



AVDTECHFEST.COM

# AVD TechFest 2021

## Winter Edition

ONLINE – 18.11.2021



## AVD as a gaming console?

Freek Berson

02:55pm – 03:45pm (CET)

05:55am – 06:45am (PST)



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# Azure Virtual Desktop as a gaming console?

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*@fberson*

*freek@wortell.nl*

*TheMicrosoftPlatform.net*

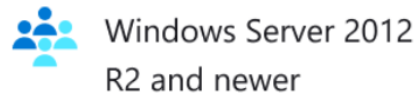
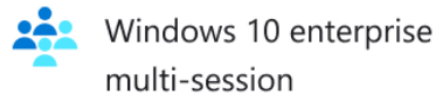
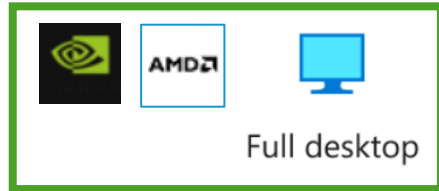




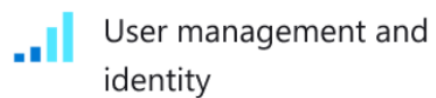
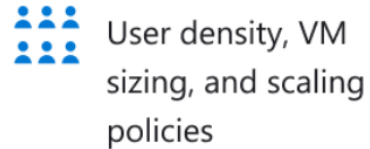
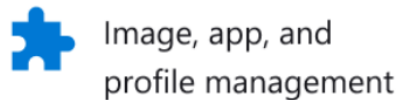
# Azure Virtual Desktop

## Your subscription—your control

### Desktop and remote apps

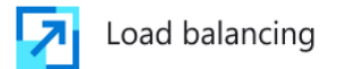


### Management and policies



## Managed by Microsoft

### Azure Virtual Desktop Service



### Azure Infrastructure








# Windows 365 – Cloud PC

- ✓ Leveraging the **AVD Platform**
- ✓ Azure AD Joined **personal desktops**
- ✓ Per-user per-month **fixed license (24/7 access)**
- ✓ **MEM** is used to manage all of your Cloud PCs.
- ✓ **Business** and **Enterprise** editions

**Freek Berson**  
[Reset password](#)

Account | Devices | **Licenses and apps** | Mail | OneDrive

ⓘ The trial subscription for Windows 365 Business 4 vCPU, 16 GB, 128 GB Trial expires on 10/1/2021. Buy this subscription so they won't lose access when the trial ends.  
[Buy this subscription](#)

Select location \*  

Netherlands

Licenses (3)

☒ **Microsoft Power Automate Free**  
9999 of 10000 licenses available

☒ **Microsoft Teams Exploratory**  
96 of 100 licenses available

☒ **Windows 365 Business 4 vCPU, 16 GB, 128 GB**  
0 of 1 licenses available


<https://windows365.microsoft.com>

Windows 365

Welcome


<https://aka.ms/w365roadmap>

### Additional upcoming features




#### Authentication models and Azure subs

- AADJ for enterprise (both bring VNET or without-no Azure sub needed)
- GPU SKUs to support more user types**
- US Gov Cloud (GCCH and GCC) support




#### Image management and profiles

- Image creation within MEM portal
- Update existing PCs with new image
- Reset VM to new clean VM for user
- Localized experience



#### Monitoring and reporting

- Device Recommender (Right-Size VM)



#### Management

- Granular RBAC support
- Trusted Launch Support
- eDiscovery support: Disk snapshot for forensic analysis
- Point in time restore
- Disk Encryption with BYOK support
- Enhanced Admin capabilities for Windows 365 Business

Rename

Troubleshoot

Open in browser



# WHY: GPU in Remoting Windows

Many applications benefit from GPU to increase performance and user experience!

DEMO: GPU vs non-GPU

**Speedtest Results:**

Metric	Value	Unit
PING	2	ms
DOWNLOAD	13000.41	Mbps
UPLOAD	7953.92	Mbps

**Remote Desktop Details:**

- Timestamp (UTC): 2021-08-10T15:27:59.548Z
- Activity ID: 9c51eecf-7771-40ee-949c-302c5a0a0000
- [Client details]  
Client version: 1.2.2222.0 (x64)  
Local OS: Windows 10 Pro x64 (10.0, Build 19042)
- [Network details]  
Transport protocol: UDP  
Round-trip time: 10 ms  
Available bandwidth: Greater than 231 Mbps  
Frame rate: 39 FPS
- [Server details]  
Remote session type: Remote desktop  
Gateway name: afdp-rdgateway-r1.wvd.microsoft.com:443  
Remote computer: wvdfbgp2012-1.wvd.ninja

Details refresh automatically every second.  
Press Ctrl+C to copy.

**Other Applications:**

- SolidWorks (3D CAD model)
- Adobe Creative Cloud (Creative Suite icons)
- 3D Architectural Rendering (Classical building facade)



# Compare: GPU vs non-GPU

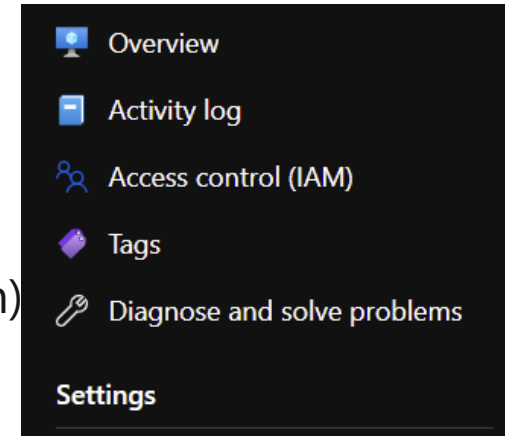






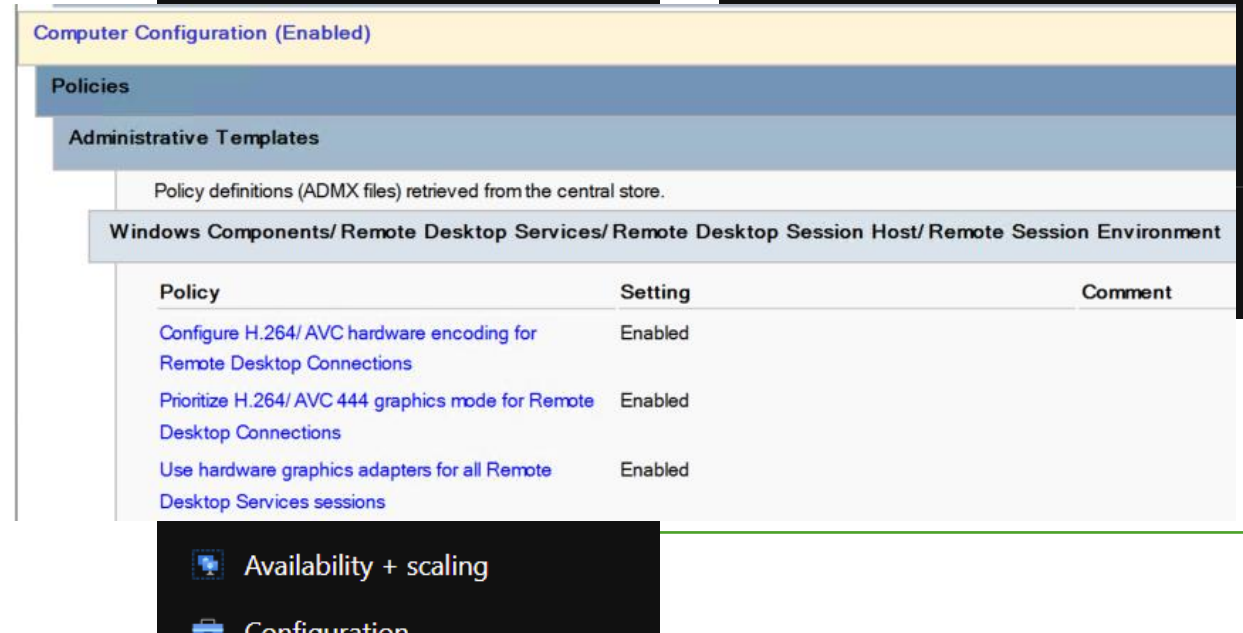
# HOW: GPU in Remoting Windows

- ✓ **Choose a GPU enabled SKU**
  - ✓ NV-series (Nvidia Tesla M60)
  - ✓ NVv3-series (Nvidia Tesla M60 + more CPU & mem)
  - ✓ NVv4-series (AMD Radeon Instinct MI25)
  - ✓ NVv5-series ?
- ✓ **Install the GPU Drivers**
  - ✓ Using Azure VM Extensions
  - ✓ Install driver manually
  - ✓ Verify installation (device manager)
- ✓ **Configure GPU remoting**
  - ✓ GPO, Intune
  - ✓ Registry
  - ✓ 3rd party



vCPU	Memory GiB	GPU
6	56	1
12	112	2
24	224	4

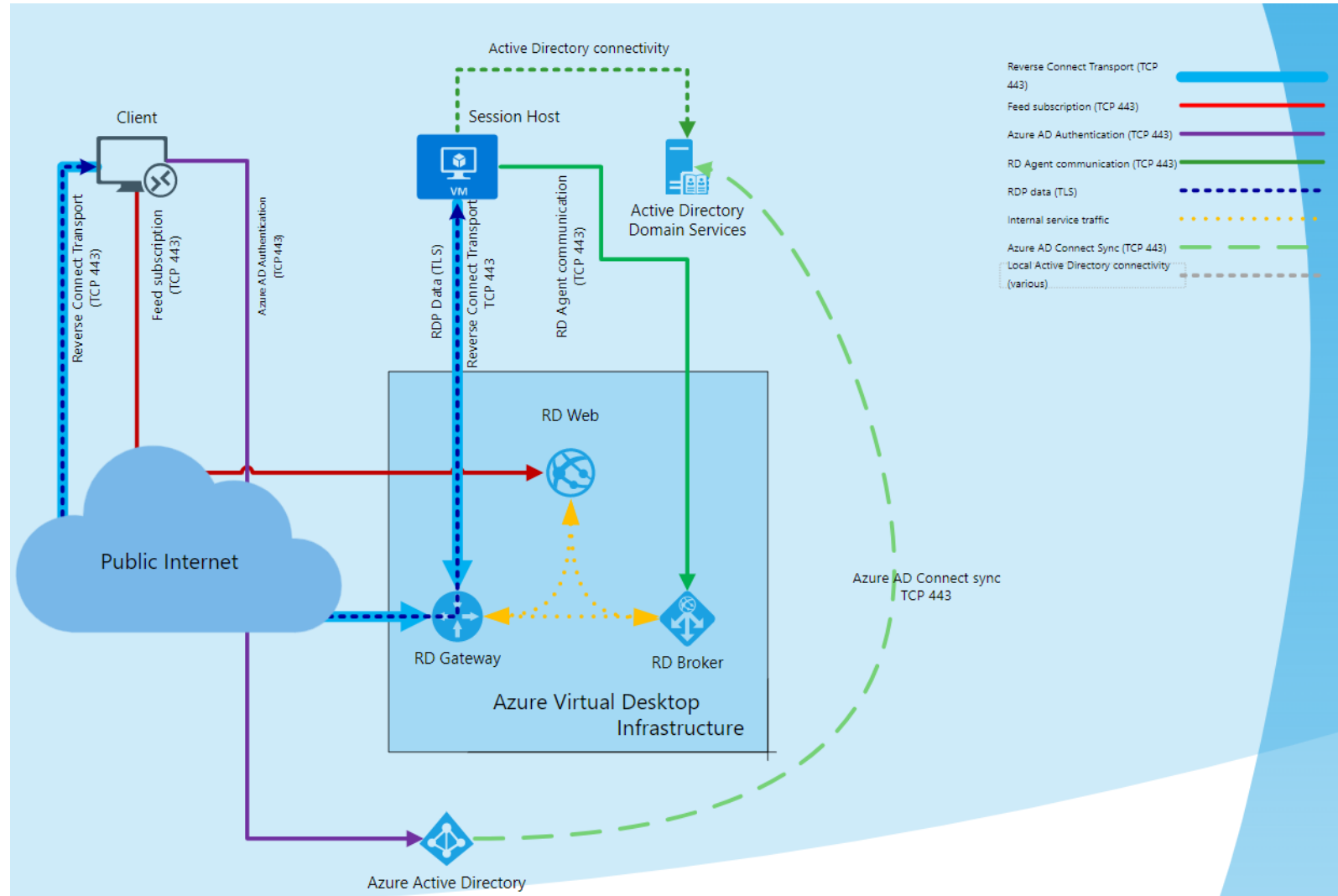
New resource





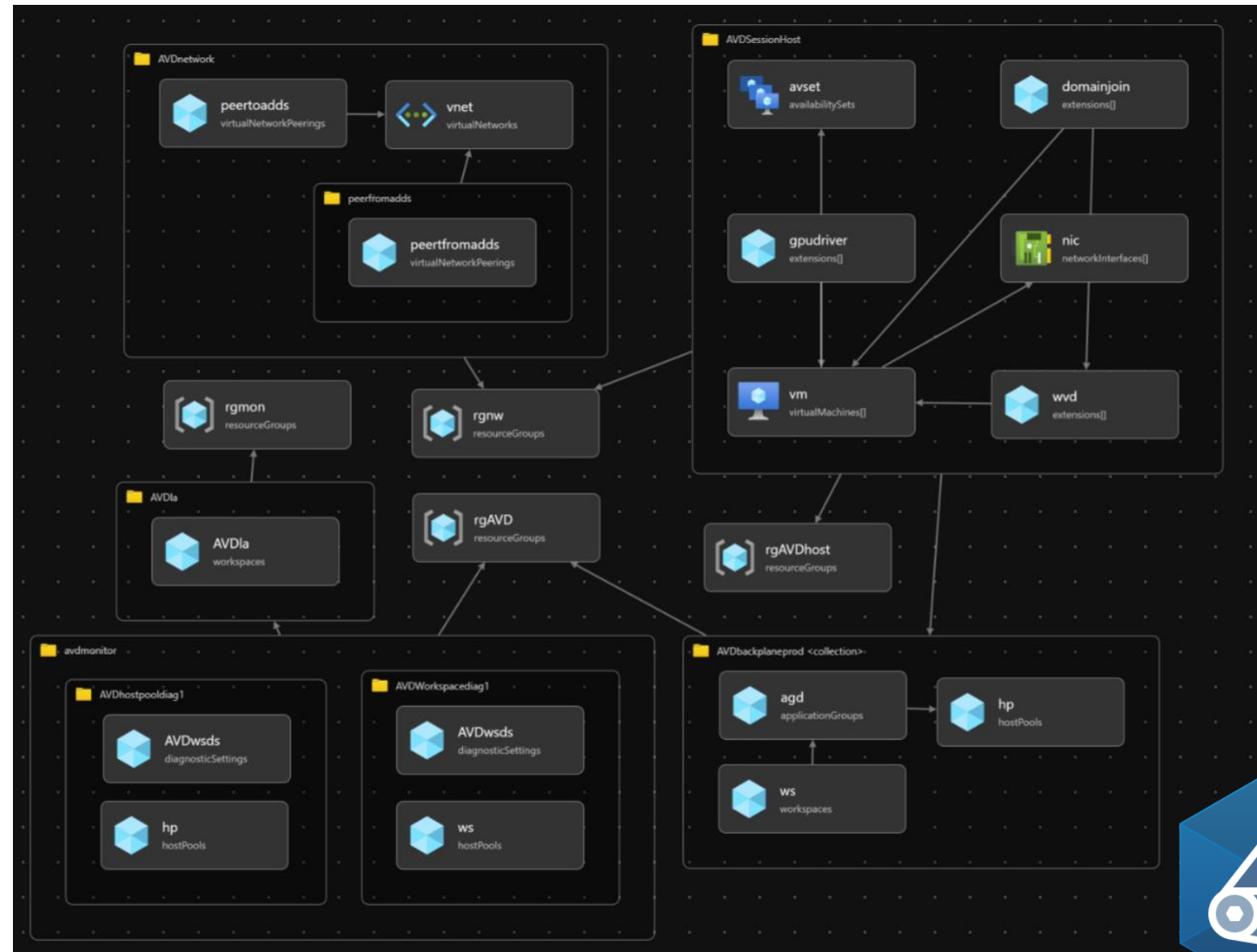
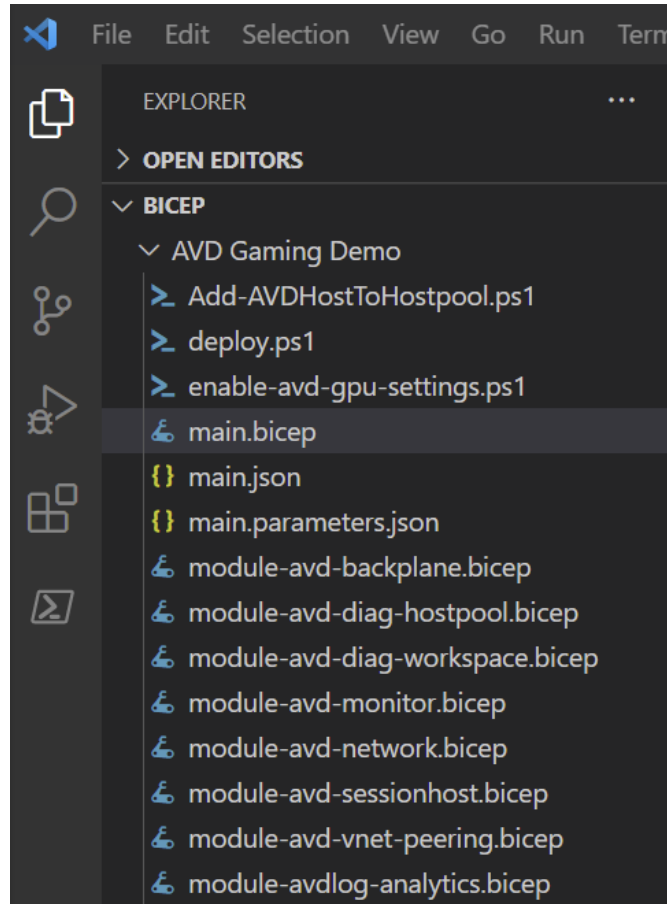
# RDP Shortpath

- ✓ **direct connectivity between client and AVD Session Host**
- ✓ **Provides RDP-UDP**
- ✓ **Options for configuring Quality of Service (QoS)**
- ✓ **Reduces round trip latency**





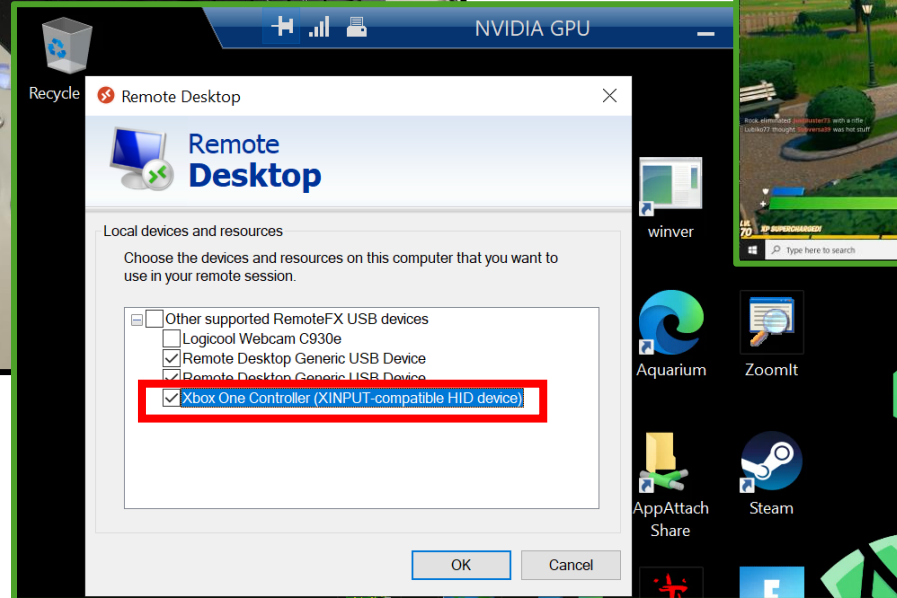
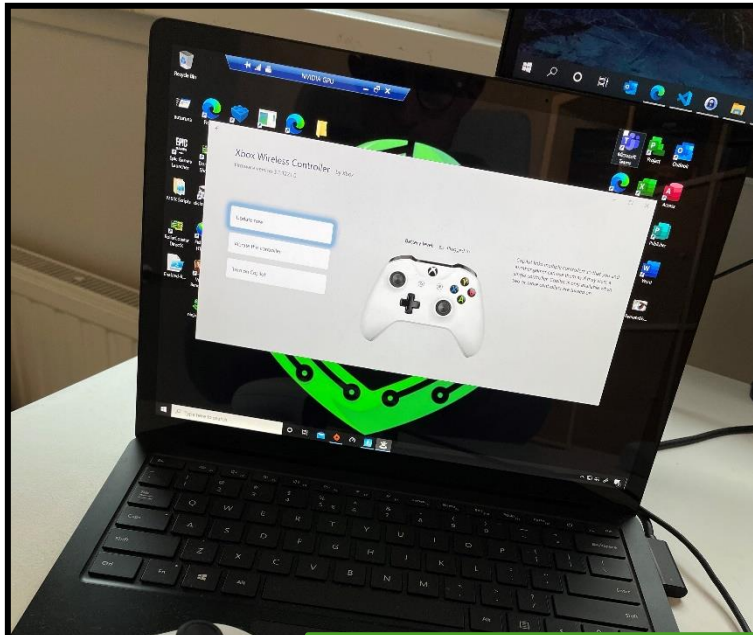
# DEMO: Deploying the scenario with Bicep



@fberson: Tweet about this session and win a copy of the book 'Getting started with Bicep'



# DEMO: AVD Gaming console





# AVD Multimedia Redirection (preview)

The image compares two scenarios of AVD Multimedia redirection. Both scenarios show a remote desktop session of a Windows 10 machine displaying a video of Saona Island. The left scenario has AVD Multimedia redirection enabled, while the right scenario has it disabled. Both scenarios show a Task Manager window open, displaying the performance of the remote session.

**Left Scenario (AVD Multimedia redirection enabled):**

- AVD Multimedia redirection enabled
- Less remote CPU usage
- Local GPU leveraged
- Smooth experience

**Right Scenario (AVD Multimedia redirection disabled):**

- AVD Multimedia redirection disabled
- High remote CPU usage
- Local GPU not leveraged
- Video stutters

**Task Manager Performance Data:**

Scenario	CPU	Memory	Disk	Network	GPU
Left (Enabled)	37%	55%	17%	2%	33%
Right (Disabled)	17%	54%	8%	3%	19%

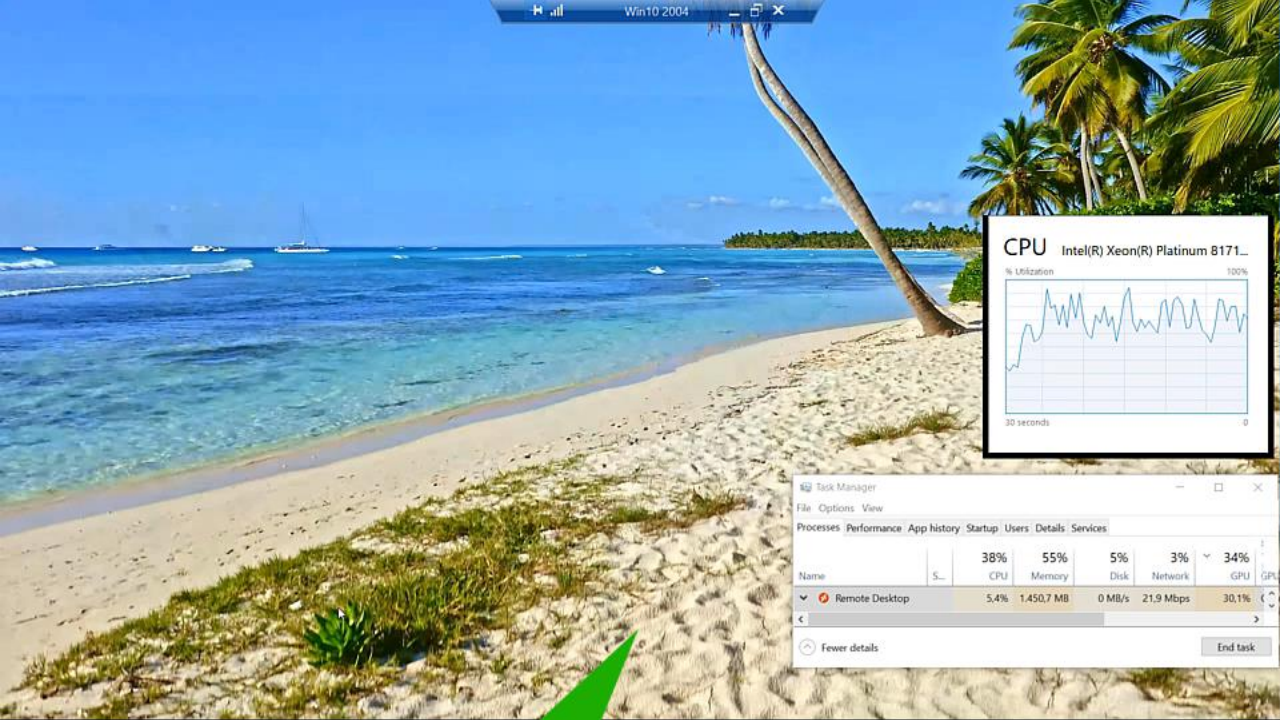
**AVD Session Details:**

Standard\_D4s\_v3  
YouTube video in Edge at 4k 2160P



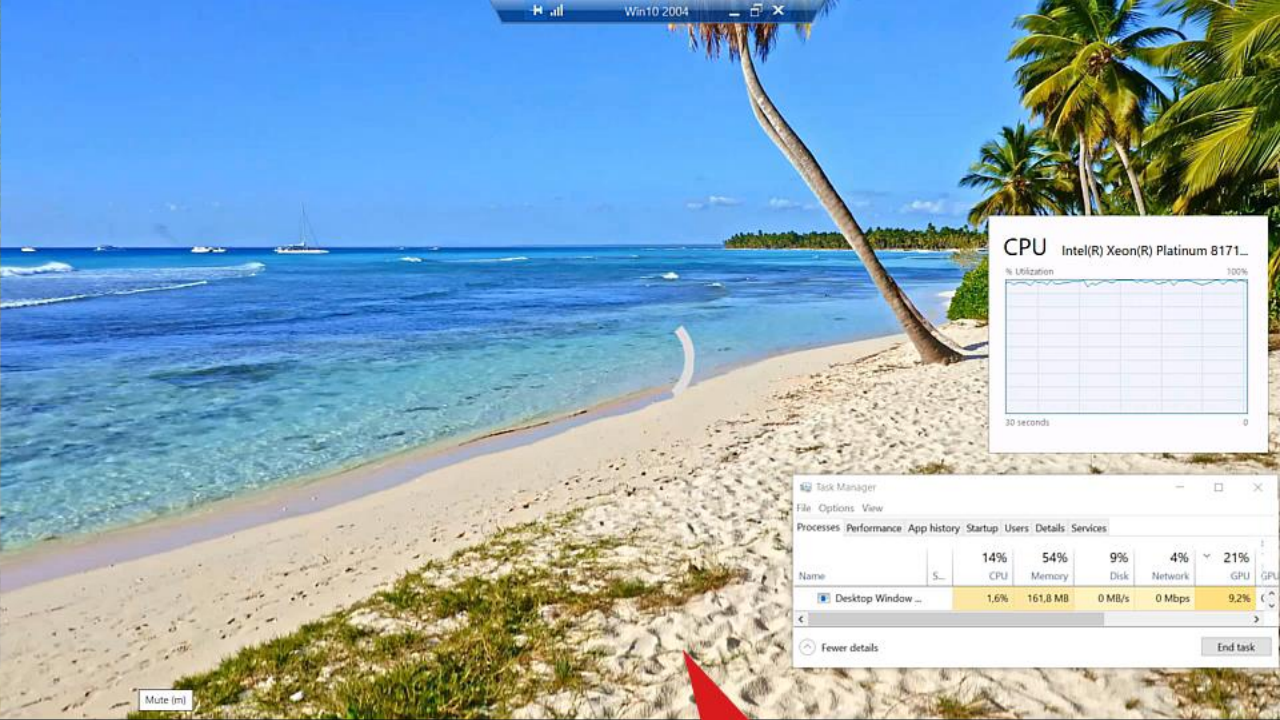
<https://www.youtube.com/watch?v=i1Z4EuPDoCw>



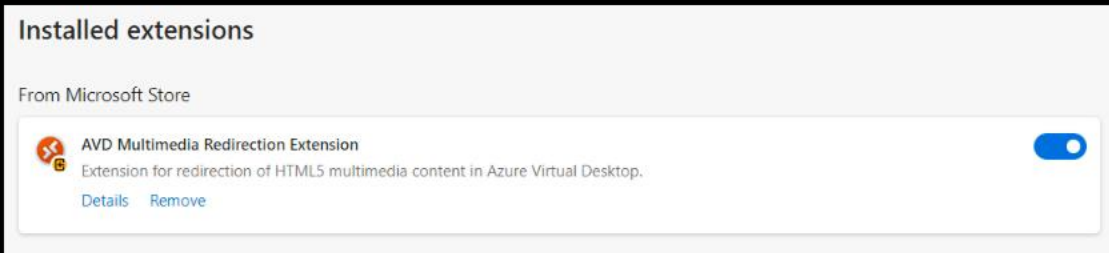
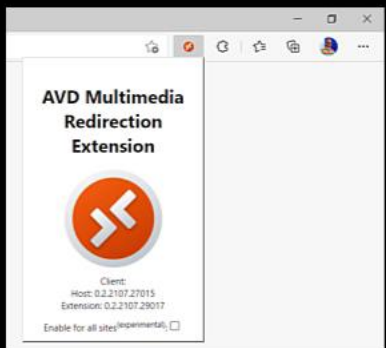


AVD Multimedia redirection enabled  
Less remote CPU usage  
Local GPU leveraged  
Smooth experience

AVD Session  
Standard\_D4s\_v3  
YouTube video in Edge  
at 4k 2160P



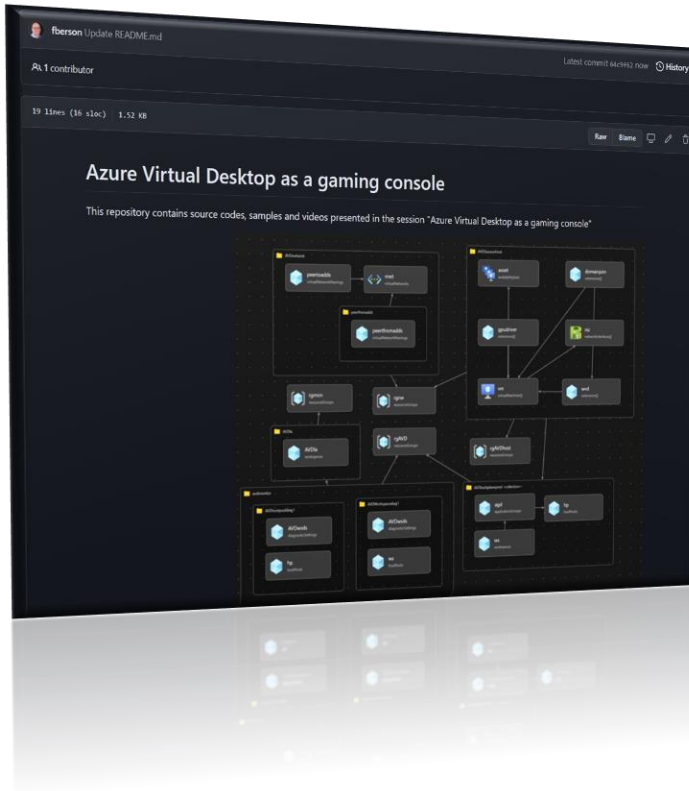
AVD Multimedia redirection disabled  
High remote CPU usage  
Local GPU not leveraged  
Video stutters



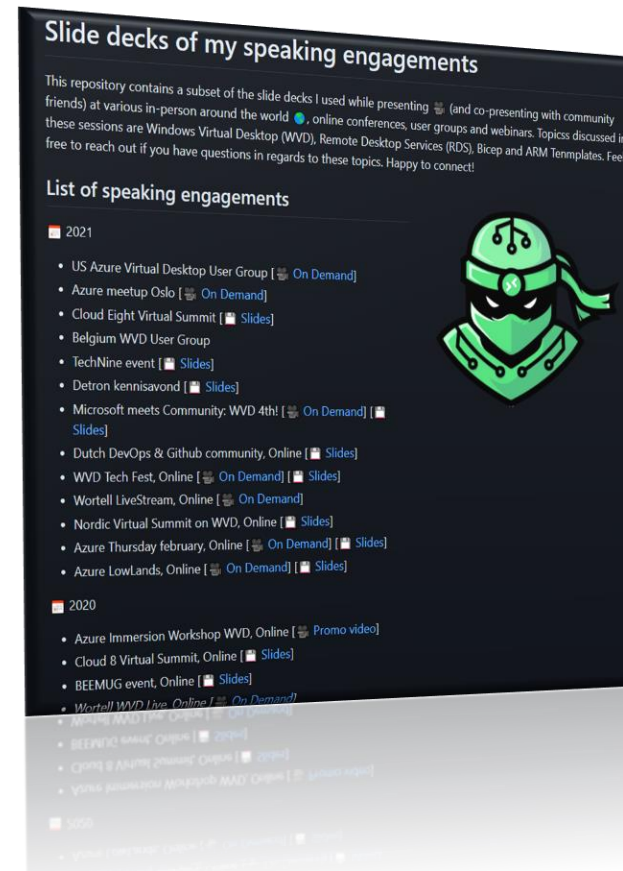
More info on AVD Multimedia Redirection:  
<https://docs.microsoft.com/en-us/azure/virtual-desktop/multimedia-redirection>



# Call to action!



<https://bit.ly/3AAcwfw>



<https://github.com/fberson/Slidedecks>



*@fberson: Tweet about this session and win a copy of the book 'Getting started with Bicep'*





# Azure Virtual Desktop as a gaming console?

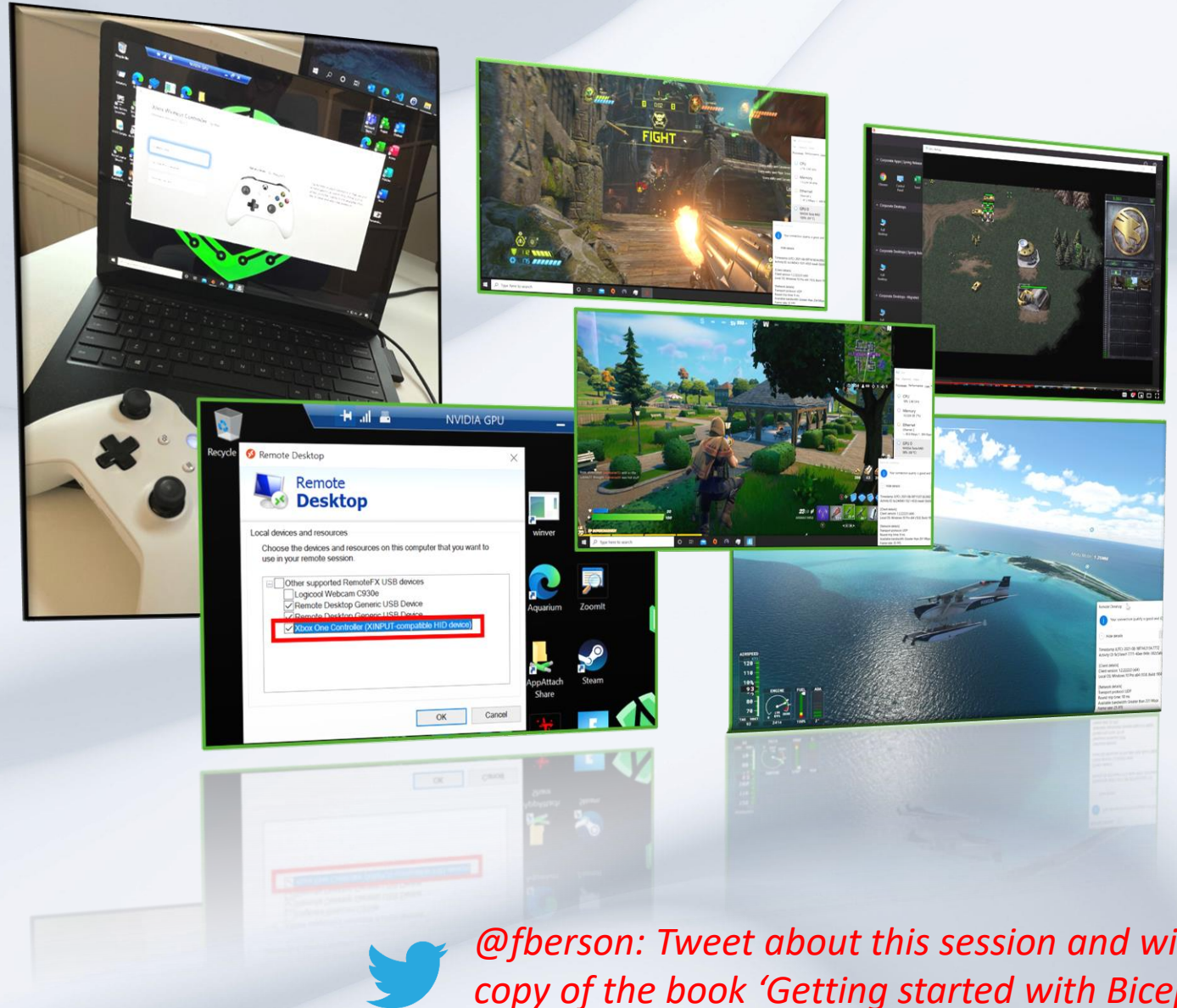
## THANK YOU!

*Freek Berson*

*@fberson*

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*TheMicrosoftPlatform.net*



*@fberson: Tweet about this session and win a copy of the book 'Getting started with Bicep'*





# Empowering AVD Image deployments with Azure Pipelines, Bicep and Liquit!

Tue, Dec 7, 2021 3:00 PM - 4:00 PM CET

Freek Berson

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TheMicrosoftPlatform.net



**AVD Liquit Build Repo** #20211010.1 • Updated create-avd-template-image.yml  
Manually triggered for main 26m ago 15m 11s

**Jobs in run #20211010.1**  
AVD Liquit Build Repo

- Job 15m 4s
- Initialize Job 3s
- Check out AVD Liquit Bu... 3s
- Install Bicep CLI 3s
- Run Bicep CLI build co... 3s
- Deploy Templ. get ... 5m 20s
- Deallocate & generaliz... 57s
- Capture VM & creat... 3m 7s
- Delete source VM a... 1m 0s
- Grab Host pool Regist... 17s
- Run Bicep CLI build co... 1s
- Deploy main.bicep t... 4m 4s
- Post-job: Checkout AV... <1s

**Job**

- Pool: Azure Pipelines
- Image: windows-latest
- Owned: Today at 08:44 [manage\_parallel\_jobs]
- Agent: Hosted Agent
- Started: Today at 08:44
- Duration: 15m 4s
- 
- The agent request is already running or has already completed.
- Job preparation parameters
- 11 queue time variables used
- Job live console data:
- Starting: Job
- Finishing: Job

**avd-image-build**

Overview

Events

Logged on

Memberships

Packages

Deployments

Type	Status	Identity	Package	Time
Distribute package	Success	7-zip (x64)		10/8/2021 12:52:07 PM
Distribute package	Success	NetSpkg++ (x64)		10/8/2021 12:52:07 PM
Distribute package	Success	PSLogin Apps (x64)		10/8/2021 12:52:04 PM
Distribute package	Success	PowerShell (x64)		10/8/2021 12:52:03 PM
Distribute package	Success	PowerShell (x64)		10/8/2021 12:52:03 PM
Distribute package	Success	PowerShell (x64)		10/8/2021 12:52:03 PM
Distribute package	Success	PowerShell (x64)		10/8/2021 12:52:03 PM

**AVD Host pool**

**NINJA-WE-P-RG-DEMO-HP - Session hosts**

Host pool

+ Add Refresh Assign Export to CSV Turn drain mode on Turn drain mode off

Filter by Name Status: 12 selected Drain mode: 2 selected

Name	Status	Drain mode	Assigned user	Active ses...
avd-demo-1.wvd.ninja	Available	Off	-	0
avd-demo-2.wvd.ninja	Available	Off	-	0

**Provisioning State Table**

Number	Provisioning State	Published date	Target regions
1.0.0	Succeeded	10/8/2021, 4:36:47 PM	West Europe
1.0.1	Succeeded	10/8/2021, 4:45:45 PM	West Europe
1.0.2	Succeeded	10/8/2021, 10:04:04 PM	West Europe

[register.gotowebinar.com/register/3599764104761845515](https://register.gotowebinar.com/register/3599764104761845515)