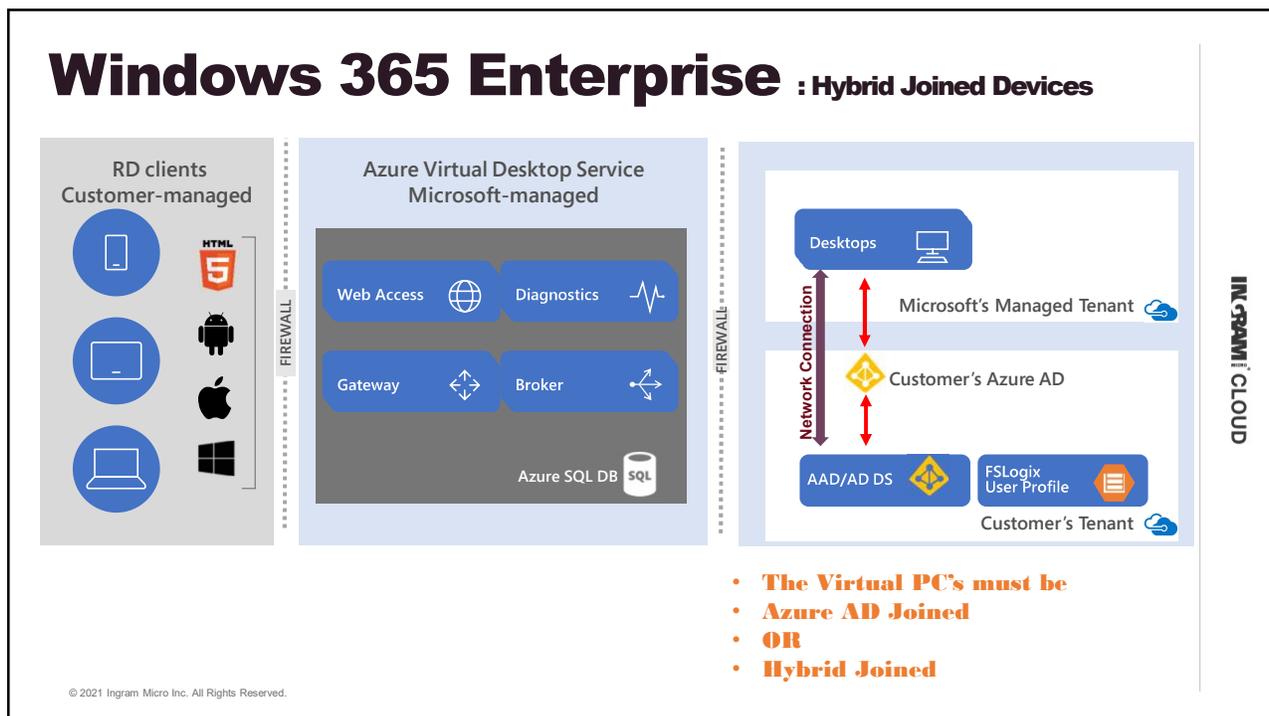
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48

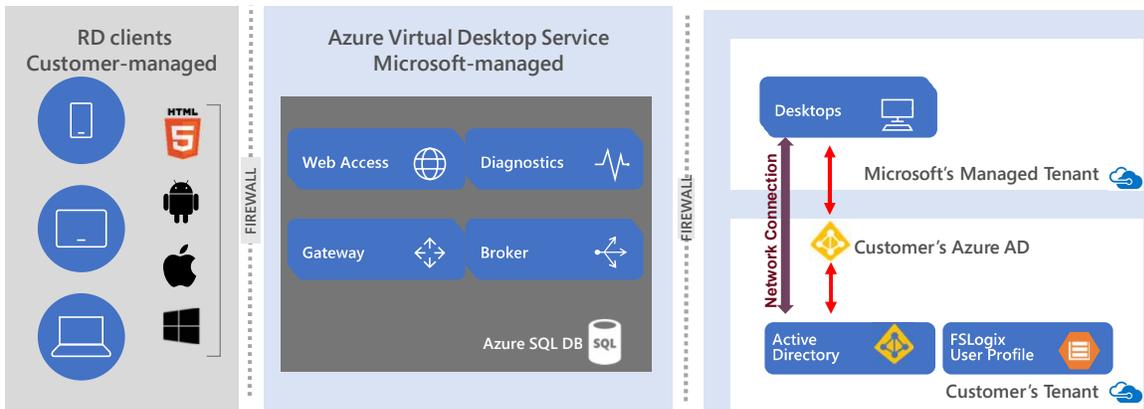


49



50

Windows 365 Enterprise : FSLogix required

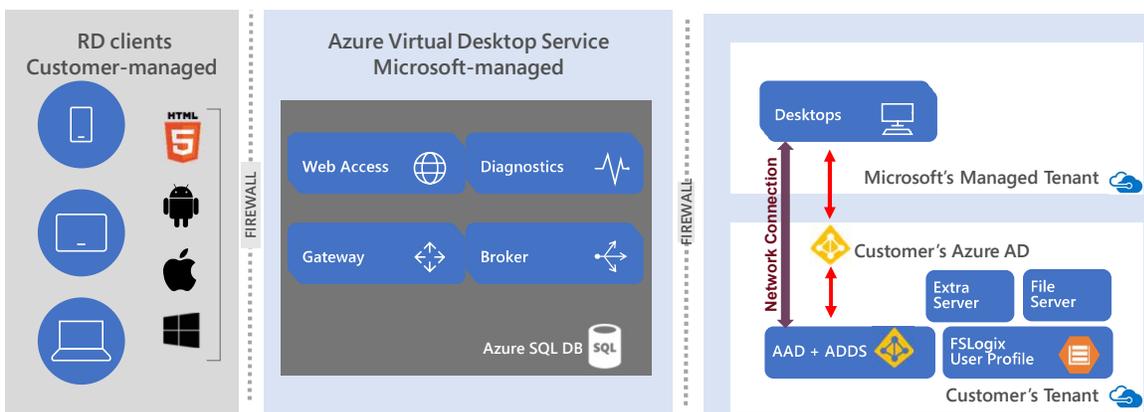


- **User Profiles are Managed with FSLogix**

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51

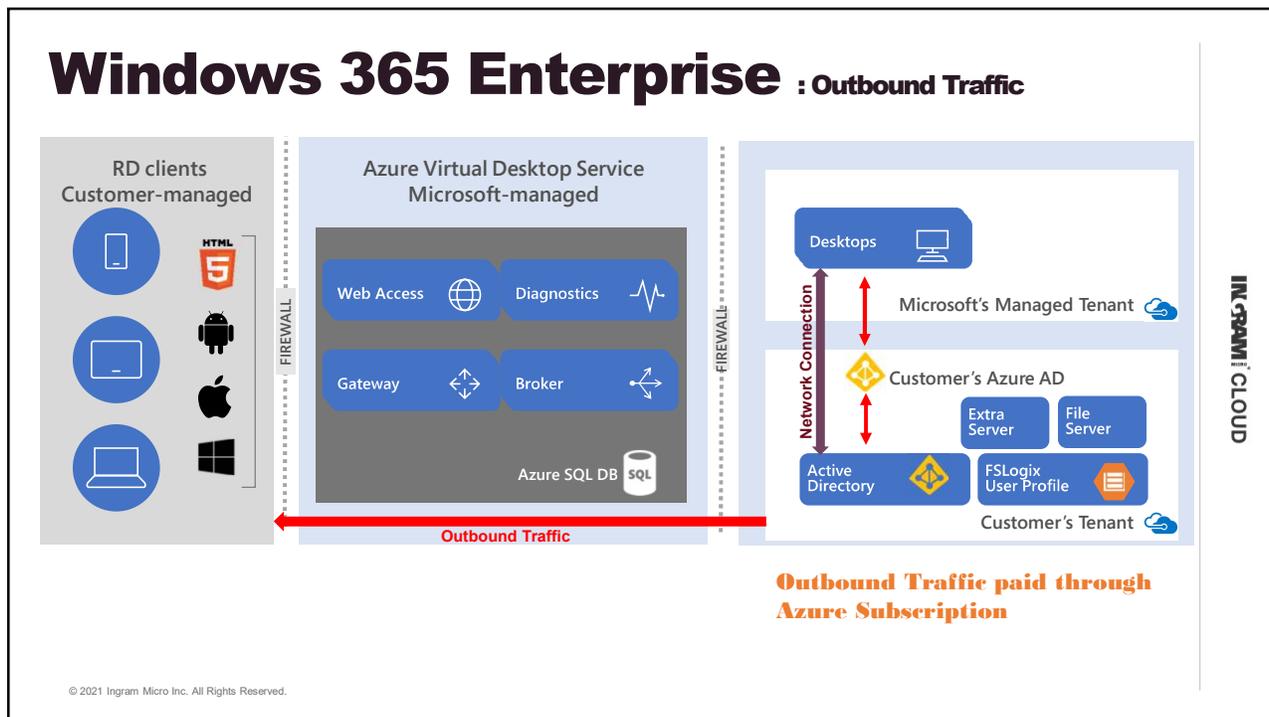
Windows 365 Enterprise : Own Servers Supported



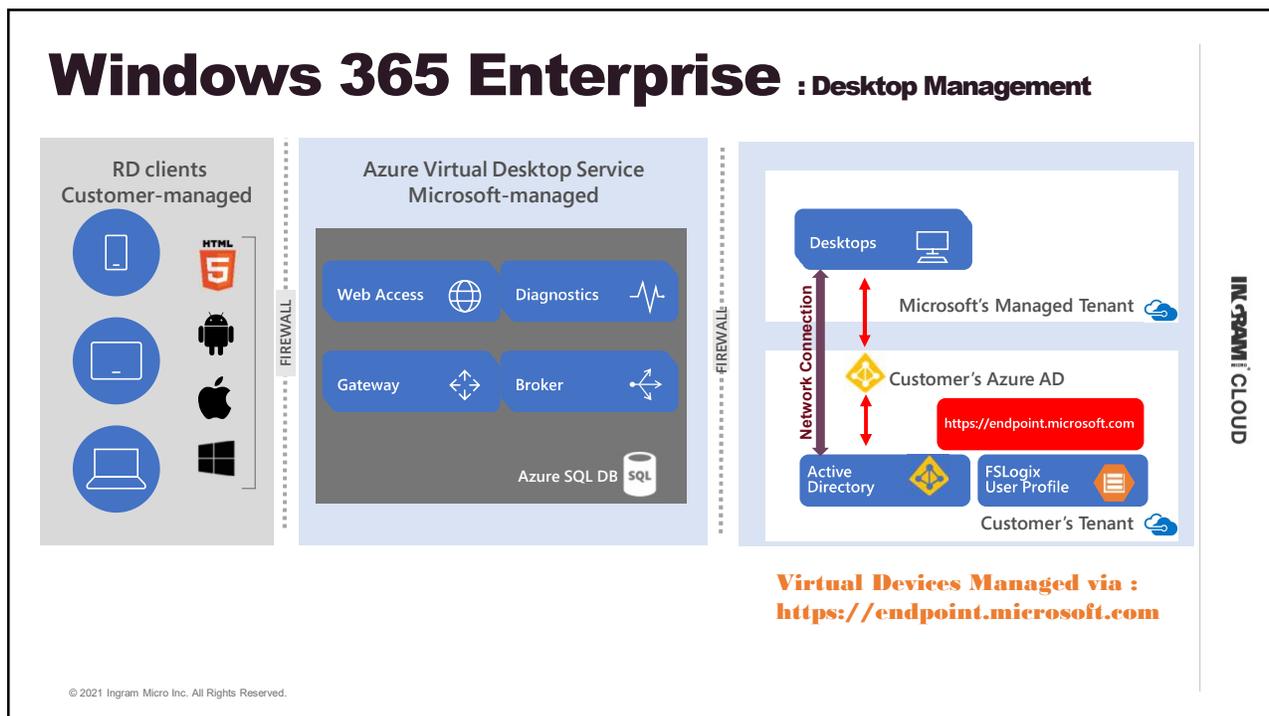
- **The Own environment can be integrated with the Desktops**
- **Azure VPN to On-Prem environment supported**

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52

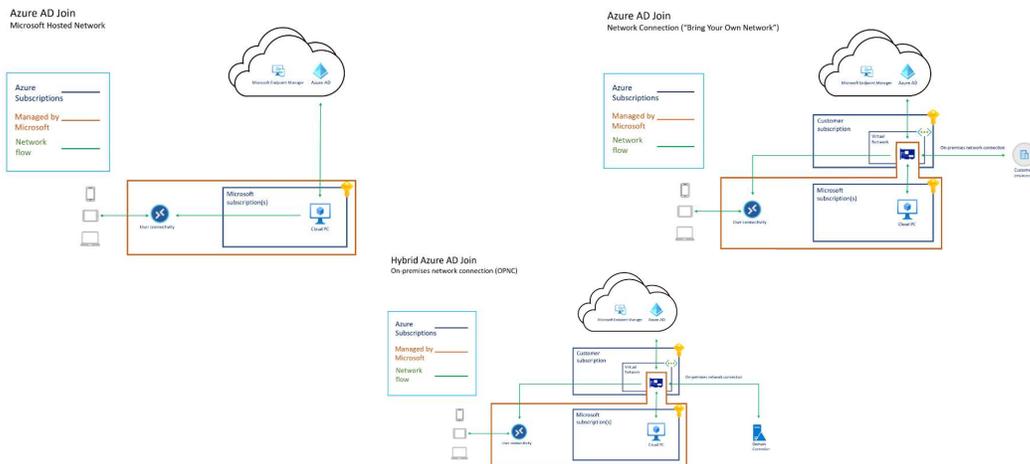


53



54

Windows 365 Enterprise Network Config



https://learn.microsoft.com/en-us/windows-365/enterprise/architecture?WT.mc_id=EM-MVP-5001447

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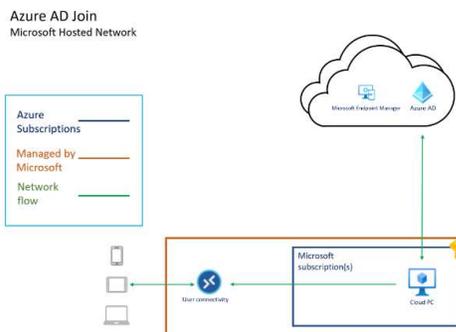
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Windows 365 Enterprise Hosted Network

New : 04-2022

- Same Network config as Windows 365 Business possible
- Hosted on behalf of architecture
 - 2GB RAM = 12GB outbound data
 - 4GB RAM = 20 GB outbound data
 - 16GB RAM = 40 GB outbound data
 - 32GB RAM = 70 GB outbound data
 - Data bandwidth restricted when these levels are exceeded



https://learn.microsoft.com/en-us/windows-365/enterprise/architecture?WT.mc_id=EM-MVP-5001447

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- Same Network config as Windows 365 Business possible

57

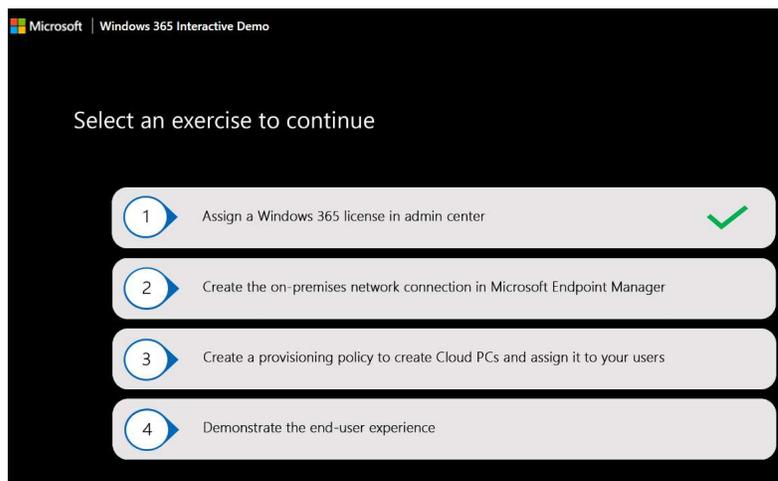
Windows 365 Enterprise

Windows 365 Enterprise	
Connecting Device	The User is the primary user of his PC with Windows 10 Pro installed
Pricing Model	Subscription Based (price / User / Month) + Azure Consumption (*)
Prerequisites	W 10 Ent + MEM Intune + AAD P1 or Microsoft 365 F3/E3/E5/Business Premium Azure Subscription
Tenant	Microsoft Tenant + Customer's Tenant
Identity	Azure Active Directory OR Active Directory + AD Connect
Desktop Management	MEM Intune Managed
Application Management	Custom Image / MEM Intune Managed
PC Storage	Included in Fixed Price
PC Compute	Included in Fixed Price (12 possible configs)
PC Networking	Azure Consumption
1vCPU, 2GB RAM, 64GB DSK	€ 18,20
2vCPU, 4GB RAM, 64GB DSK	€ 25,50
2vCPU, 4GB RAM, 128GB DSK	€ 28,20
2vCPU, 4GB RAM, 256GB DSK	€ 36,40
2vCPU, 8GB RAM, 128GB DSK	€ 37,30
2vCPU, 8GB RAM, 256GB DSK	€ 45,50
4vCPU, 16GB RAM, 128GB DSK	€ 60,10
4vCPU, 16GB RAM, 256GB DSK	€ 68,30
4vCPU, 16GB RAM, 512GB DSK	€ 92,00
8vCPU, 32GB RAM, 128GB DSK	€ 112,00
8vCPU, 32GB RAM, 256GB DSK	€ 120,20
8vCPU, 32GB RAM, 512GB DSK	€ 143,90

58

Windows 365 Interactive demo

- <http://aka.ms/w365demo>



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59

59

Windows 365 Business vs Enterprise ?

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Microsoft

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Technical Comparison

Capability	Windows 365 Business	Windows 365 Enterprise
Domain Join	AAD Join only	AAD Join without VNet AAD Join with Vnet Hybrid AAD Join with VNet
Licensing Requirements	No pre-requirements	Windows 10/11 Enterprise Microsoft Endpoint Manager Azure AD Premium P1
Networking Cost	Outbound Based on RAM of Cloud PC	Outbound Based on RAM of Cloud PC or Azure Bandwidth Pricing
Seats	Capped to 300 Seats	No Seat cap per Tenant
Provisioning	Standard Desktop Image only	Standard or Custom Image
Policy Management	None	MDM or GPO
Windows Update	Default Windows Update	Managed by MEME

Licensing Comparison

Windows 365 Business	Windows 365 Enterprise
<ul style="list-style-type: none"> Supports native Azure Active Directory Join (AADJ) No Azure subscription required No licensing pre-requisites Simple purchase, deploy, manage and use through Windows365.com Available via Web Direct or CSP For business < 300 users 	<ul style="list-style-type: none"> Azure subscription required Must be licensed for Windows 10 or 11 Enterprise, Microsoft Endpoint Manager & Azure AD Premium P1 Deploy and manage through Microsoft Endpoint Manager Available via Web Direct, Microsoft Field, or CSP Unlimited number of users

Find additional Information



Resources

Topic	Link(s) to documentation
Main Product Page	https://www.Windows365.com
Interactive demo	https://aka.ms/w365demo
Technical blog	https://aka.ms/deploycpc - Enterprise https://aka.ms/deploycpcbusiness - Business
Troubleshooting	https://aka.ms/w365docs
Customer Scenarios	https://transform.microsoft.com/modernwork/products/windows-365
Mechanics video	https://www.youtube.com/watch?v=V14la2uwrk
FAQ	https://www.microsoft.com/en-us/windows-365/faq

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63

63

Windows 365 Frontline

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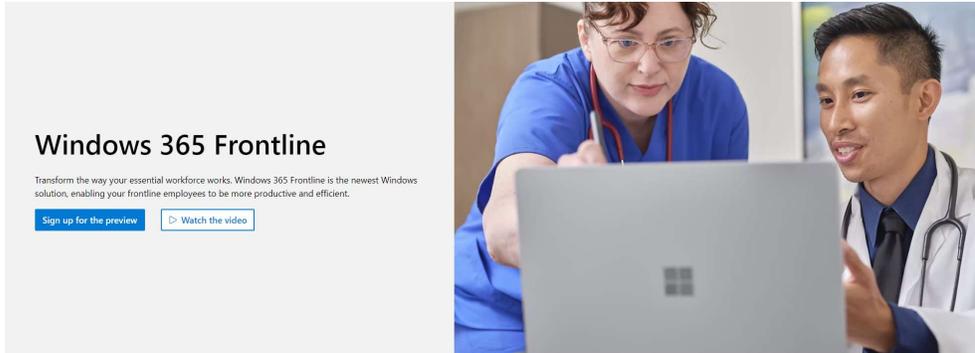
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64

Windows 365 Frontline



- Remove the constraints of shared physical devices
- Seamless access to Cloud PCs from shift to shift
- Give part-time workers the flexibility to work from anywhere



<https://www.microsoft.com/en-us/windows-365/frontline>

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65

65

Windows 365 Frontline



- Save costs by providing a single license to provision 3 Cloud PCs
- Three Cloud PCs can't be used concurrently
- Three Unique Cloud PCs / Only One at the same time Active
- Helpful when
 - On a rotation schedule
 - Working across time zones and regions
 - Part-time workers



Windows 365 Frontline

- Cloud PC access only when they need it (for example, during their shift)
- Personalized, full Windows experience
- Predictable monthly pricing

<https://learn.microsoft.com/en-us/windows-365/enterprise/introduction-windows-365-frontline#licensing>

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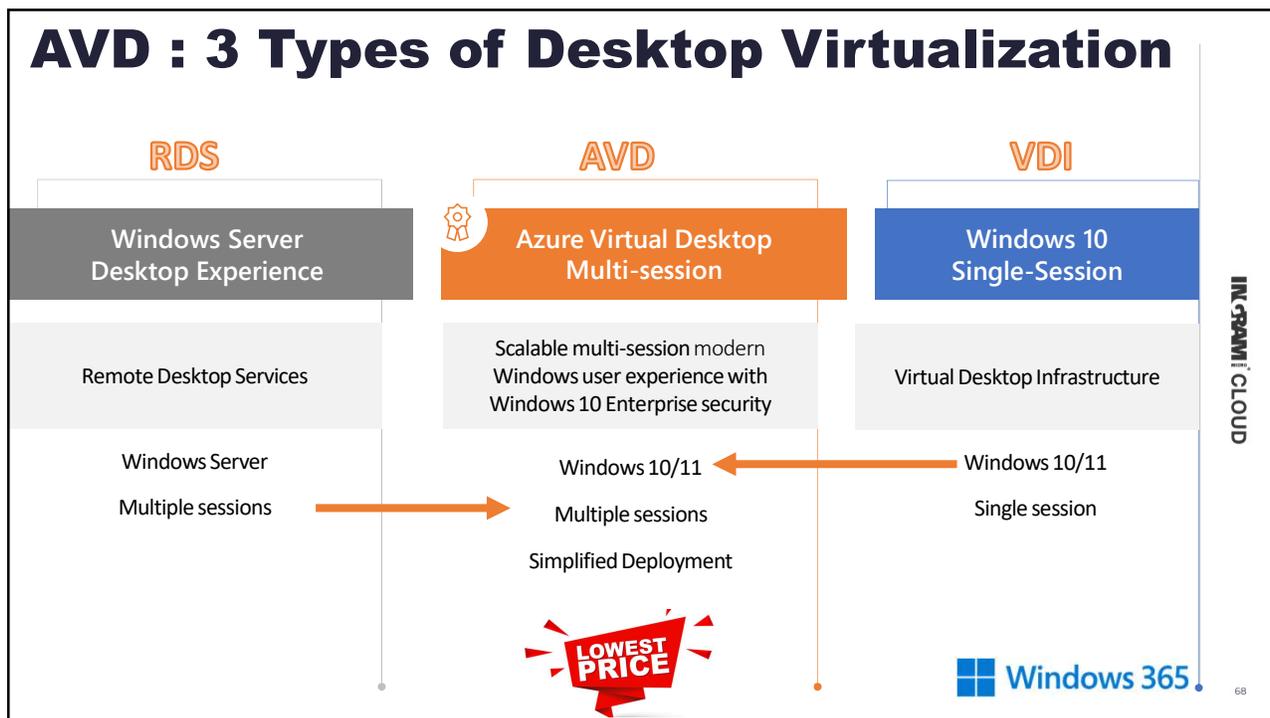
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66

Azure Virtual Desktop

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67



68

Desktop Virtualization

- Remote Desktop Services (RDS) (° 1995)
 - Running on a Windows Server Operating System (WS2019, WS2016, WS2012R2)
 - Multi Session environment (Multiple Users on ONE Server)
- Virtual Desktop Infrastructure (VDI) (° 2006)
 - Running on a Desktop Operating System (Win10, Win11, Win8, Win7)
 - Single Session environment (One User working on one remote desktop)
- Windows 10/11 Multi Session (WVD or AVD) (° 2018)
 - Running in Azure only on a Desktop Operating System (Win10, Win11)
 - Multi Session environment (Multiple Users on ONE Desktop O/S)



Application & Desktop Virtualization



Azure Virtual Desktop : Windows 10 Multi-Session

- **Windows 10 Multi-Session = cheapest**
- **RDS is possible**
- **VDI is possible**

Remote Applications and Desktops are running on Virtual Machines in Azure in the Customer's Tenant

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71

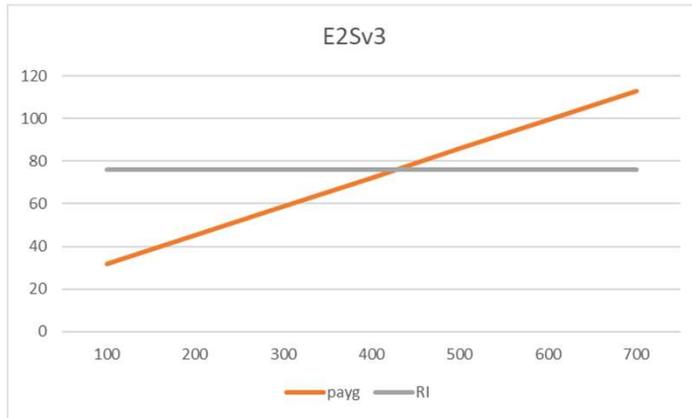
Azure Virtual Desktop : Consumption Based / Reservations

- **Shutting down unused VM's will save Azure Consumption Cost**
- **Working with Azure Reserved Instances (RI's) will save Azure Cost**

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72

Reserved Instances (RI's)



hrs	PAYG	RI
100	31,78	76,19
200	45,28	76,19
300	58,78	76,19
400	72,28	76,19
500	85,78	76,19
600	99,28	76,19
700	112,78	76,19
800	126,28	76,19

(1 month = 730 hours)

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73

73

Enable Reserved Instances in CMP



Marketplace
All Categories ▾ Azure Reserved Instances (NCE only) ✕

SERVICE PLANS (1)

Service plan	Subscription period	MSRP	Margin	Cost
Azure Reserved Instances (NCE only) ⓘ	1 month(s)		0%	
— Setup Fee		€0.00	0%	€0.00

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74

74

Azure Savings Plan NEW

PAYG	
Savings plan	<p style="text-align: center;">Average 500x VMs of mixed compute types</p>
Reserved instances	<p style="text-align: center;">30x D8v2 VMs running 24x7</p>

<https://learn.microsoft.com/en-us/answers/questions/1082760/azure-reserved-instance-vs-azure-savings-plan-best>

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75

Azure Virtual Desktop : Active Directory Optional ! NEW

RD clients
Customer-managed

Azure Virtual Desktop Service
Microsoft-managed

Web Access | Diagnostics

Gateway | Broker

Azure SQL DB

Customer's Azure AD

Desktops | Apps

Active Directory NEW | FSLogix User Profile

Customer's Tenant

<https://docs.microsoft.com/en-us/azure/virtual-desktop/deploy-azure-ad-joined-vm>

- **Using your own Active Directory is possible but not needed anymore (public preview since 07-2021) NEW**
- **Using FSLogix User Profiles is recommended but not needed**

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76

Azure Virtual Desktop : External Users NEW

RD clients
Customer-managed

Azure Virtual Desktop Service
Microsoft-managed

Web Access

Diagnostics

Gateway

Broker

Azure SQL DB

External Azure AD Users

Customer's Azure AD

Desktops

Apps

Active Directory

FSLogix User Profile

Customer's Tenant

Additional Cost will Apply
(Promo till End of Year)

- External Azure AD Users can be given access to Remote Applications and Remote Desktops running in your Tenant*
(New since July 15, 2021) NEW

77

Azure Virtual Desktop : Remote App Streaming NEW

ISV

App as a SaaS solution

<https://docs.microsoft.com/en-us/azure/virtual-desktop/remote-app-streaming/overview>

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78

AVD Remote App Streaming



- Special Promo effective from July 14, 2021 to December 31, 2021
 - No Licensing Cost for External Users ONLY (Infrastructure Cost same as before)
- New per-user Pricing effective on January 1, 2022

	Apps Only <small>(from January 1, 2022)</small>	Apps & Desktops <small>(from January 1, 2022)</small>
External Users	\$5.50	\$10.00
Internal Users	Same licensing as before : - Windows 10 Enterprise - Microsoft 365 BP, E3, E5	Same licensing as before : - Windows 10 Enterprise - Microsoft 365 BP, E3, E5

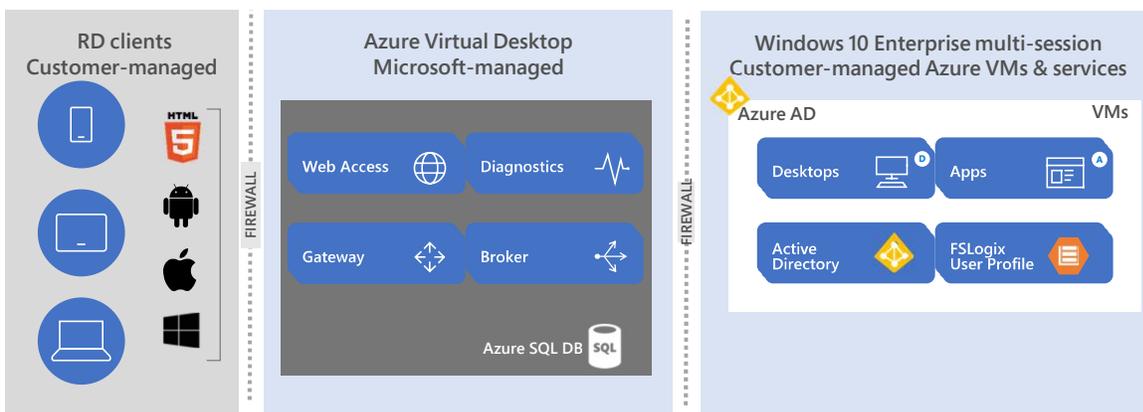
<https://azure.microsoft.com/en-us/blog/azure-virtual-desktop-the-desktop-and-app-virtualization-platform-for-the-hybrid-workplace/>

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Azure Virtual Desktop : Internal Users



**ANY DEVICE
ANY PLACE
ANY TIME**

**NO CHARGES FOR
INFRASTRUCTURE**

**AZURE CONSUMPTION
+ Microsoft 365 BP**

€ 0,00

+/- € 30.00/user/month

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80

AVD Remote app streaming (External Users) NEW

- Deliver apps as a Service (SaaS) to external Users (Customers)
- New per-user access pricing option effective on January 1, 2022
 - \$5.50 per user per month (for Apps only)
 - \$10.00 per user per month (Apps + Desktops)
- Promotion effective from July 14, 2021 to December 31, 2021
 - No additional cost for External Users
 - Promotion only for External Users
 - No changes for Internal Users
- Only includes Access Rights

<https://docs.microsoft.com/en-us/azure/virtual-desktop/remote-app-streaming/>

<https://docs.microsoft.com/en-us/azure/virtual-desktop/remote-app-streaming/licensing>

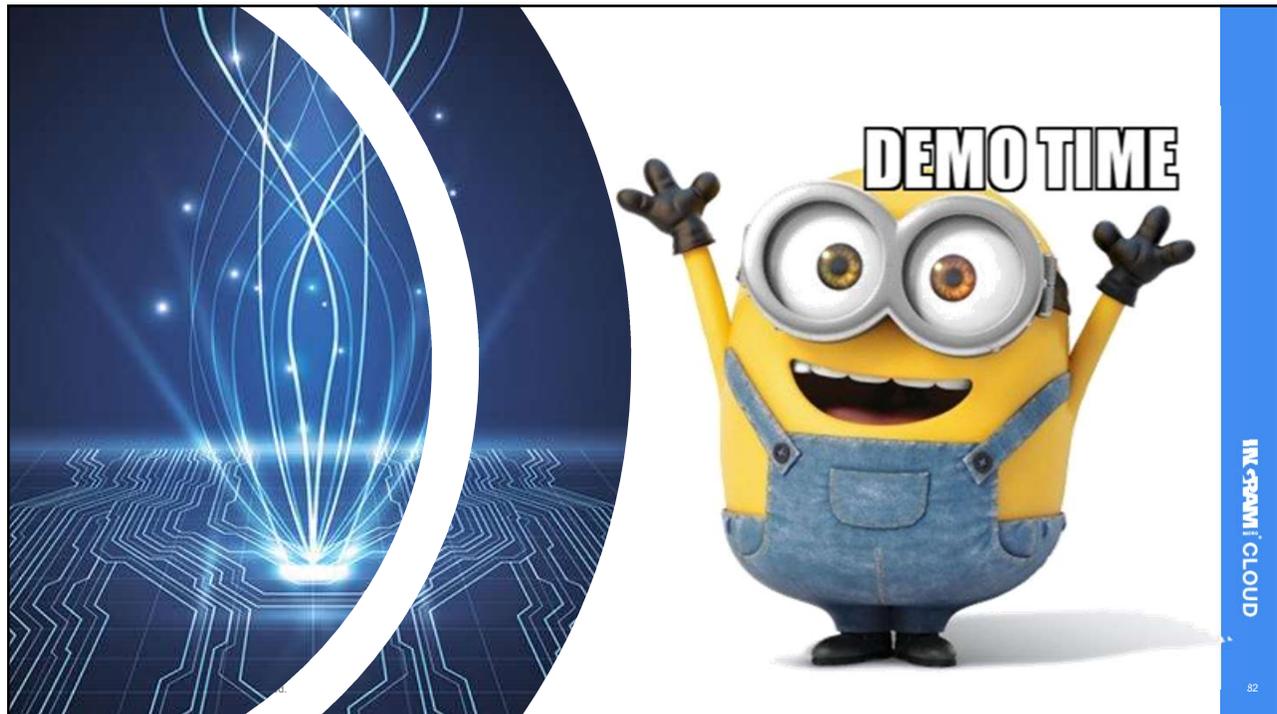
<https://azure.microsoft.com/en-us/blog/azure-virtual-desktop-the-desktop-and-app-virtualization-platform-for-the-hybrid-workplace/>

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81



82

Azure Virtual Desktop Sizing & Pricing



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83

SessionHosts Sizing Considerations

- Number of Users per vCPU
- AVD – RDS – VDI (Pooled or Personal)
- Expected Active Users during working hours / Night / Weekend
- Types of Applications
- Graphical Application needs



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84

Azure Virtual Desktop entitlement

License (any Commercial Licensing program)	Azure Virtual Desktop entitlement
Windows 10/11 Enterprise E3/E5	•
Windows 10/11 Education A3/A5	•
Windows 10/11 Education/Microsoft 365 Education Student Use Benefit	•
Windows 10/11 Enterprise per device with Software Assurance	
Windows VDA E3/E5	•
Windows VDA per device	
Microsoft 365 E3/E5*	•
Microsoft 365 F3*	•
Microsoft 365 A3/A5*	•
Microsoft 365 Business Premium*	•

* Users licensed with Microsoft 365 can use and access Azure Virtual Desktop even if they aren't the primary user of a device with a Qualifying Operating System (QOS). A QOS is an underlying desktop operating system that may be "upgraded" to a higher edition of Windows. Windows Pro is the most common QOS.

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85

Microsoft Recommendations

Multi-session recommendations

The following table lists the maximum suggested number of users per virtual central processing unit (vCPU) and the minimum VM configuration for each workload. These recommendations are based on [Remote Desktop workloads](#).

Workload type	Maximum users per vCPU	Minimum VM configuration	Profile container storage minimum
Light	6	2 vCPUs, 4 GB RAM, 30 GB storage	30 GB
Medium	4	4 vCPUs, 8 GB RAM, 30 GB storage	30 GB
Heavy	2	8 vCPUs, 16 GB RAM, 30 GB storage	30 GB
Power	1	6 vCPUs, 56 GB RAM, 340 GB storage	30 GB

<https://docs.microsoft.com/en-us/windows-server/remote/remote-desktop-services/virtual-machine-recs>

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Users per Core

Power User	Medium User	Task Worker
1 User / Core	2 Users / Core	3 Users / Core

Depends on Application Types and Usage



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Price per User per Month

**3 USERS PER CORE
4 Cores
= 12 USERS**

	RDS for 12 Users in Azure	RDS per User in Azure	AVD for 12 Users in Azure	AVD per User in Azure
D4S (4 Cores) / 1 year RI (24/7)	€ 252,53	€ 21,04	€ 113,06	€ 9,42
TOTAL / User		€ 21,04		€ 9,42

Azure Hybrid Benefit*

* Microsoft 365 Business Premium / E3

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88

Price per User per Month

3 USERS PER CORE
8 Cores
= 24 USERS

	RDS for 24 Users in Azure	RDS per User in Azure	AVD for 24 Users in Azure	AVD per User in Azure
D8S v5 (8 Cores) / 1 year RI (24/7)	€ 470,85	€ 19,61	€ 205,41	€ 8,55
TOTAL / User		€ 19,61		€ 8,55

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89

89

AVD : Price per User per Month

	RDS for 24 Users in Azure	RDS per User in Azure	AVD for 24 Users in Azure	AVD per User in Azure
D8S v5 (8 Cores) / 1 year RI (24/7)	€ 470,85	€ 19,61	€ 205,41	€ 8,55
RDS CAL (1Y/Mth)		€ 8,08		€ 0,00
TOTAL / User		€ 27,69		€ 8,55

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90

AVD : Price per User per Month

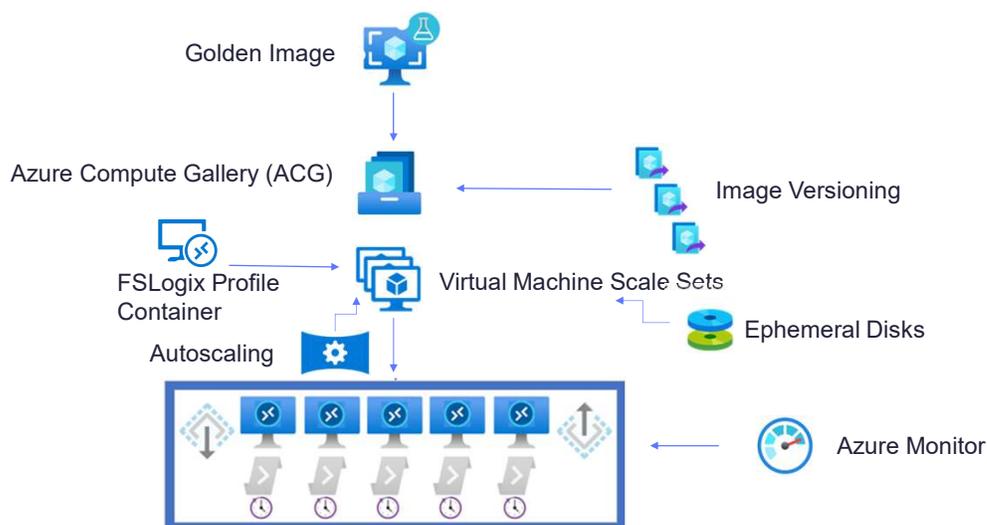
	RDS for 24 Users in Azure	RDS per User in Azure	AVD for 24 Users in Azure	AVD per User in Azure
D8S v5 (8 Cores) / 1 year RI (24/7)	€ 470,85	€ 19,61	€ 205,41	€ 8,55
RDS CAL (1Y/Mth)		€ 8,08		
M365 Buss. Pre.		€ 20,60		€ 20,60
TOTAL / User		€ 48,29		€ 29,15

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91

AVD Ingram Micro Deployment Template



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92

92

Ask Ingram Micro for help !

- We will help you making an estimation
 - iaas@ingrammicro.be
 - iaas@ingrammicro.nl
- We are organizing courses for your technical employees
 - <https://bit.ly/imc-be>
 - <https://bit.ly/imc-nl>
- We can help you setting up the environment
 - iaas@ingrammicro.be
 - iaas@ingrammicro.nl

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AVD : Technical Training

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Microsoft **More as a Service**

**Azure Virtual Desktop :
Setup a POC**

Learn how to install your first Azure Virtual Desktop installation. Discover the AVD components like a Workspace, HostPools, Application Groups, FSLogix, ...

<http://bit.ly/ingramcloud>

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29-Mar

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AVD : Advanced Technical Course



Microsoft
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Azure Virtual Desktop : Advanced Topics

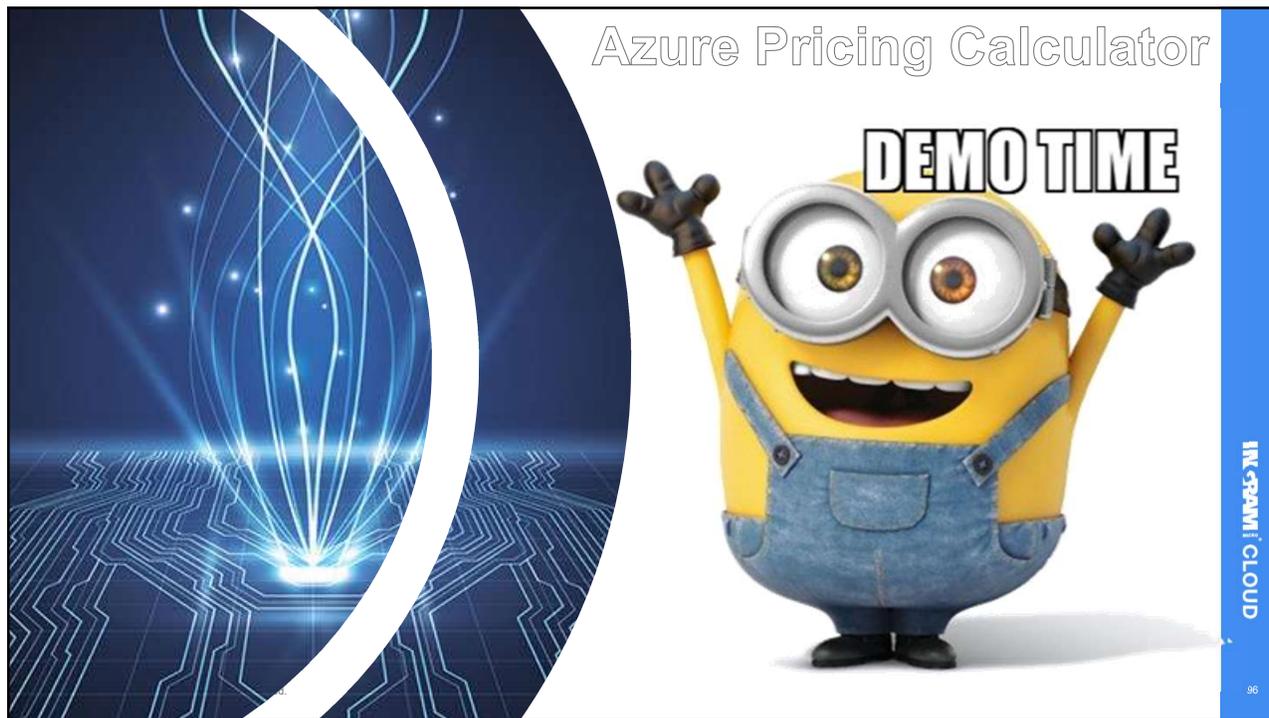
Learn how to do a production installation with Azure Virtual Desktop. Learn the concepts like Golden Images, AutoScaling, Printing, Monitoring, ...

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19-Apr <http://bit.ly/ingramcloud>

95



Azure Pricing Calculator

DEMO TIME

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When proposing AVD ?

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97

Azure Virtual Desktop Pricing

	AVD Personal (VDI)	AVD Pooled (Multi Session)
Connecting Device	Any Device	
Pricing Model	Azure Consumption	
Prerequisites	Windows 10 Enterprise or Microsoft 365 F3/E3/E5/Business Premium	
Tenant	Customer's Tenant	
Identity	Active Directory + AD Connect or Azure Active Directory (preview)	
Desktop Management	Azure Portal Managed	
Application Management	Custom Image / MEM Intune Managed	
PC Storage	Azure Consumption	
PC Compute	Azure Consumption	
PC Networking	Azure Consumption	
Price Example	AVD Personal (VDI)	AVD Pooled (Multi Session)
• 1Y Reserved Instance		
• 2 Users / vCPU + Standard SSD		
• B-Series		
2vCPU, 4GB RAM, 128GB DSK	25,55	+/- €10 (2 users)
2vCPU, 8GB RAM 128GB DSK	42,84	+/- €10 (4 users)
4vCPU, 16GB RAM 128GB DSK	77,42	+/- €10 (8 users)
8vCPU, 32GB RAM, 128 GB DSK	138,30	+/- €10 (16 users)

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98

98

Azure Virtual Desktop Pricing

	AVD Personal (VDI)	AVD Pooled (Multi Session)
Connecting Device	Any Device	
Pricing Model	Azure Consumption	
Prerequisites	Windows 10 Enterprise or Microsoft 365 F3/E3/E5/Business Premium	
Tenant	Customer's Tenant	
Identity	Active Directory + AD Connect or Azure Active Directory (preview)	
Desktop Management	Azure Portal Managed	
Application Management	Custom Image / MEM Intune Managed	
PC Storage	Azure Consumption	
PC Compute	Azure Consumption	
PC Networking	Azure Consumption	
Price Example	AVD Personal (VDI)	AVD Pooled (Multi Session)
<ul style="list-style-type: none"> 1Y Reserved Instance 2 Users / vCPU + Standard SSD B-Series 2vCPU, 4GB RAM, 128GB DSK 2vCPU, 8GB RAM 128GB DSK 4vCPU, 16GB RAM 128GB DSK 8vCPU, 32GB RAM, 128 GB DSK	25,55 42,84 77,42 138,30 ~ Windows 365	+/- €10 (2 users) +/- €10 (4 users) +/- €10 (8 users) +/- €10 (16 users) Lowest Cost

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Azure Virtual Desktop – Windows 365

	Azure Virtual Desktop	Windows 365
Deployment	Medium to more Complex	Easy Deployment
Deployment Time	Multiple Hours	30 minutes
Management	Medium to more Complex	Easy Management
Experience	Remote Apps or Full Desktop	Full Desktop
User Density per VM	Multi Session (Pooled) or 1:1 (Personal)	1:1 (Personal)
Licensing	Consumption Based (PAYG)	Subscription Based *
Backend Maintenance	Customer / Partner	Microsoft

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Azure Virtual Desktop – Windows 365

Feature	Azure Virtual Desktop (Single-session)	Azure Virtual Desktop (Multi-Session)	Windows 365 Business	Windows 365 Enterprise
Type of Deployment	Personal Desktop	Pooled Desktop	Personal Desktop	Personal Desktop
Price Model	Based on Resource Usage	Based on Resource Usage	Fixed per-user	Fixed per-user + egress bandwidth
Networking	Customer-managed	Customer-Managed	Microsoft-managed	Customer-Managed
Identity	AD DS, ADDS, Hybrid Join, AAD Join	AD DS, AADDS, Hybrid Join, AAD Join	AAD Join	Hybrid Join (AAD Join coming soon !)
Operating Systems	Win7E, Win10E, Win11E, WS12R2, WS16, WS19	Win10E, Win11E, WS12R2, WS16, WS19	Win10E (Single Session) Win11E (Single Session)	Win10E (Single Session) Win11E (Single Session)
Base Image	Custom / Microsoft	Custom / Microsoft	Microsoft	Custom / Microsoft
Remote Applications	Supported	Supported	Not supported	Not supported
Management	Azure Portal + MEM	Azure Portal + MEM	End-User Portal	MEM / GPO

<https://docs.microsoft.com/en-us/azure/virtual-desktop/compare-virtual-desktop-windows-365>

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101

101

Managed Service with Azure Virtual Desktop / Windows 365



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102

Build your own Virtual Desktop Managed Services



Helpdesk Support



Application Management



Golden Image Management



Endpoint Management



Microsoft Defender for Endpoints



Daily Backup

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103

103

Partner Profitability & Service attach rate*

Endpoint Management

\$45

User/month

Service Attach

41%

on average

* Forrester 2021
* Study did not include Windows 365

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104

104

Why Managed Services ?

Partner profitability & service attach rate*



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105

105

Microsoft 365 Package



Identity & access management

Protect users' identities & control access to valuable resources based on user risk level

- Azure Active Directory
- Conditional Access
- Windows Hello
- Windows Credential Guard



Information protection

Ensure documents and emails are seen only by authorized people

- Azure Information Protection
- Office 365 Data Loss Prevention
- Windows Information Protection
- Microsoft Cloud App Security
- Office 365 Advanced Security Mgmt.
- Microsoft Intune



Threat protection

Protect against advanced threats and recover quickly when attacked

- Advanced Threat Analytics
- Windows Defender
- Advanced Threat Protection
- Office 365 Advanced Threat Protection
- Office 365 Threat Intelligence



Security management

Gain visibility and control over security tools

- Azure Security Center
- Office 365 Security Center
- Windows Defender Security Center

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106

106

Build your own DaaS Package Offering (example)



Windows 365
Microsoft
Azure Virtual Desktop

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107

107

Example Package Services

- Daily Backup
- Microsoft Defender for Endpoints
- Application Management
- Azure Information Protection
- Microsoft Endpoint Management Intune
- Graphical Application Support
- Update Services
- Patch Management
- HelpDesk Support
- Package with Thinclient Included
- Package with Microsoft Surface Included
- Cloud Printing Management
- New Application Rollout
- Golden Image Management
- Data / Application Migration Services
- Teams integration



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108

108



WRAP-UP

- Desktop Virtualization : Historical Overview
- Windows 365
- Windows 365 Business
- Windows 365 Enterprise
- Windows 365 Business vs Enterprise
- Azure Virtual Desktop : What is New ?
- Azure Virtual Desktop : Sizing & Pricing
- When proposing Azure Virtual Desktop ?
- Managed Service with Azure Virtual Desktop / Windows 365

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109

109



Questions ?



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110

