

WELCOME TO

AVD



DISCUSSION SERIES

SESSION 6: ECONOMIC ASSESSMENT - BUILDING A BUSINESS CASE FOR AVD

TODAY'S DISCUSSION FORMAT



The discussion is being recorded.



Please use the chat window to ask your questions.



We have our experts on hand to answer your questions.



The video and content will be sent via email post event.



Agenda

- **Benefits of VDI & DaaS**
- **The Challenges with On-Prem**
- **Traditional Cost Models vs AVD**
- **Building a Business Case for a Cloud Service**
- **cubesys Economic Assessment**

Benefits of VDI & DaaS

- **Simplify management.**
- **Improve flexibility.**
- **Enable remote access to applications and desktops.**
- **Enhance the user experience.**
- **Increase productivity.**
- **Strengthen endpoint security.**
- **Enable cost and energy savings.**





The Challenges with On-Prem

Best Virtualized End-user Experience

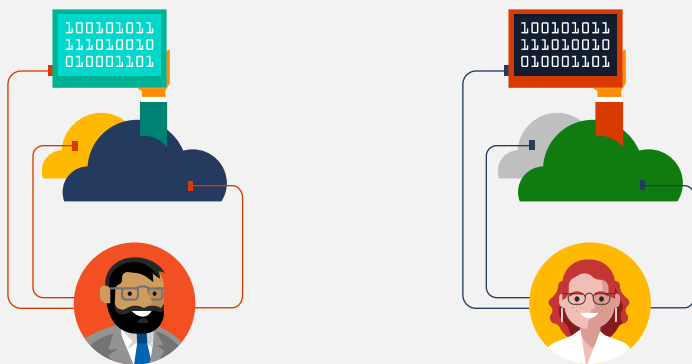
Containerized user profiles enable fast VHD load times



AVD

Containerized profiles

User profiles



Placed into a VHD container that is stored on Azure

- Dynamically attached at user logon
- Content appears to be in its native location

User Experience Benefits

Achieves extremely fast logon times

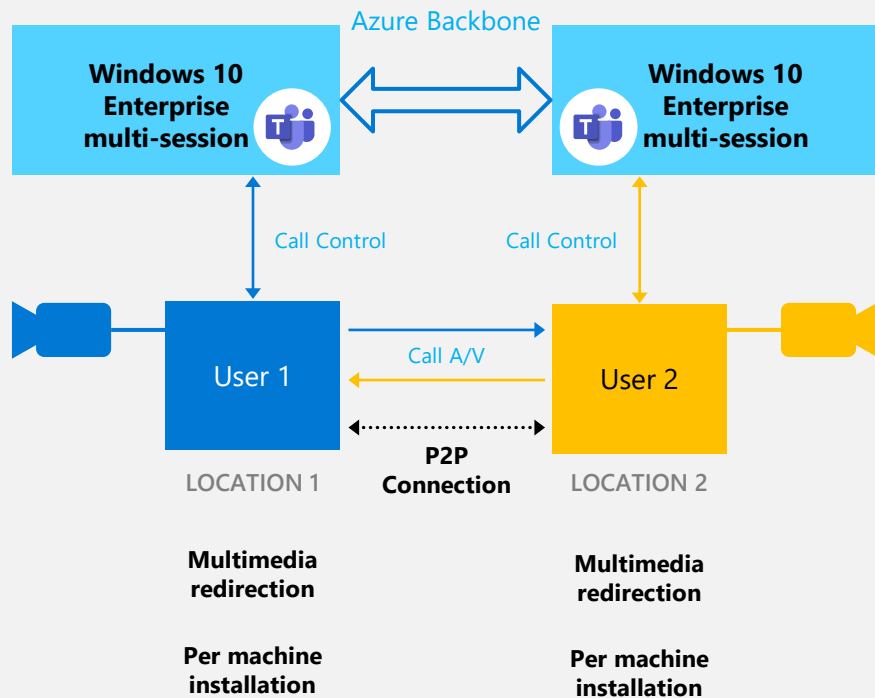
*Uses native Windows VHD capabilities –
no hypervisor*

Best Virtualized End-user Experience

Teams Enhancements



Teams on AVD – With Enhancement



User Experience Benefits

Less network bandwidth compared to USB camera redirection

Increased video framerates, up to 30 fps

Enhanced UI for ease of use in virtualized environments











Ability to redirect multiple cameras

High-performance, low latency audio & video calling

Enhanced Security with Simplified Configuration

Simplified Security Configuration



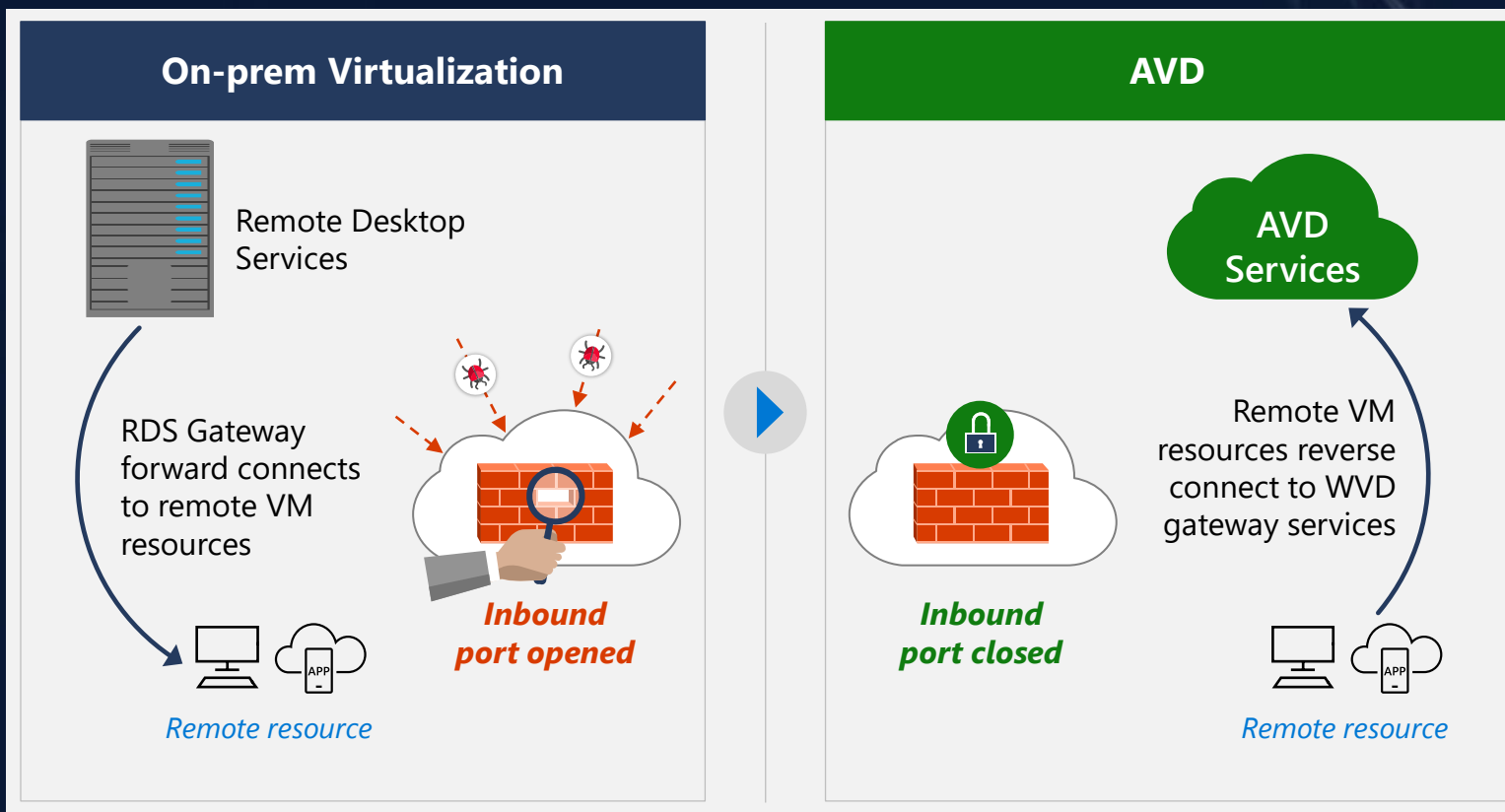
On-prem Virtualization	AVD
<p data-bbox="244 625 606 701">Security Services Manually Deployed by IT</p> <div data-bbox="91 729 591 878"><p data-bbox="262 739 591 849">MFA Conditional Access Intelligent Security Graph</p></div> <div data-bbox="91 906 415 963"><p data-bbox="168 921 415 949">Install NPS extension</p></div> <div data-bbox="91 992 496 1056"><p data-bbox="168 999 496 1056">Configure NPS components on RD Gateway</p></div> <div data-bbox="91 1078 343 1142"><p data-bbox="168 1085 343 1142">Configure NPS extension</p></div> <div data-bbox="91 1163 323 1235"><p data-bbox="168 1170 323 1235">Verify and troubleshoot</p></div> <div data-bbox="453 968 759 1239"></div>	<p data-bbox="1039 625 1434 701">Azure AD Security Services Easily Configured by IT</p> <div data-bbox="937 768 1177 868"><p data-bbox="1057 799 1146 835">Menu</p></div> <div data-bbox="937 899 1172 1192"><ul style="list-style-type: none"><li data-bbox="937 899 1049 935"> MFA<li data-bbox="937 963 1133 1028"> Conditional Access<li data-bbox="937 1056 1172 1120"> Intelligent Security Graph<li data-bbox="937 1149 1014 1185"> ...</div> <div data-bbox="1261 925 1533 1153"></div>

Security Benefit

*Enhanced security capabilities,
already built in*

Enhanced Security with Simplified Configuration

The attack surface is reduced, compared to on-prem

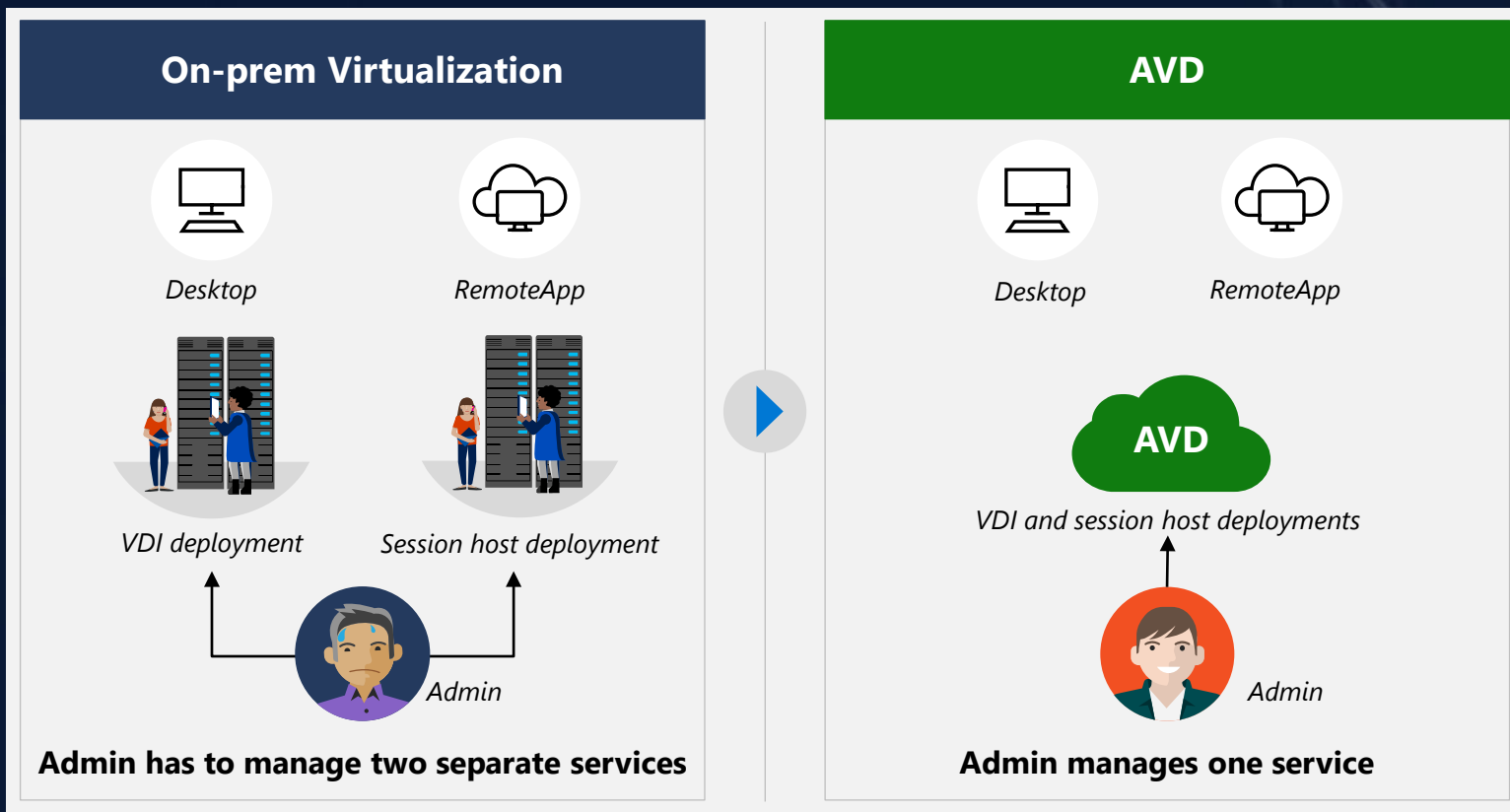


Security Benefit

- Reduced exposure to attacks**
- Less time monitoring inbound ports**
- Focus alerts on access and identity-based attacks**

Efficient and Simplified Management

One service supports both desktop & RemoteApp experience



Management Benefit

Less labor and time required to manage both VDI and session host deployments

Efficient and Simplified Management

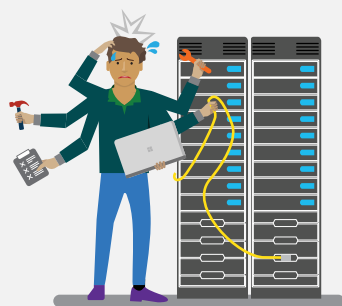
Readily-available VM management tools



On-prem Virtualization

Complicated VM Management
Manually Conducted by IT

- ? VM Deployment
- ? OS and App Management
- ? DR Setup and Configuration



AVD

Readily-available, Built-in Tools
Easily Utilized by IT

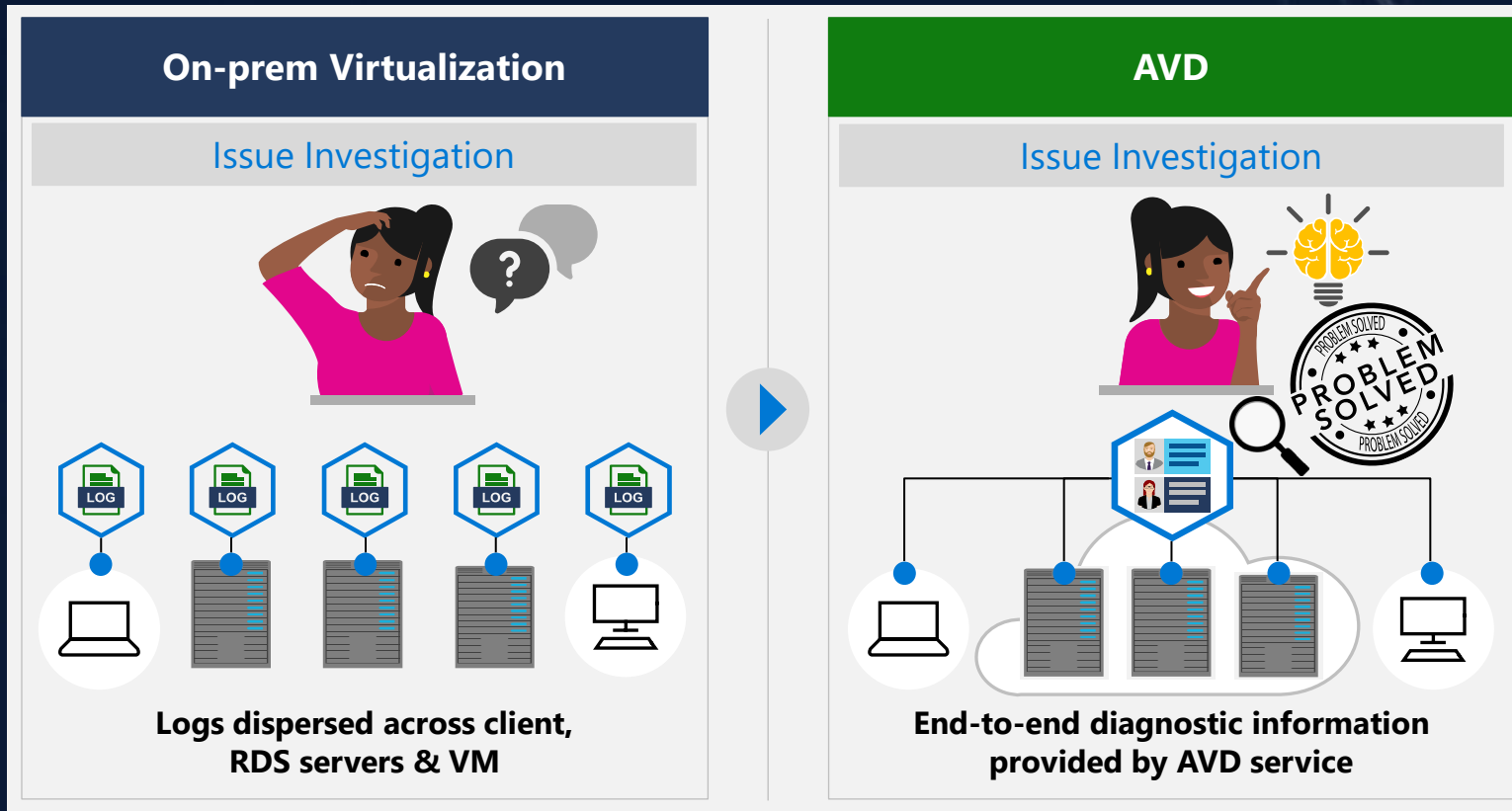
- Menu
- ✓ VM Deployment (e.g. Azure Update Management)
- ✓ Multiple OS and App Management tools at choice
- ✓ DR with Azure Site Recovery
- ✓ ...



Management Benefit

Simplified management via versatile tools and automation

Efficient and Simplified Management Simplified Troubleshooting



Management Benefit

Fast root cause identification via advanced diagnostic services

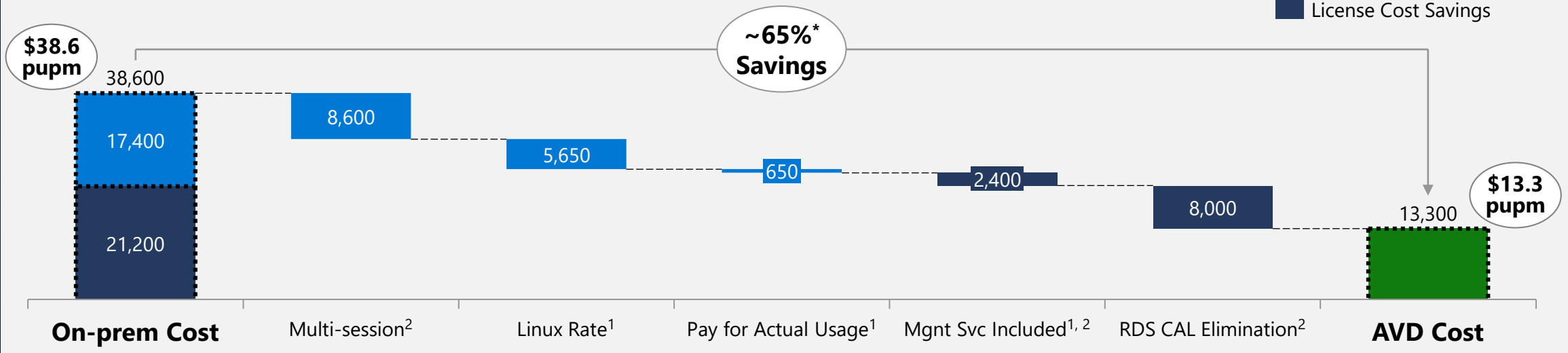


Traditional Cost Models vs AVD

CAPEX HEAVY



Virtual Desktop Cost (\$ per month)



Drivers for Saving

Windows 10 multi-session reduces number of VMs required (vs. single-session)

Session host VMs charged at Linux compute rate (vs. Windows Server compute rate)

Most actual usage charged at PAYG rate (vs. fixed on-prem investment)

Free** AVD management service incl. associated infra (vs. mgnt services and infra on-prem)

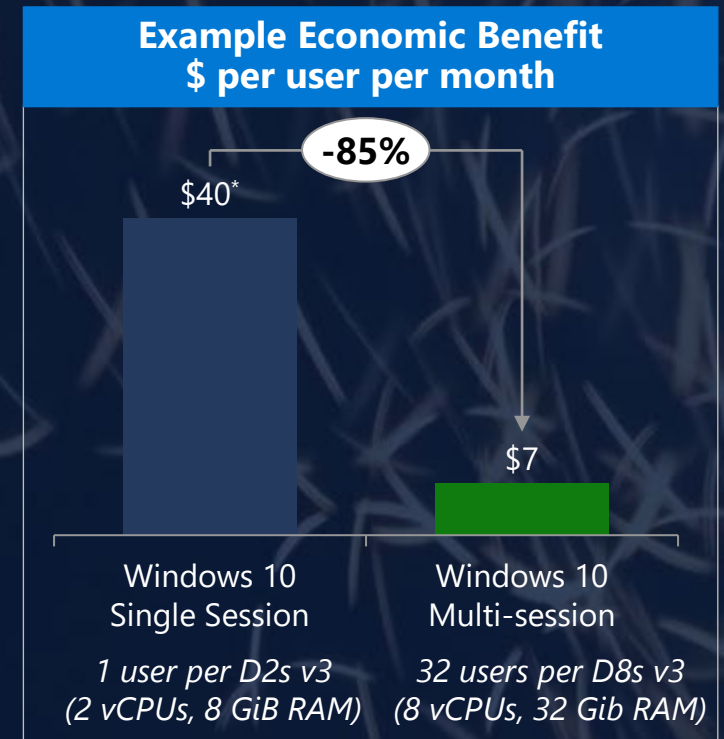
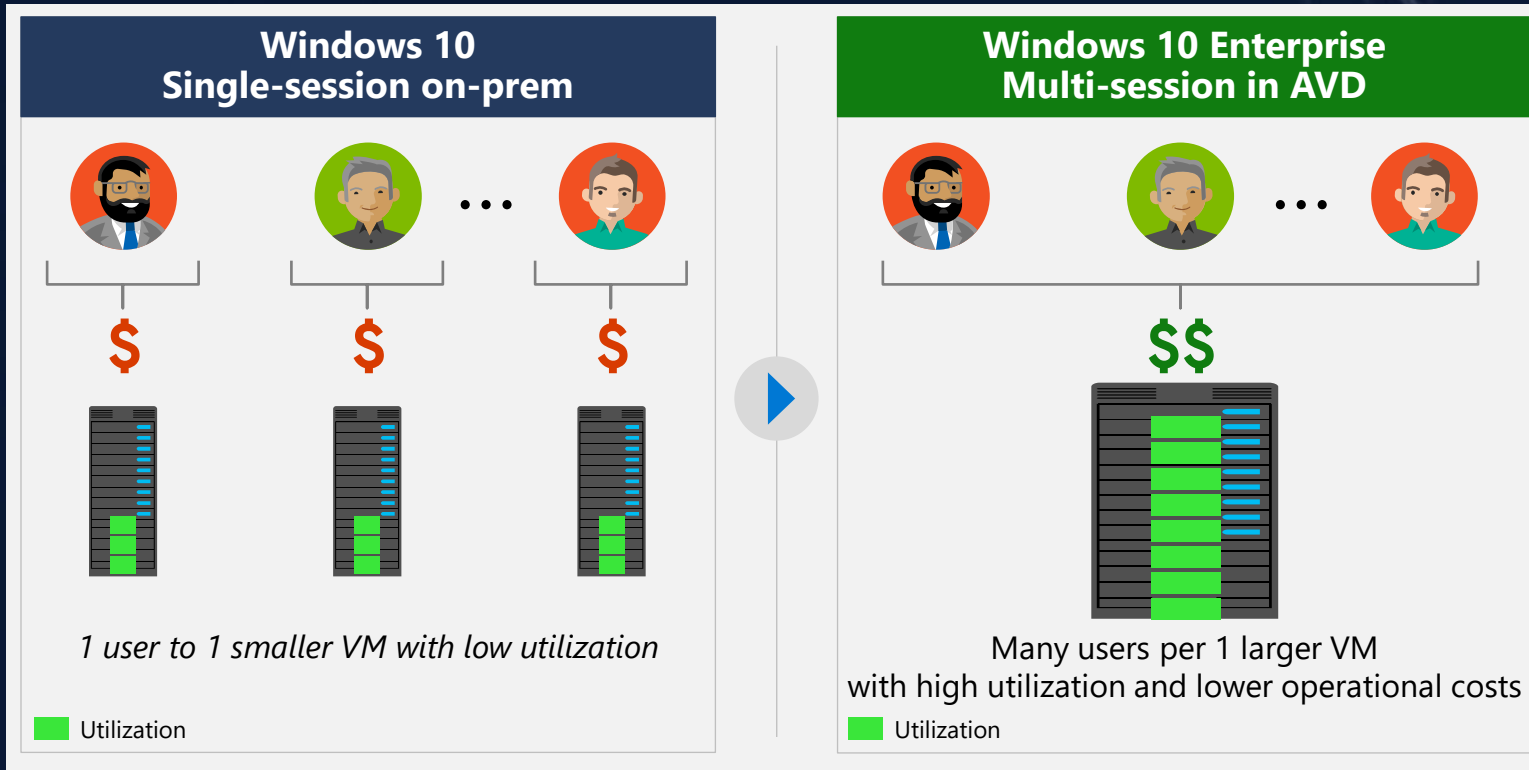
RDS CAL not required by W10 MS in WVD**

\$13.3 pupm

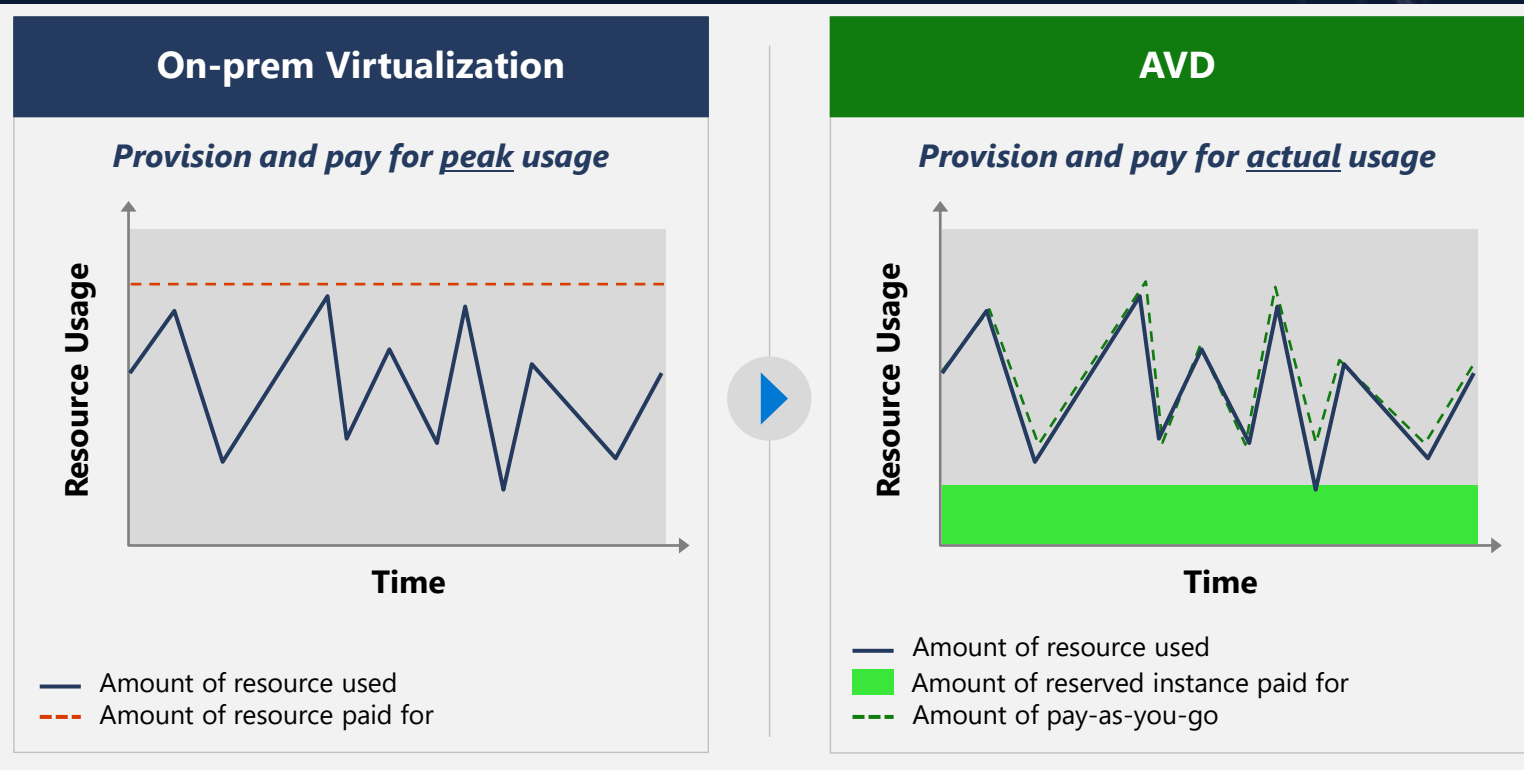
~65%* Savings

\$38.6 pupm

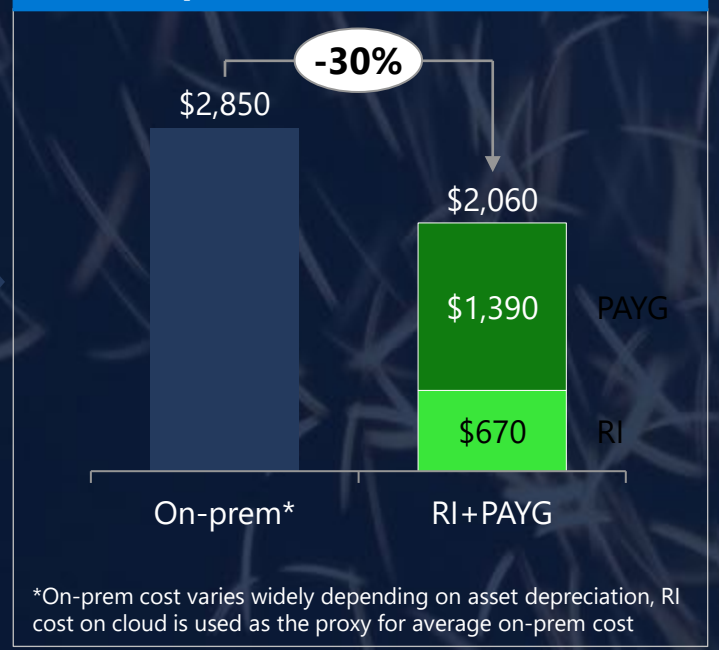
Windows 10\11 Experience at Multi-session Cost



Cost Effective Compute and Storage*



(Compute) Example Economic Benefit \$ per month for 25 VMs

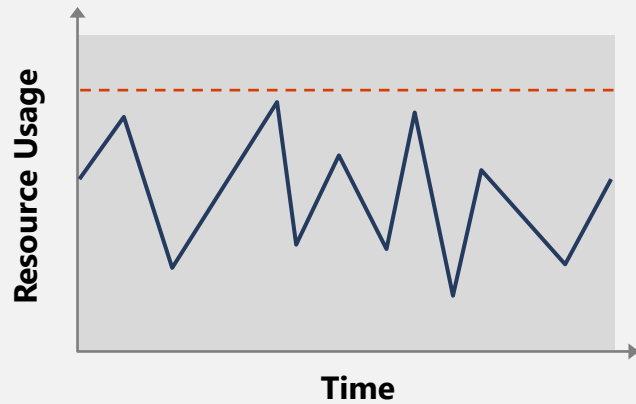


Flexible Network Provisioning



Physical Network On-prem

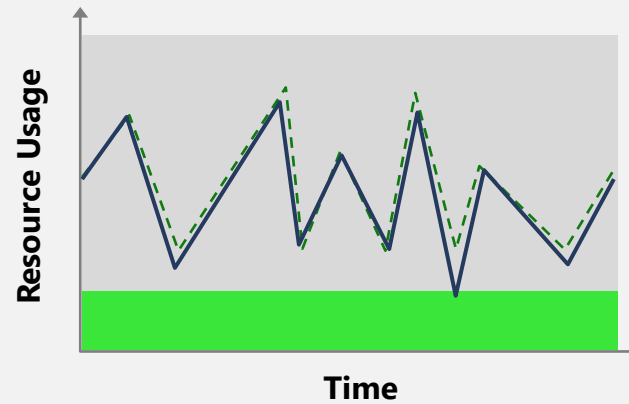
Provision and pay for peak two-way traffic



- Amount of network bandwidth used
- - - Amount of network bandwidth paid for

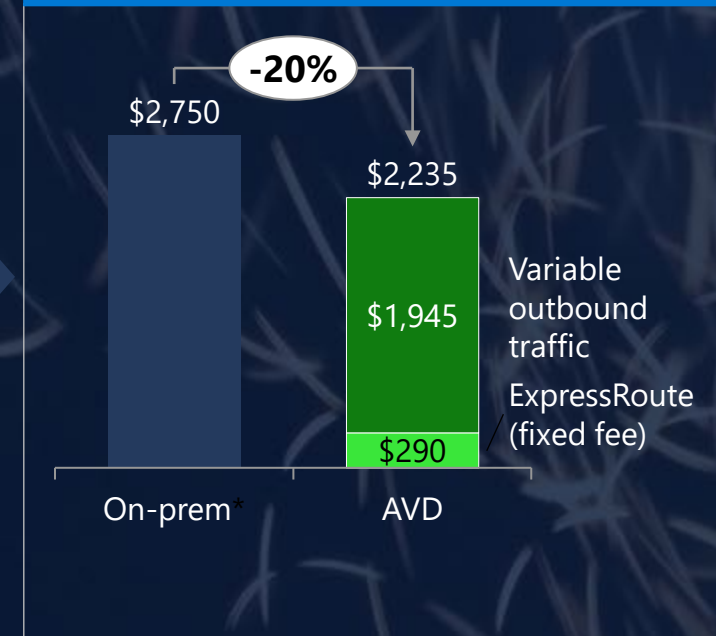
Network Provisioned in WVD

Provision and pay for actual outbound traffic



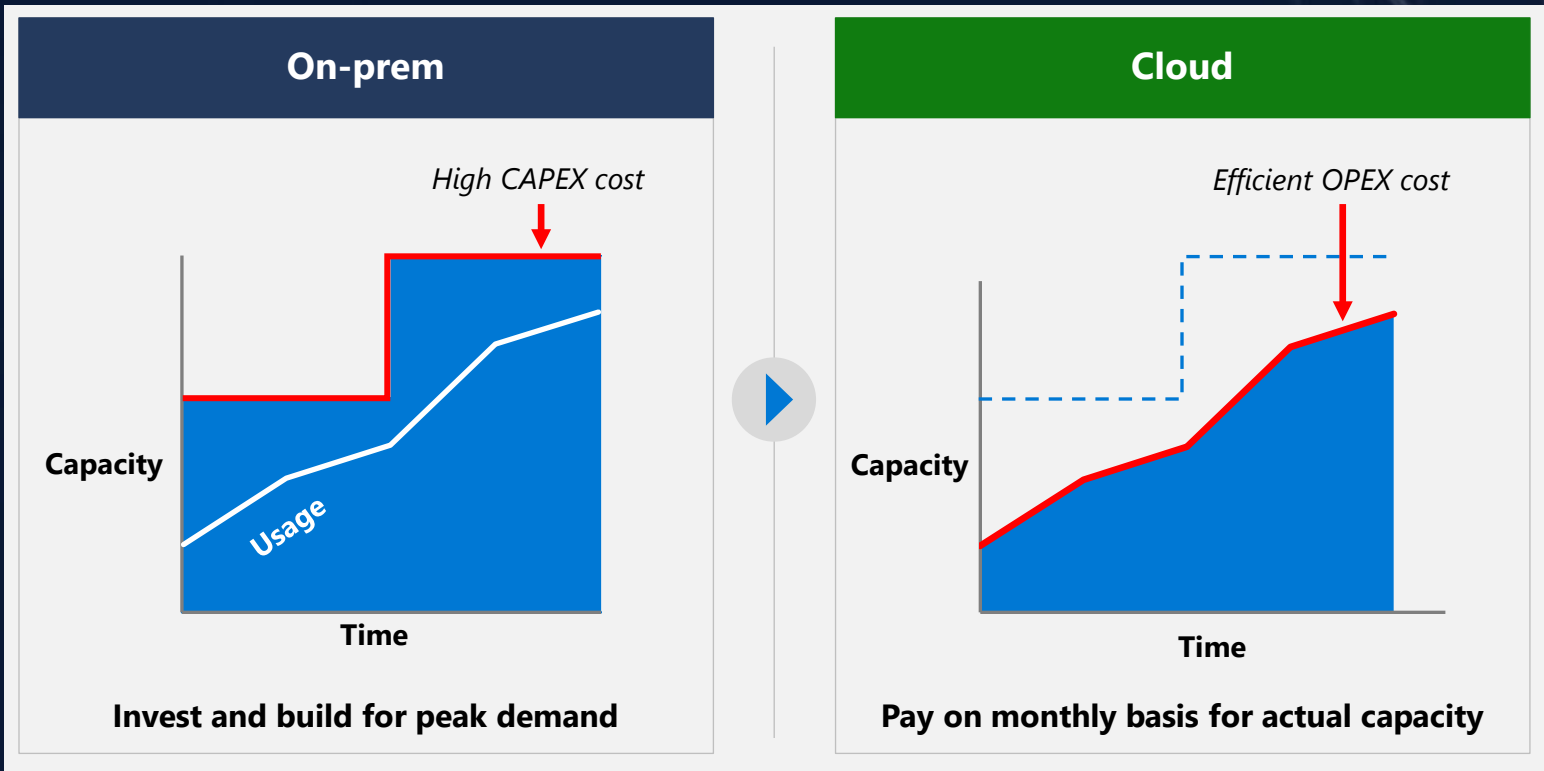
- Amount of network bandwidth used
- Amount of ExpressRoute (fixed fee) paid
- - - Amount of variable outbound traffic paid

Example Economic Benefit \$ per month for 1,500 users





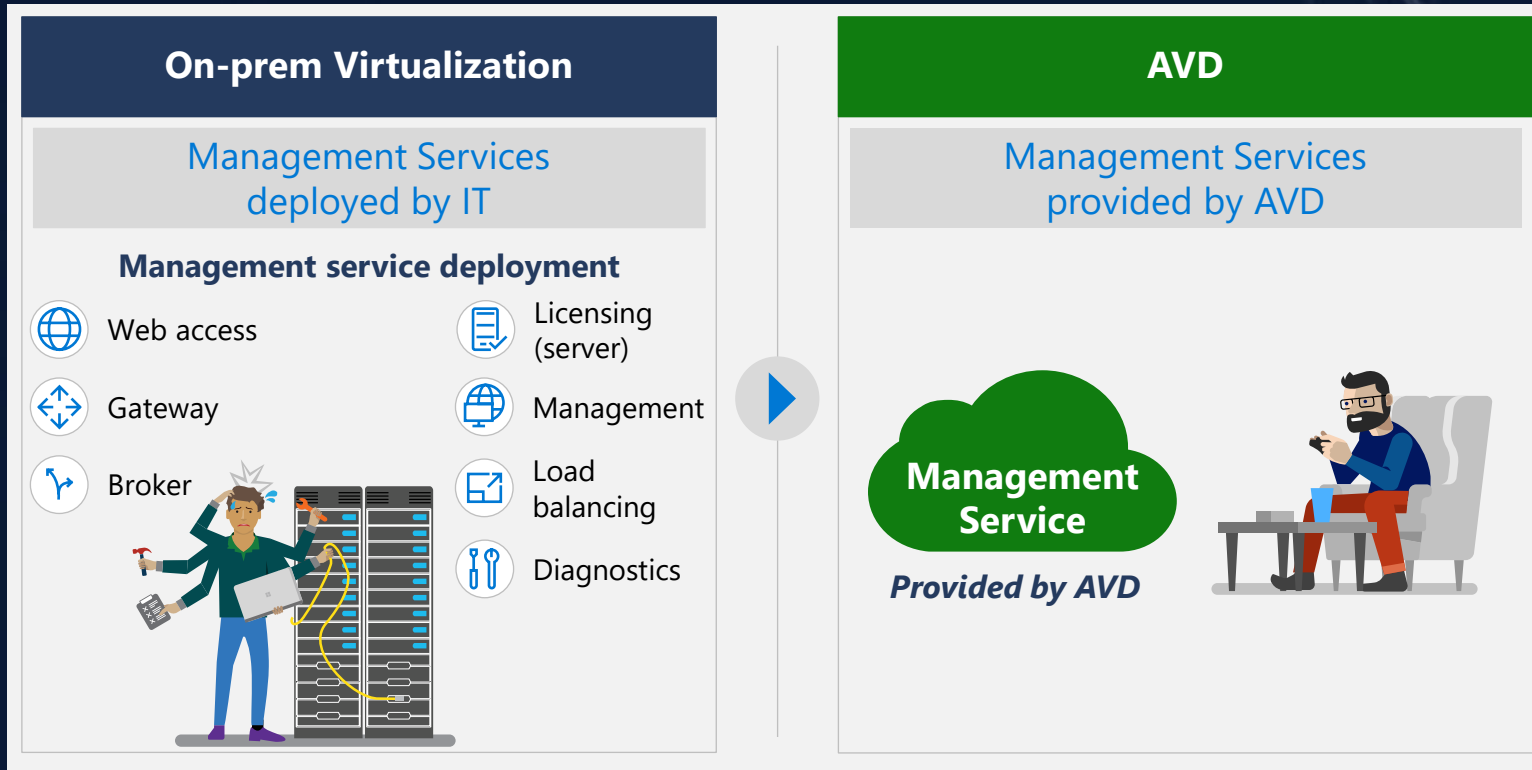
Opex Spend Aligned to Business Usage



- ### Economic Benefit
- Avoid large upfront financial commitments and deployment projects*
 - Match capacity to operational needs*
 - Align IT HW, SW, and services with changing business requirements*
 - Enable accurate departmental cross-charge and COGS alignment*

Note: Figures are illustrative and based on pre-configured assumptions; actual savings vary by user requirements and infrastructure configuration

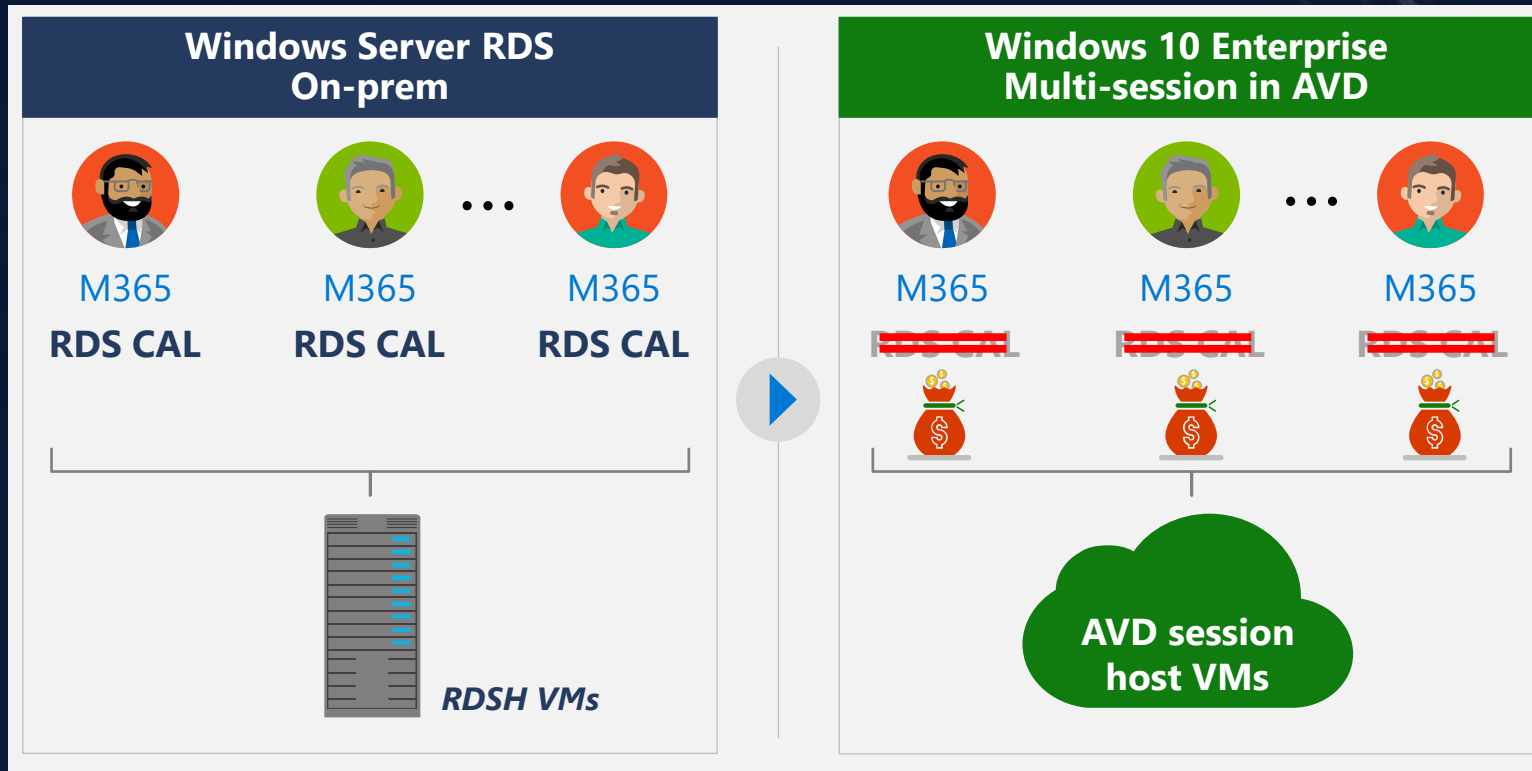
Management Service Included With the Licenses you Already Own



Economic Benefit

- No management infrastructure needed*
- No additional licenses required*
- Reduced labor cost*

Savings on RDS CAL with Multi-session Deployment



Economic Benefit


\$17 Saving**
Per user per month


**This saving applies when customers migrate from Windows Server deployment to Windows 10 multi-session in AVD; Windows Server in AVD still requires RDS CAL

3-year Win7 ESU Included



On-prem

 Windows 7





Pricing for extended security updates

Year	ESU Cost (/ device)	
	Enterprise	Pro
2020	\$25	\$50
2021	\$50	\$100
2022	\$100	\$200



AVD

 Windows 7



Year	ESU Cost (/ device)	
	Enterprise	Pro
2020	\$25	\$50
2021	\$50	\$100
2022	\$100	\$200

Economic Benefit

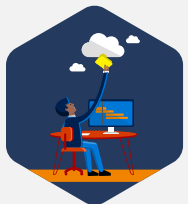
\$25-200 Savings
Per device per year

Reduced Labor Requirements



Lower labor cost because compute and storage move to cloud

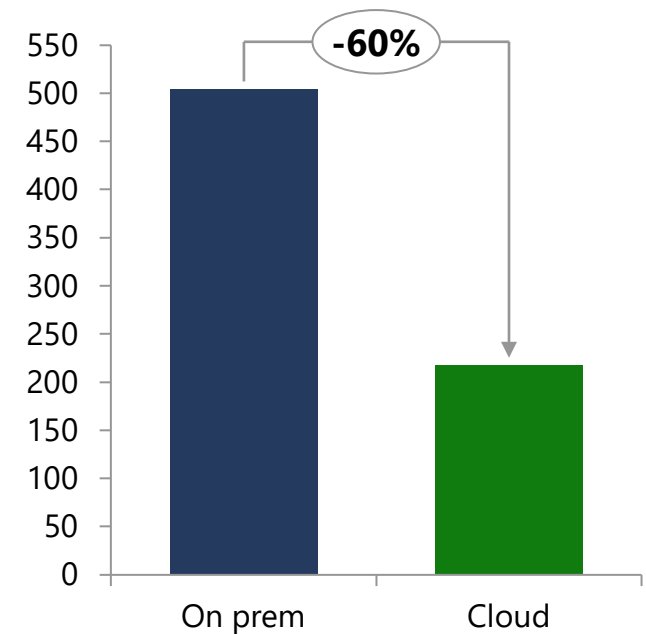
- Eliminate high overhead associated with managing on-premise infrastructure
- Reduced labor cost due to increased automation in the cloud



Lower labor cost when you use PaaS services

- AVD delivered as an evergreen PaaS service, reducing your labor cost for managing and upgrading management plane
- Simplified file storage management, leveraging fully managed NetApp Files service

Per Desktop Per Year IT Labor Cost



Source: industry analysis

Note: Figures are illustrative; actual savings vary by user requirements and current virtual desktop operating model



Building a Business Case for a Cloud Service

Use Cases & Persona's



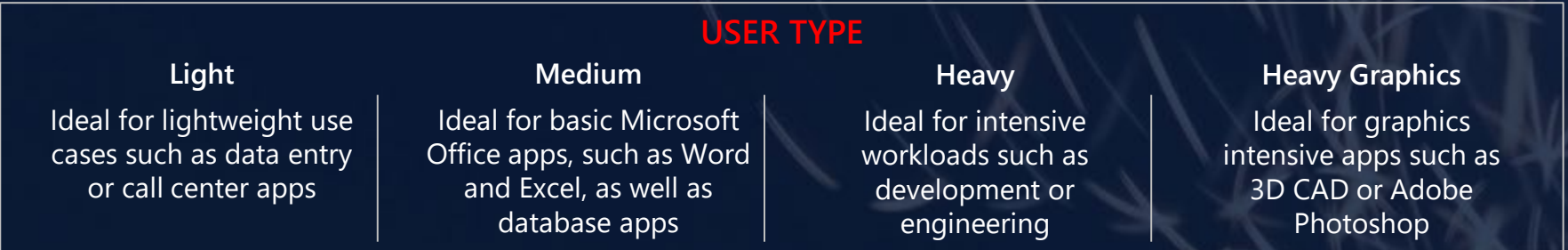
a User Group

- Each user group represents a need for different solution and is independent of each other
- Support for up to five user groups to model an overall AVD opportunity



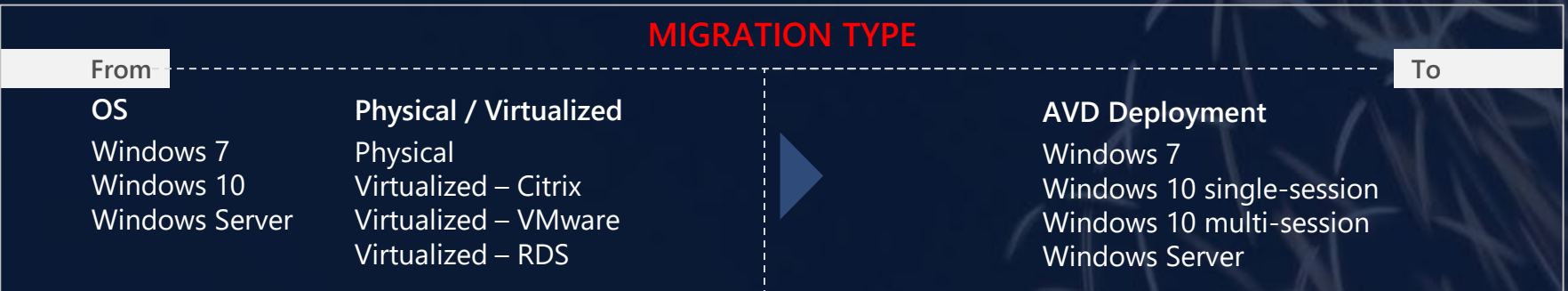
b User Type

- Four pre-defined user types based on workload intensity – primary driver for AVD infrastructure cost



c Migration Type

- Migration type determines AVD licensing needs and drives management and infrastructure cost



Solution Configurator Input Categories (2/2)



d Compute

- Includes VMs, OS disks, and additional data disks

Compute

Virtual Machines

OS Disk

Additional Data Disk

e Storage

- Storage options for choice: Azure NetApp Files, Azure Files and File Server

Storage

Azure NetApp Files

Azure Files

File Server

f Networking

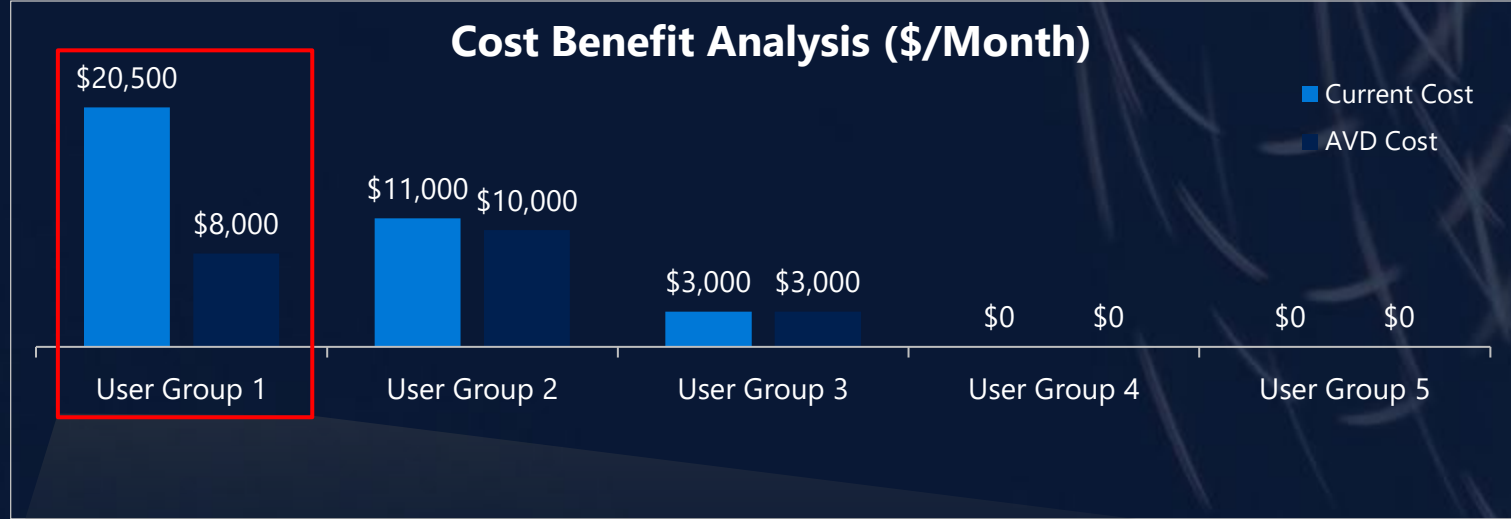
- Includes Virtual Network and ExpressRoute

Networking

Virtual Network

ExpressRoute

Cost Benefit



Cost Component	Current Cost	AVD Cost
License	Client input	Model calculation + user input
Management		Model calculation + user input
Infrastructure		Model calculation + user input
Device		Client input
IT labor		Client input
Service		Client input

AT A GLANCE



Understand what you need to successfully deploy Azure Virtual Desktop (AVD) and Windows365.

In our unique assessment we provide budget guidance, evaluate your readiness and build a tailored plan to deploy.



WHAT WE COVER

The cubesys team will work with you to:

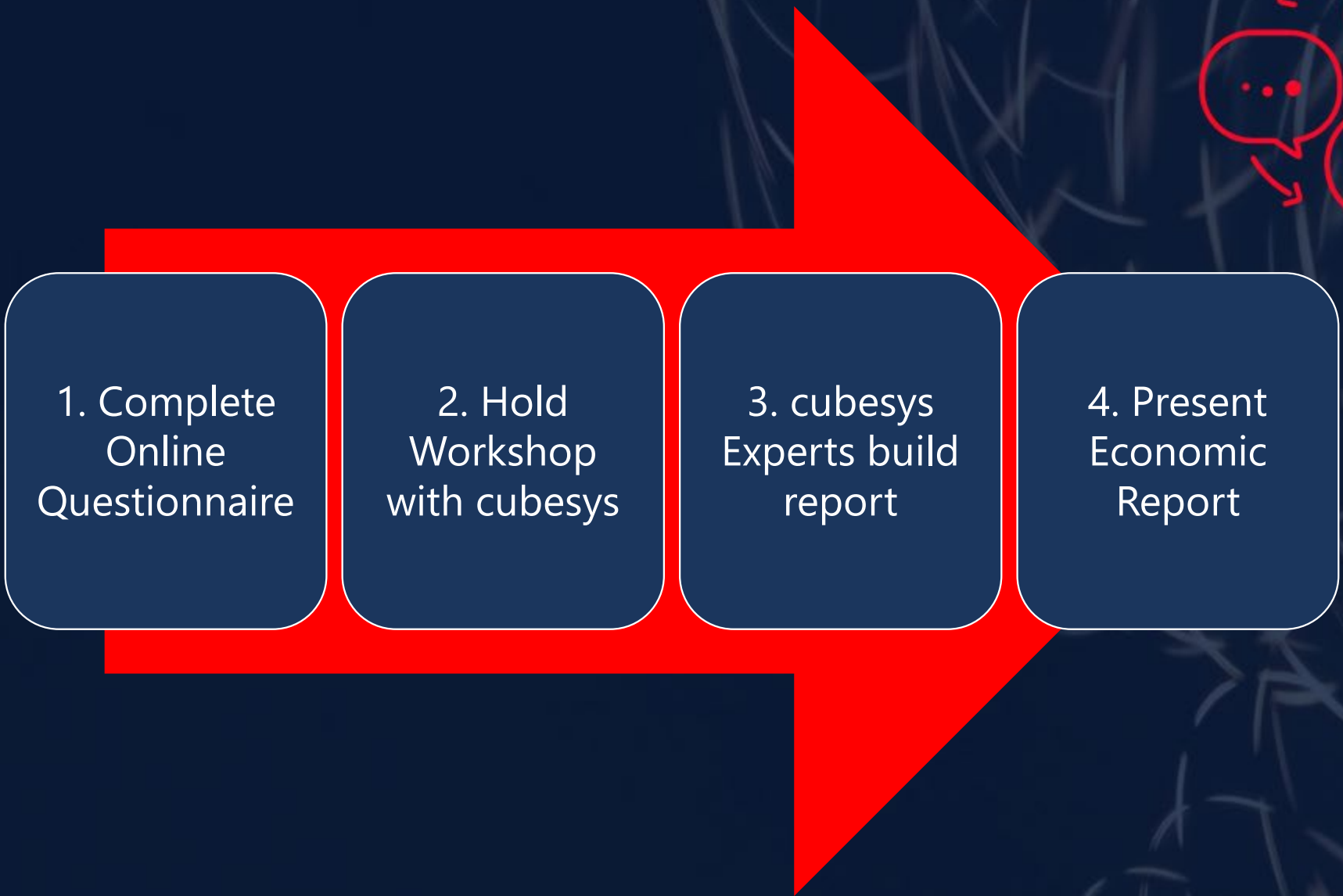
- ✔ Build an operational economic model
- ✔ Understand Implementation costs & timelines
- ✔ Assess readiness to adopt AVD or Windows 365
- ✔ Help you choose AVD or Windows 365 or both
- ✔ Build a technical roadmap
- ✔ Address any Legacy App concerns & plan for success with AVD or Windows 365

WHAT YOU WALK AWAY WITH

At the conclusion of the planning session, cubesys will provide a report providing your organisation with:

- ✔ **CONFIDENCE** in budgeted spend for AVD &/or Windows 365
- ✔ **CONFIDENCE** in your readiness
- ✔ **CONFIDENCE** in how you will adopt and run AVD &/or Windows 365
- ✔ **CONFIDENCE** you can delivery end-user value
- ✔ **CONFIDENCE** in your PLAN to succeed.





1. Complete Online Questionnaire

2. Hold Workshop with cubesys

3. cubesys Experts build report

4. Present Economic Report



AVD DISCUSSION SERIES

Thank you

SESSION 6: ECONOMIC ASSESSMENT - BUILDING A BUSINESS CASE FOR AVD