



# Amazon WorkSpaces Core

Technical Deep Dive

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AWS End User Computing

# Agenda

- Amazon WorkSpaces Core?
- Why did we build this?
- Architectural models
- Workflow & lifecycle
- Questions

# Introducing Amazon WorkSpaces Core

Amazon WorkSpaces Core enables customers and partners to **build customized VDI solutions** using purpose-built compute instances optimized for virtual desktops

# Amazon WorkSpaces Core—for builders

## Simple



Quickly deploy and scale on Amazon WorkSpaces global managed infrastructure

Curated machine choices for desktop user personas make it easier and faster to get started

## API driven



Integrate with your existing business logic and workflows

Leverage partner solutions to Eliminate cloud infrastructure learning curve for IT administrators

## Optimized spending



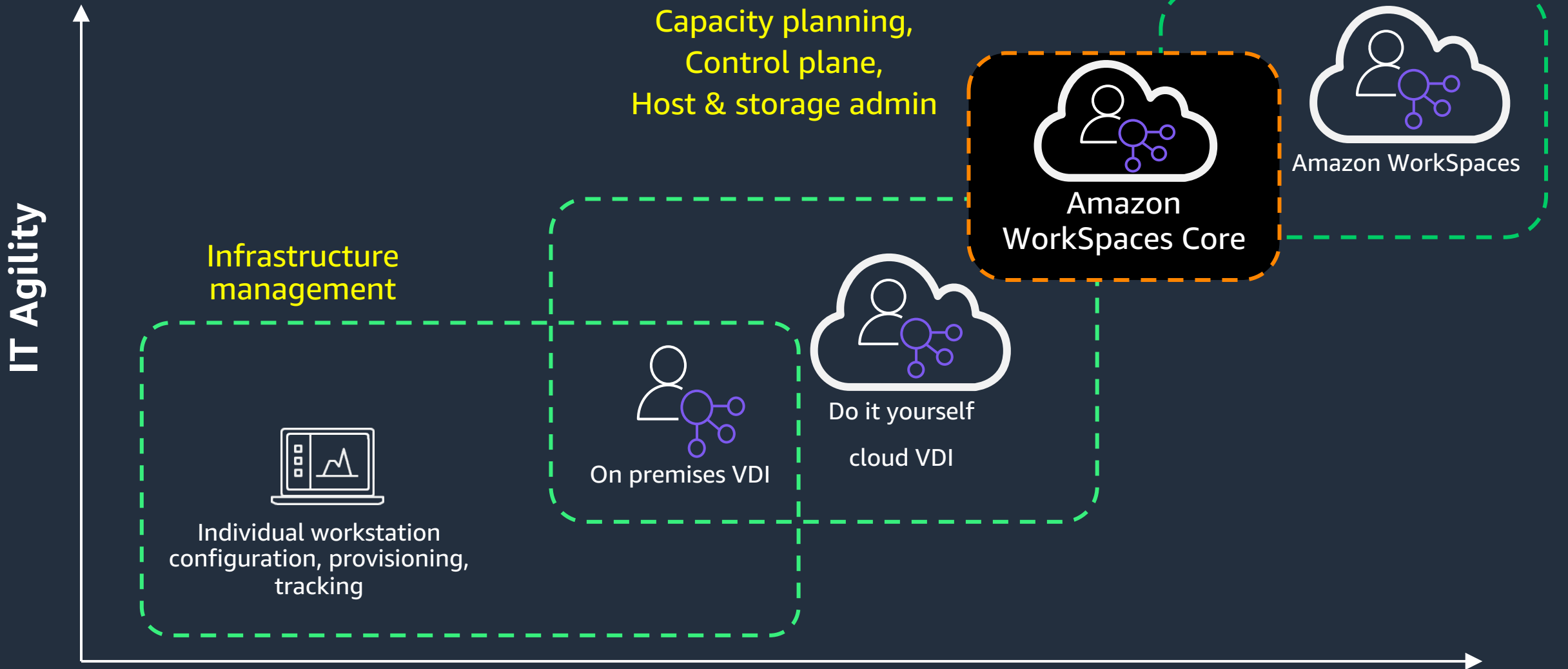
No upfront costs

Pay-as-you-go

Fixed rate monthly pricing

Start / Stop (Hibernate)  
With Manual running mode

# Evolution of the virtual desktop



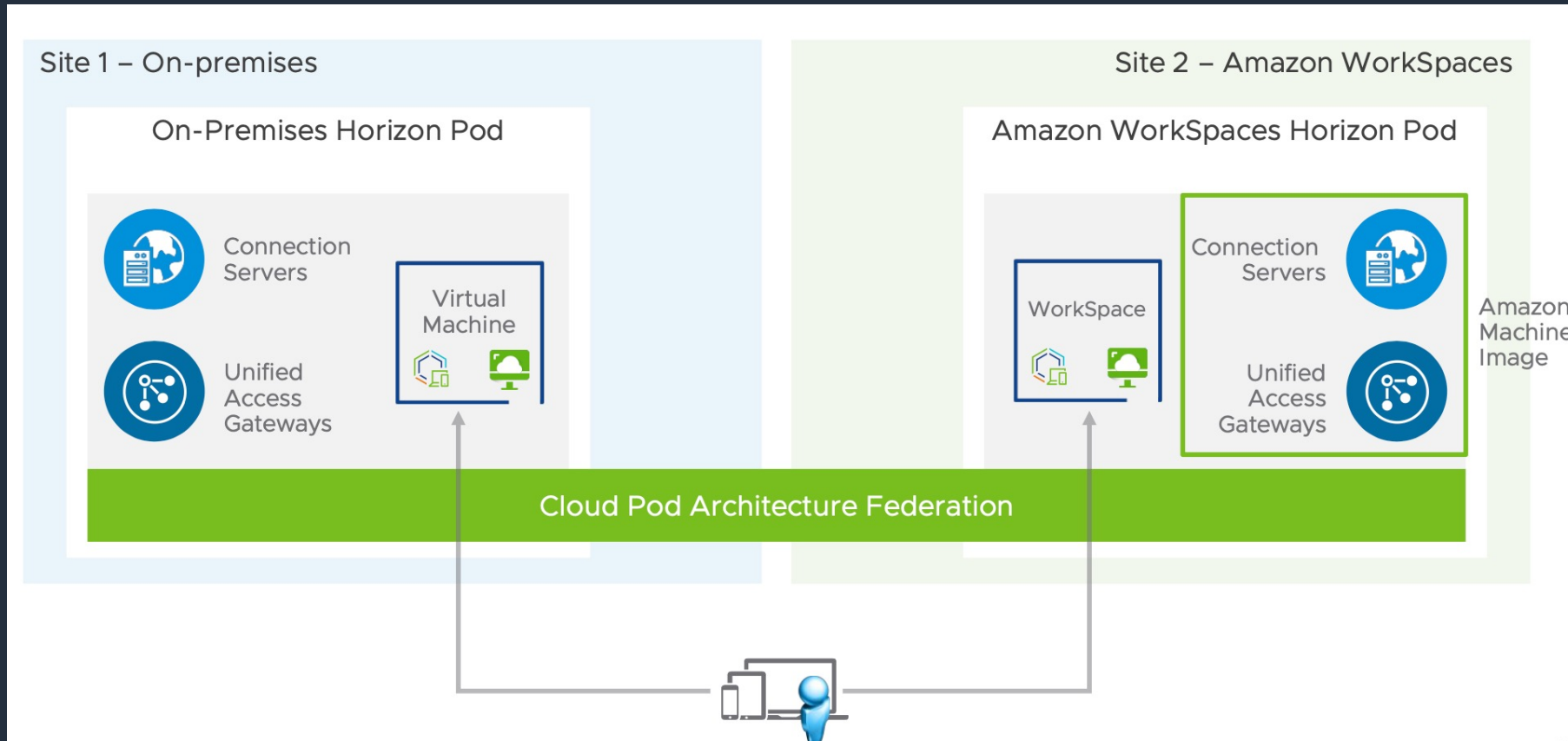
**Security /Reliability/Cost Savings**

# How is this different from Amazon WorkSpaces?

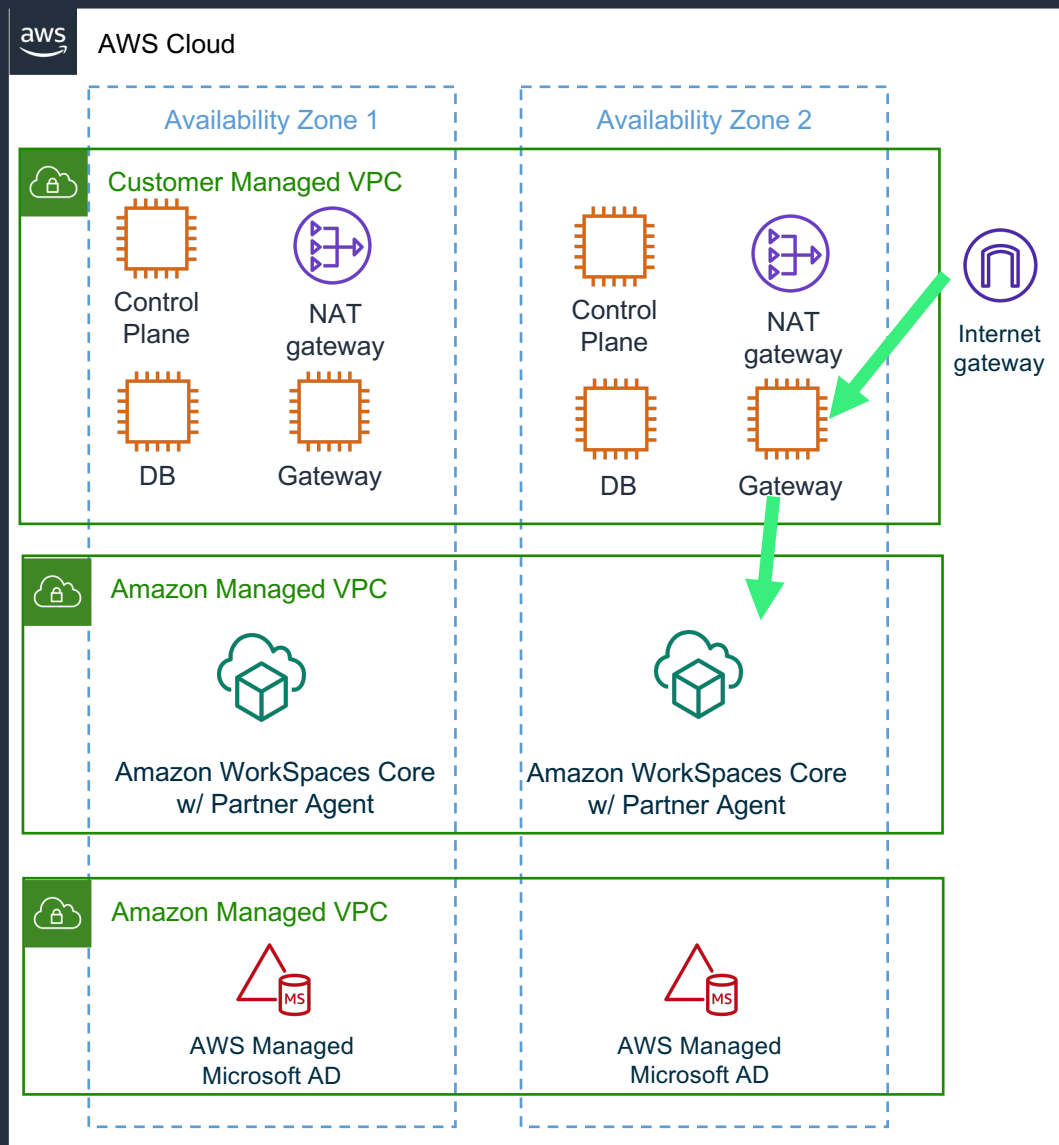
On-premises VDI	Build Your Own-Cloud VDI	WorkSpaces Core	WorkSpaces
Image management	Image management	Image management	Image management
Directory services & policies	Directory services & policies	Directory services & policies	Directory services & policies
VDI control plane install & admin	VDI control plane install & admin	VDI control plane install & admin	VDI control plane install & admin
Host admin	Host admin	Host admin	Host admin
Storage admin	Storage admin	Storage admin	Storage admin
Load balancers install & admin	Load balancers install & admin	Load balancers install & admin	Load balancers install & admin
Hypervisor install & admin	Hypervisor install & admin	Hypervisor install & admin	Hypervisor install & admin
Physical security	Physical security	Physical security	Physical security
Power, HVAC	Power, HVAC	Power, HVAC	Power, HVAC
Rack and stack	Rack and stack	Rack and stack	Rack and stack
		Partner/Customer managed	Customer managed
			Service managed



# VMware Horizon with Amazon WorkSpaces



# Partner solution & WorkSpaces Core-VDI



Anyone  
Anywhere  
Any  
device

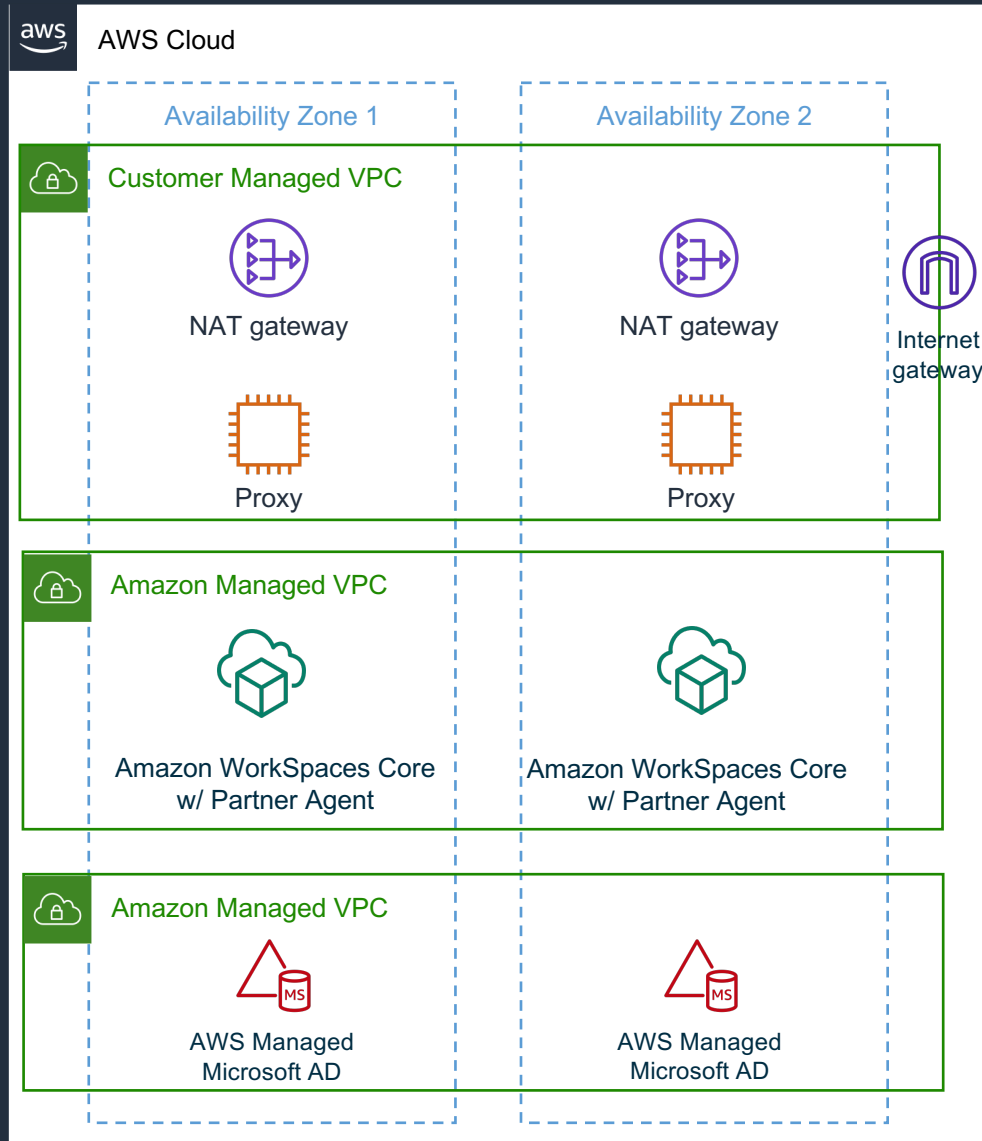


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# Partner solutions & WorkSpaces Core–cloud service



Assume Role

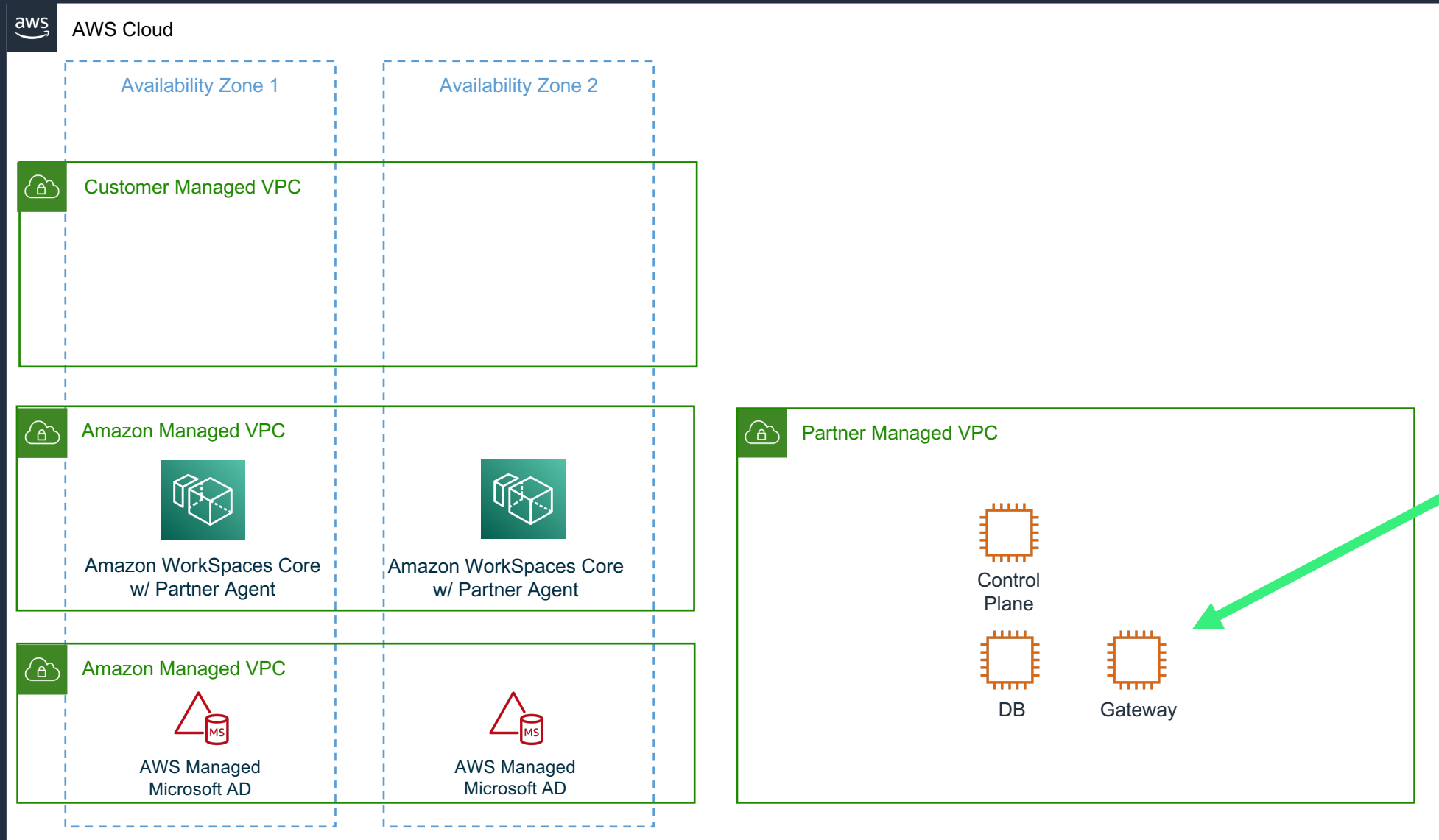


## Partner cloud service

- Control plane
- Gateway service
- Security
- Monitoring
- Etc.

Anyone  
Anywhere  
Any Device

# Partner solution & WorkSpaces Core—partner-owned



Anyone  
Anywhere  
Any Device

# Simple steps to get started

Connect to Customers AWS Account from Partner Solution	Connect to customers Identity	Import image	Deploy Desktops	Manage Lifecycle of desktops
<p><u>Assume Role:</u> temporary security credentials that you can use to access AWS resources.</p> <p><u>Secret &amp; Access Keys</u> Can be used for VDI architectural style</p>	<p><u>Register Workspace Directory API</u></p> <p>Enables WorkSpaces to manage desktop and active directory resources</p>	<p><u>Ingestion of the specified Windows 10 Bring Your Own License (BYOL) Bring Your Own Protocol (BYOP)</u></p> <p>BYOL_REGULAR_BYOP BYOL_GRAPHICS_G4DN_BYOP</p>	<p><u>Create bundles</u> that combines the custom image and the underlying compute and storage configuration.</p> <p><u>Launch new WorkSpaces</u> that have consistent hardware and software configurations.</p>	<p><u>Change Running modes</u>, storage and compute types to optimize cost</p> <p><u>Rebuild / Restore</u> to repair desktops</p> <p><u>Termination</u></p>

# Technical Overview

## API changes

<u>API</u>	<u>New API vs. Update</u>	<u>Change</u>
CreateWorkSpaces	Update	A new Running Mode 'Manual' supported
ImportWorkpaceImage	Update	A new value of 'BYOL_REGULAR_BYOP' or 'BYOL_GRAPHICS_G4DN_BYOP' added
DescribeWorkSpaces	Update	A new Running Mode 'Manual' supported
ModifyWorkspaceProperties	Update	Enable switching between ALWAYS_ON and MANUAL
ModifyWorkspaceCreationProperties	Update	Maintenance schedules can be either enabled or disabled
CreateWorkspacelImage	Update (Public)	Creation of a custom image from an existing Workspace

# CLI Examples

## Import Image

```
akloman@3c063040b46a ~ % aws workspaces import-workspace-image --ec2-image-id ami-071265f23ca9034c8 --ingestion-process BYOL_GRAPHICS_G4DN_BYOP --image-name wsc1gpu --image-description wsc1gpu
{
  "ImageId": "wsi-js8wyr4f"
}
```

## Create Manual Running Mode

```
akloman@3c063040b46a ~ % aws workspaces create-workspaces \
  --workspaces DirectoryId=d-906758a4c5,UserName=test10,BundleId=wsb-xp4lh2jq7,WorkspaceProperties={RunningMode=MANUAL}
{
  "FailedRequests": [],
  "PendingRequests": [
    {
      "WorkspaceId": "ws-83b5k7w22",
      "DirectoryId": "d-906758a4c5",
      "UserName": "test10",
      "State": "PENDING",
      "BundleId": "wsb-xp4lh2jq7"
    }
  ]
}
```

# Documentation

- Create a AWS account and get console and CLI access  
<https://aws.amazon.com/premiumsupport/knowledge-center/create-and-activate-aws-account/>
- Open support case to enable BYOL and BYOP  
[https://docs.aws.amazon.com/workspaces/latest/adminguide/byol-windows-images.html#windows\\_images\\_eligibility\\_byol](https://docs.aws.amazon.com/workspaces/latest/adminguide/byol-windows-images.html#windows_images_eligibility_byol)  
Reach out to Support / Sales / PM
- Register Workspace Directory within Console  
Enables WorkSpaces to manage desktop and active directory resources  
<https://docs.aws.amazon.com/workspaces/latest/adminguide/register-deregister-directory.html>
- Ingestion of the specified Windows 10 via CLI  
Bring Your Own License (BYOL) Bring Your Own Protocol(BYOP)  
Use this string when importing  
    --ingestion-process BYOL\_REGULAR\_BYOP or BYOL\_GRAPHICS\_G4DN\_BYOP  
<https://docs.aws.amazon.com/cli/latest/reference/workspaces/import-workspace-image.html>
- Create bundle via Console  
<https://docs.aws.amazon.com/workspaces/latest/adminguide/create-custom-bundle.html>
- Launch a Workspace Core  
<https://docs.aws.amazon.com/workspaces/latest/adminguide/launch-workspace-microsoft-ad.html#create-workspace-microsoft-ad>
- Security Group check  
Confirm Amazon WorkSpaces Core and VMware Connection server security groups are open for communications  
<https://docs.aws.amazon.com/workspaces/latest/adminguide/amazon-workspaces-security-groups.html>



# Thank you!

Andrew Kloman

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**VDI migration innovation with Amazon WorkSpaces – Andrew Kloman**