

Configuring an Ubuntu Virtual Desktop with Amazon Workspaces

Project Goals:

- Use Amazon Workspaces to provision an Ubuntu Virtual Desktop that can be accessed using the Amazon Workspaces client application
- Select an appropriate bundle for my project goals
- Create and invite a user to the workspace



Amazon Workspaces is a cloud-based virtual desktop service that allows users to provision desktops for users without the need for physical hardware.

For our purposes, we will be creating a persistent desktop for individual use, do note that depending on your situation; a pooled workspace might work better.

We will use the AWS Workspaces client application to test our access to our workspace.

Creating a Directory

Amazon WorkSpaces > Directories > Create directory

WorkSpaces

- WorkSpaces
 - Personal
 - Pools
 - Directories**
 - Bundles
 - Images
 - IP Access Controls
 - Account Settings
- WorkSpaces Secure Browser
- WorkSpaces Core
 - Get started
 - Managed Instances **New**
- Partners
 - Citrix
 - OmniSSA

Create directory Info

Manage access to your WorkSpaces by creating a WorkSpaces directory

Workspace type Info

► I don't know, help me to decide

Personal

Each user is assigned a persistent Workspace.

Pool

A shared pool of non-persistent WorkSpaces that are available to all users in the pool.

Workspace device management Info

Use the device management solution of your choice to manage WorkSpaces in this directory.

☒ **AWS Directory Service**
WorkSpaces in the directory will join AD domain specified in AWS Directory Service.

☐ **Microsoft Entra ID**
WorkSpaces in the directory will join your Entra ID tenant through Windows Autopilot user-drive mode.

☐ **Custom**
Use device management solution of your choice to manage WorkSpaces. Make sure the MDM agent is included in the images that you will use to launch WorkSpaces in the directory.

Unregistered directories in AWS Directory Service (2)

Directory summary

Workspace type
Personal

Workspace device management
Directory Service: -

[Register directory](#)
Subnet 1: -
Subnet 2: -

Amazon WorkSpaces > WorkSpaces > Create WorkSpaces

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Select a directory Info

WorkSpaces uses a directory to store and manage information for your WorkSpaces and users.

Directories (1/1) Info

Directory ID	Workspace Type	Directory name	Organization ...	Identity source	Status
d-906625e6ab	Personal	junaid.mohamme...	junaidmohammed	AWS Directory Se...	Registered

Our first step is to create a directory, that will authenticate users and determine their access on their virtual desktop.

For my purposes, I decided to use the AWS Managed Microsoft AD. This directory type is a cloud hosted active directory with full features and a low cost.

Do note that creating a directory might take some time, and the directory must be registered after its creation

Creating and Identifying Users

Amazon WorkSpaces > WorkSpaces > Create WorkSpaces

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Step 1: Select a directory
Step 2 - optional: Create Users
Step 3: **Identify Users**
Step 4: Select Bundle
Step 5: WorkSpaces configuration
Step 6 - optional: Customization
Step 7: Review

Identify Users [Info](#)

To create a WorkSpace for existing users in this directory, search and select from the table below.

Select users from directory (1/6)

You can select up to 25 users.

Q Filter Users

☐	Username	Name
☐	Admin	
☐	Administrator	
☐	AWS_WorkSpaces	
☐	Guest	
☒	Hughge	Hugh George
☐	krbtgt	

In this step we create a user who will be authorized to use this workspace. We can enter the users name, username, and email.

Once we finish the setup for our desktop, we can invite the user to finish setting up their account in order to access their Amazon workspace.

Selecting the Appropriate Bundle

Select Bundle [Info](#)

Amazon Linux bundles come with Firefox, LibreOffice, Evolution, Python, and more. Windows bundles come with Internet Explorer 11 and Firefox. You can install your own applications and packages on your WorkSpaces after launch. [Learn more](#)

The monthly payment may vary depending on your selection. [See pricing](#)

The selected bundle is: Performance with Ubuntu 22.04. You can customize your user bundles selection on step 6.

Value | Standard | **Performance** | Power | PowerPro | GPU enabled

Free tier eligible | For low resource intensive applications | For entry to mid-level data processing

Compute power
2 vCPU

Recommended for
Web browsing, email, word processing, spreadsheets, audio processing, and coursework.

Example user roles this bundle suits
Accountants, Customer support assistants (using text and audio), office workers and students (using low resource intensive applications).

Memory
8 GB

Not recommended for
Video conferencing, screen sharing, software development tool, business intelligence applications, or graphics applications.

Communication tools supported
Instant messaging, email, and audio conferencing.

Performance bundles (1/17) [Info](#)

Filter bundles: Filter owner:

Performance bundles (1/17) [Info](#)

Filter bundles: Filter owner:

Filter operating system: Filter protocol: Filter software:

Name	ID	Language	Client p...	Bundle ...	Bundle ...	Update...	Source ...
Performance wi Free tier eligible	wsb-20818...	English	DCV (WSP)	Regular	Available	Wednesday, 10/17/2024	Base image fro
Performance wi	wsb-b9jc2...	English	DCV (WSP)	Regular	Available	Tuesday, 10/16/2024	Base image fro
Performance wi	wsb-55rhr...	English	DCV (WSP)	Regular	Available	Wednesday, 10/16/2024	Base image fro
Performance wi	wsb-gqb4...	English	DCV (WSP)	Regular	Available	Tuesday, 10/15/2024	Base image fro
Performance wi	wsb-05t16...	English	DCV (WSP)	Regular	Available	Tuesday, 10/15/2024	Base image fro
Performance wi	wsb-dz4ny...	English	DCV (WSP)	Regular	Available	Wednesday, 10/16/2024	Base image fro
Performance wi	wsb-0mps...	English	DCV (WSP)	Regular	Available	Tuesday, 10/15/2024	Base image fro
Performance wi	wsb-5s0yn...	English	DCV (WSP)	Regular	Available	Wednesday, 10/16/2024	Base image fro
Performance wi	wsb-b1rv0...	English	DCV (WSP)	Regular	Available	Wednesday, 10/16/2024	Base image fro
Performance wi	wsb-0m4d...	English	DCV (WSP)	Regular	Available	Monday, 10/14/2024	Base image fro

In this step we decide the size of the resources provisioned to our virtual hardware (compute power and memory) as well as which bundle to use. Bundles are what decides what type of OS we will be interacting with.

For both hardware and bundle I chose performance as it is inside the free tier. The performance bundle provides an Ubuntu desktop experience

Other Configurations

Amazon WorkSpaces > WorkSpaces > Create WorkSpaces

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Step 1: Select a directory
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Step 6 - optional: Customization
Step 7: Review

WorkSpaces configuration Info

Running Mode

Choose your running mode and how you would like to be billed.

☐ AlwaysOn
Billed monthly. Instant access to an always running Workspace.

☒ AutoStop
Billed by the hour. Workspace starts automatically when you log in, and stops when it is no longer being used. When possible, AutoStop creates a snapshot of the desktop state in the root volume of the Workspace.

AutoStop Time (hours)

1

Manage tags Info

Use tags to add metadata to your Workspace, or track costs in the AWS Cost Explorer. A tag consists of a case-sensitive key-value pair. Alphabetic characters, numbers, white space, invisible separators and _ . : / = + @ are accepted. Key is limited to 127 characters, and value to 255 character. For example, key = Name, and value = Webserver.

No tags associated with the resource.

[Add new tag](#)

You can add up to 50 more tags.

[Cancel](#) [Previous](#) [Next](#)

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Customization - optional Info

Customize specific bundles and encryption for each user. If you choose a KMS key managed by an external key store, it might be slower and less reliable than a key managed entirely within KMS.

Hughge

Bundle name

Performance with Ubuntu 22.04

Encryption Key

☐ Encrypt root and user volume

☐ Encrypt root volume

☐ Encrypt user volume

User volume

☐ Root volume size: 80 GB
User volume size: 10 GB

☐ Root volume size: 80 GB
User volume size: 50 GB

☒ Root volume size: 80 GB
User volume size: 100 GB

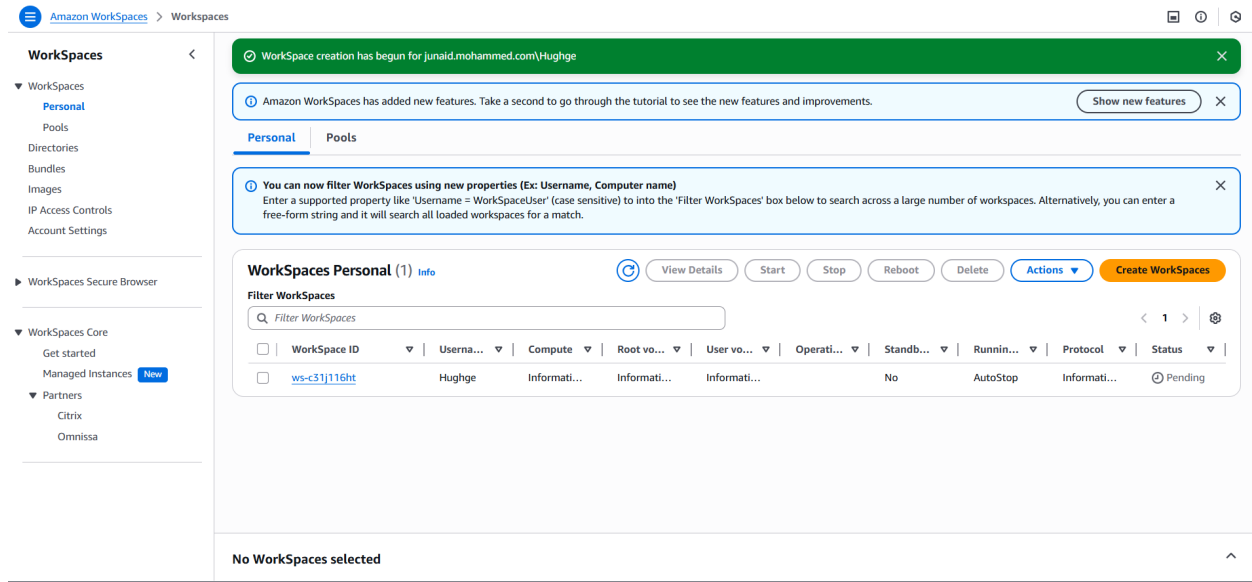
☐ Custom
Enter custom volume sizes

[Cancel](#) [Previous](#) [Next](#)

In this step we decide the behavior of our instance. Most AWS workspace instances have a base price that increases hourly upon use. Always on means the instance is always running and always costing money. However; autostop stops the instance when it is no longer being used.

We also decide the encryption and size of our user's volume. In almost every context you should encrypt root and user volume, but since this is a practice context I opted not to select these options.

Completed Workspace Creation (may take 15-30 min for performance)

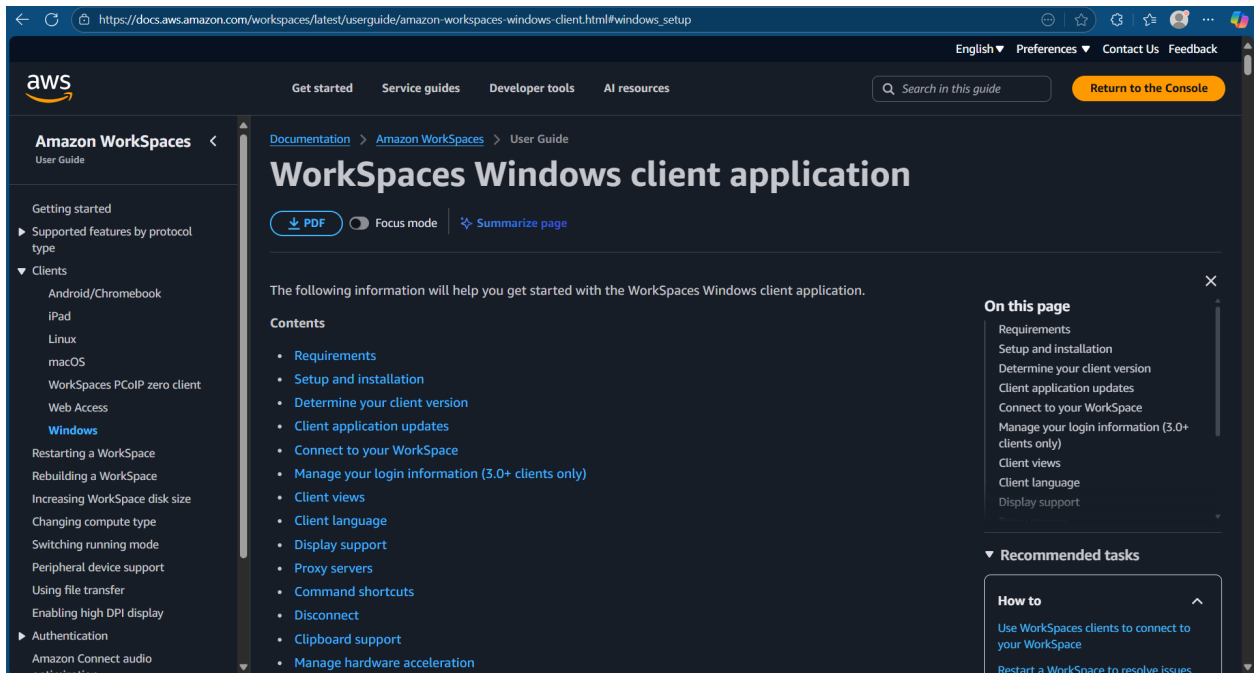


The screenshot shows the Amazon WorkSpaces console interface. At the top, a green notification bar states "Workspace creation has begun for junaid.mohammed.com\Hughge". Below this, a light blue banner mentions new features. The main content area is titled "WorkSpaces Personal (1)" and includes a search filter "Filter WorkSpaces". A table lists workspace details:

Workspace ID	Username	Compute	Root volume	User volume	Operating system	Standby	Running	Protocol	Status
ws-c31j116ht	Hughge	Informati...	Informati...	Informati...	No	AutoStop	Informati...	Pending	

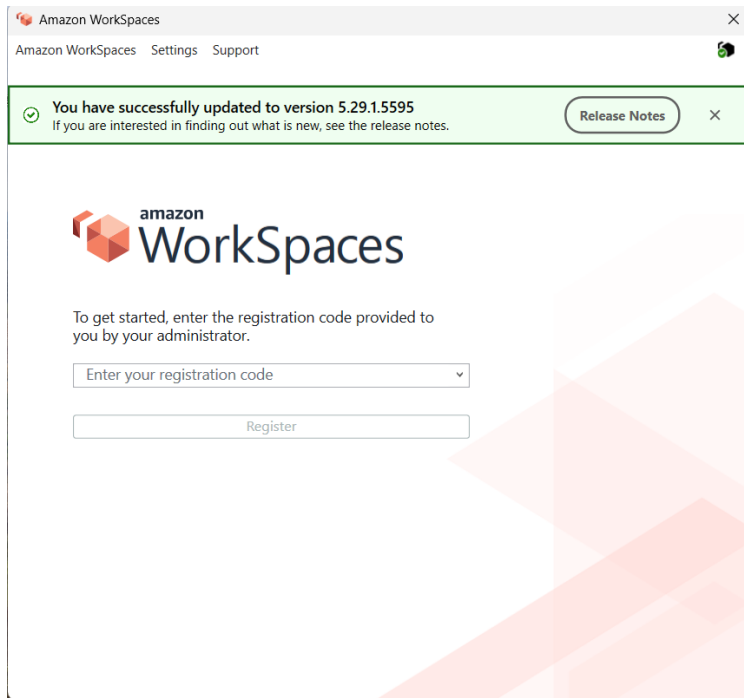
At the bottom, it states "No WorkSpaces selected".

Download the Windows Client for Workspaces



The screenshot displays the "WorkSpaces Windows client application" documentation page on the AWS website. The page includes a navigation sidebar with links like "Getting started", "Supported features by protocol type", and "Clients". The main content area is titled "WorkSpaces Windows client application" and includes a "PDF" download button. A "Contents" section lists topics such as "Requirements", "Setup and installation", "Determine your client version", "Client application updates", "Connect to your WorkSpace", "Manage your login information (3.0+ clients only)", "Client views", "Client language", "Display support", "Proxy servers", "Command shortcuts", "Disconnect", "Clipboard support", and "Manage hardware acceleration". A right-hand sidebar titled "On this page" lists specific topics like "Requirements", "Setup and installation", "Determine your client version", "Client application updates", "Connect to your WorkSpace", "Manage your login information (3.0+ clients only)", "Client views", "Client language", and "Display support". A "Recommended tasks" section at the bottom right suggests "How to" use WorkSpaces clients to connect to a WorkSpace.

Accessing Workspaces as Our Invited User



After downloading the client application,
invite our created user to Workspaces.

An email will be sent with a registration code
and further setup

If done correctly, you should now be able
to access your provisioned Ubuntu
desktop with the credentials of the user
you created

