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A Beginners Guide to Deploying CrowdStrike Falcon Sensor on Amazon WorkSpaces

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Deployment Guide: Build your Amazon WorkSpaces environment with the Falcon sensor installed

Prerequisites:

- Have an AWS account to create or administer an Amazon WorkSpace. Users do not need an AWS account or AWS console access to connect to and use their Amazon WorkSpaces.

- Decide the billing model - choose between yearly sensor licensing model or AWS metered billing. You are required create a separate image for each of the licensing models.

- Require a WorkSpaces compliant Directory Service for user management and logins.

- On launching the WorkSpace, you must specify profile information for the user, including a username and email address, or you can access the directory service and create your usernames to be linked in the Workspace build. Users complete their profiles by specifying a password that will accessible from a system generated email. (Information about WorkSpaces and users is stored in a directory.)

- Verify the supported regions and select a region for your WorkSpaces. Amazon WorkSpaces is available in most AWS Regions. For more information about the supported regions, see AWS Region Table.

- It is required to have a fully qualified domain name (FQDN) for the deployment of WorkSpaces

- The WorkSpace must be a domain member to the directory service.

- Note on Product Support:

    - Login to the CrowdStrike Falcon Console or CrowdStrike Support portal for product related questions and help.

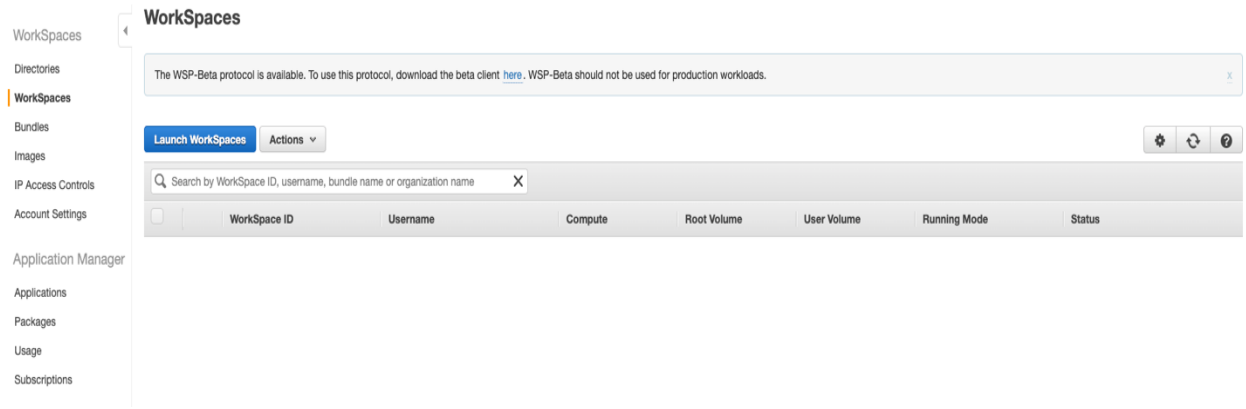
- Email aws@crowdstrike.com for any questions regarding CrowdStrike integrations with AWS.

Deployment Steps: Creation of Amazon WorkSpace Custom Image

Customers can take their current WorkSpaces golden image and create a new image with the CrowdStrike Falcon sensor installed on the image. This will allow you to use the golden image to create end user WorkSpaces with the CrowdStrike agent installed.

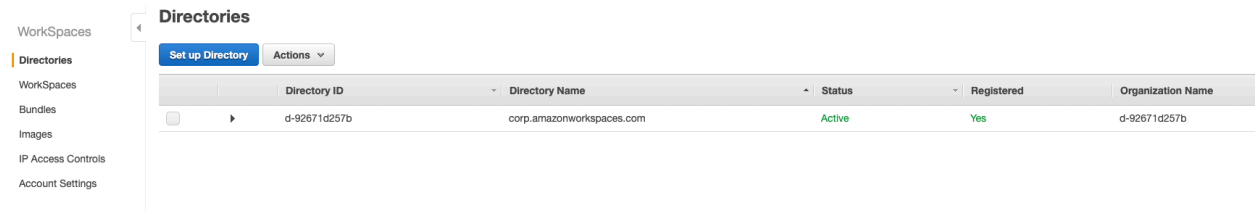
Step 1: Select region to host the WorkSpace

To begin, select an AWS region that supports WorkSpaces. Please refer to the list of regions that support WorkSpaces on Amazon's Region Table. For this demo, we will be using us-east-1 (N. Virginia) region.
Open the Amazon WorkSpaces console at https://console.aws.amazon.com/WorkSpaces/ .



Step 2: Validate Directory Services

From the WorkSpaces console select the Directories tab to validate your Directory services in your AWS region. You should have an active directory services that is registered as pictured below:



If you do not have a directory service please see the following links from AWS to setup a Directory Services:

https://aws.amazon.com/directoryservice/

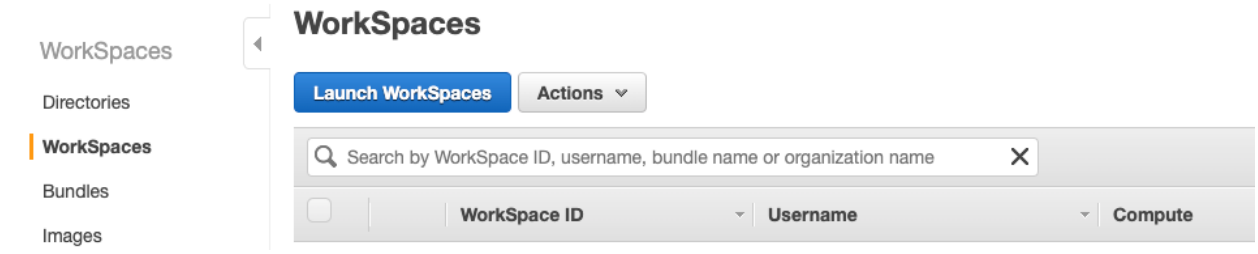
https://aws.amazon.com/quickstart/architecture/active-directory-ds/

Step 3: WorkSpace Golden Image Creation

If you do not have a current image and this is a new install, you will need to create a WorkSpace to connect and create your golden image. If you have a current Golden Image that you would like to modify and add the CrowdStrike Falcon Sensor, please skip to **Step 12.**

We will step through the creation of the WorkSpace in the next steps:

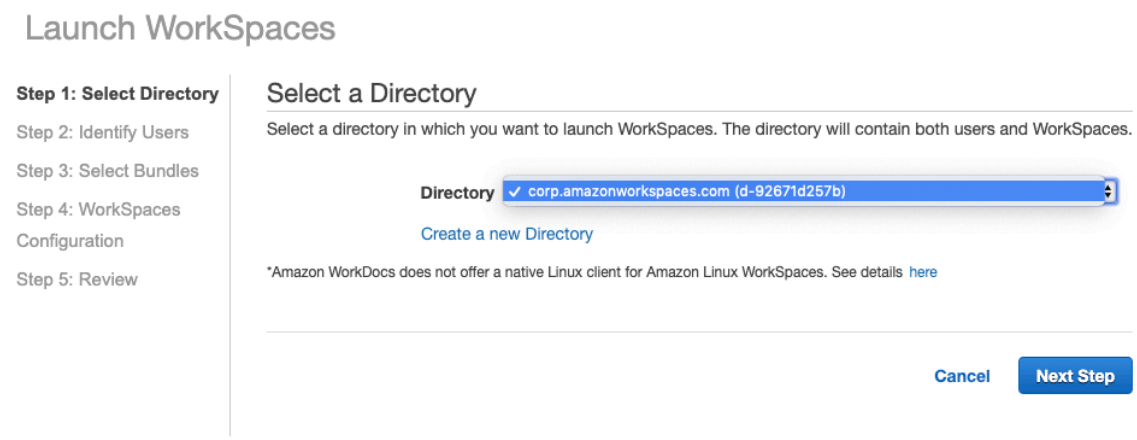
From the WorkSpaces console, select WorkSpaces from the navigation pane.



Choose ***Launch WorkSpaces*** button to create a new WorkSpace.

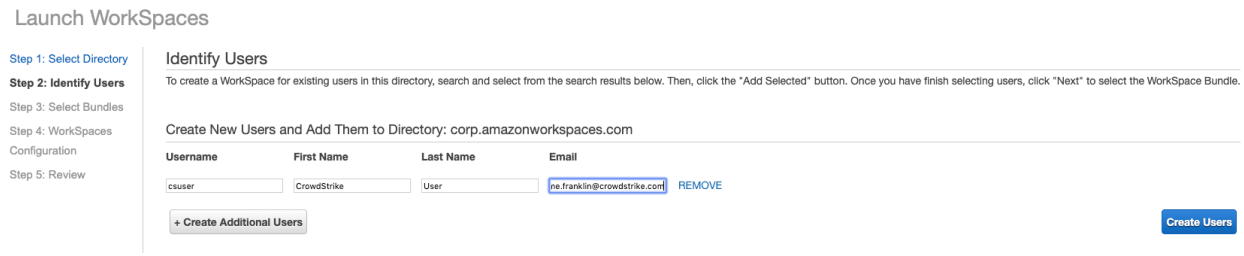
Step 4: Select Directory

In the first screen, select your directory service from the drop down and select next.



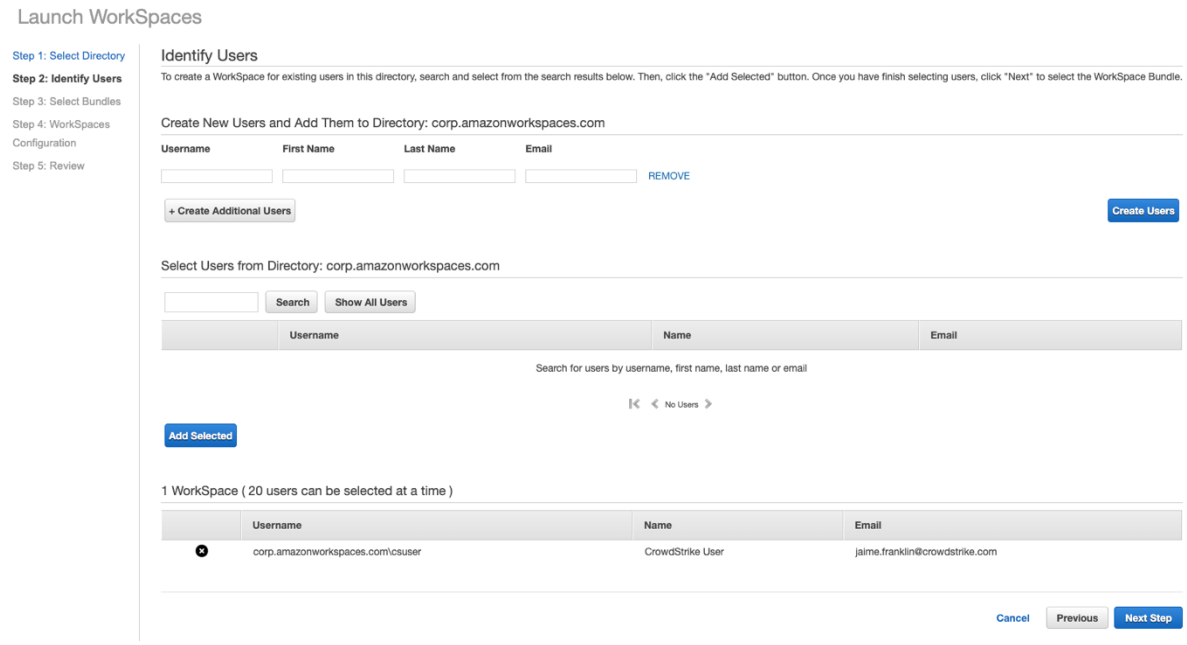
Step 5: Identify Users

You will create your users or select existing users in your Active Directory. To create a new user, enter the username, first name, last name and email address and click ***Create User***. You can create multiple users by selecting the ***Create Additional Users*** button before selecting the ***Create Users'*** button.



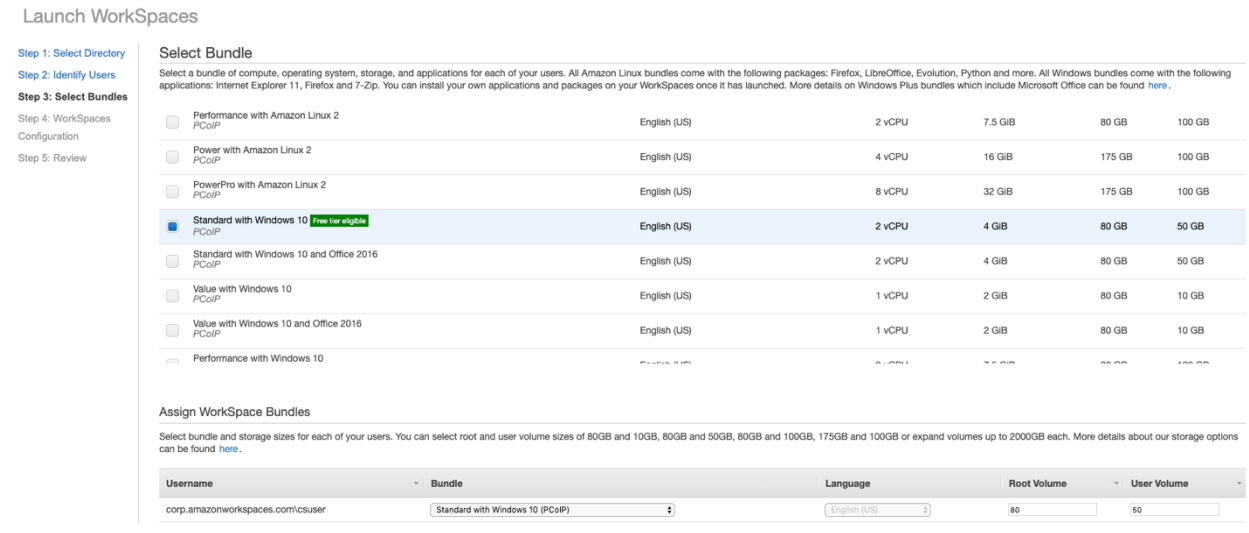
Once you have created your user account, you should see the user listed as below. Once you have added your users, select ***Next Step*** button

Please Note: If you are new to WorkSpaces, you will have a WorkSpaces limit to 2 WorkSpaces on your account. Each user will be assigned one WorkSpace. You will need to submit a support ticket to AWS to request a WorkSpace resource increase to your desired number. Please see AWS Support page for creating a ticket and resource increase.



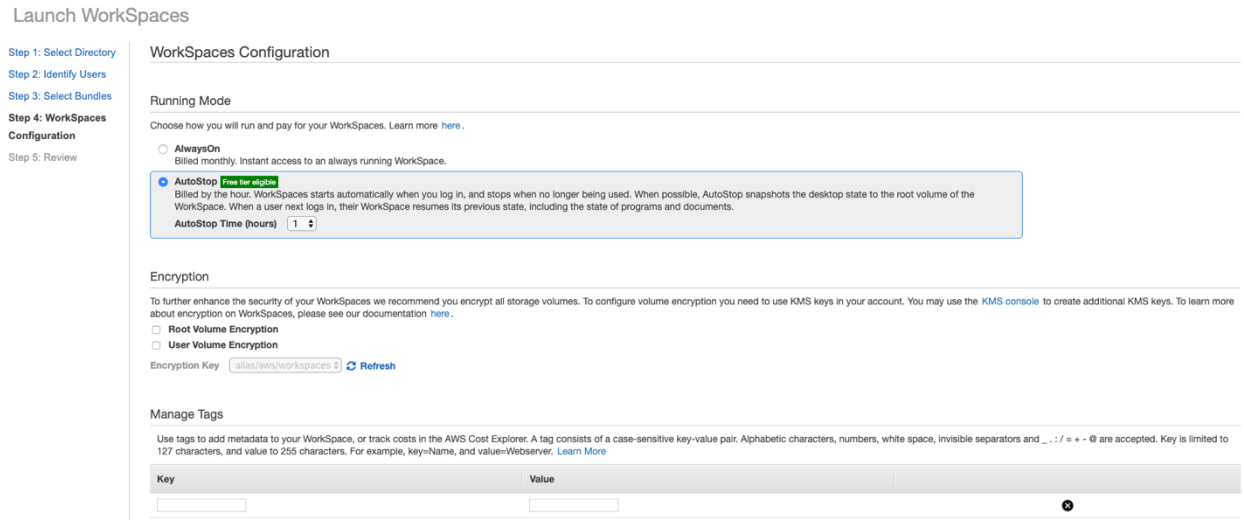
Step 6: WorkSpace Bundle Selection

In this step, you will select a bundle with the OS version and resources desired. Based on the purpose of the WorkSpace, select a version of the OS and software required for your users. In this example we will use the standard Windows 10 bundle to create our image. Once you select your bundle click the ***Next Step*** button at the bottom of the screen.



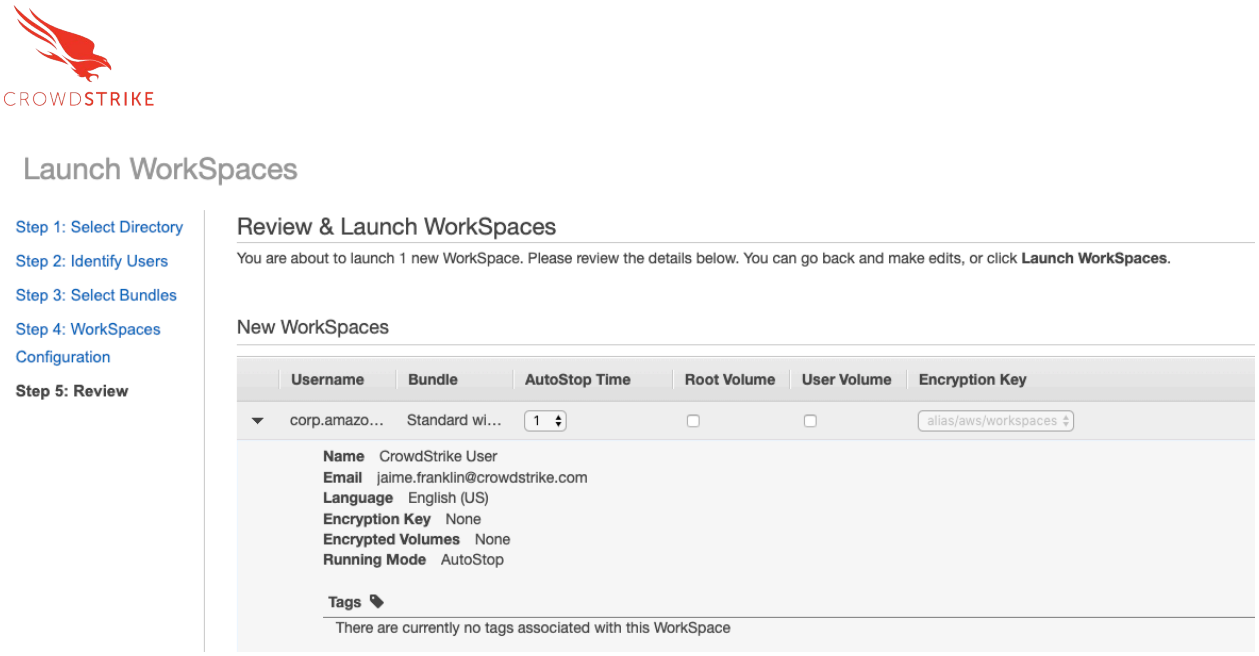
Step 7: WorkSpace Configuration

In this step you will select the running mode, encryption for volumes and manage tags, if required. It is important that you do not encrypt your volumes as we will be using this to create your golden image. Once you make your choices for tags and running mode select ***Next Step*** button.



Step 8: Review and WorkSpace Launch

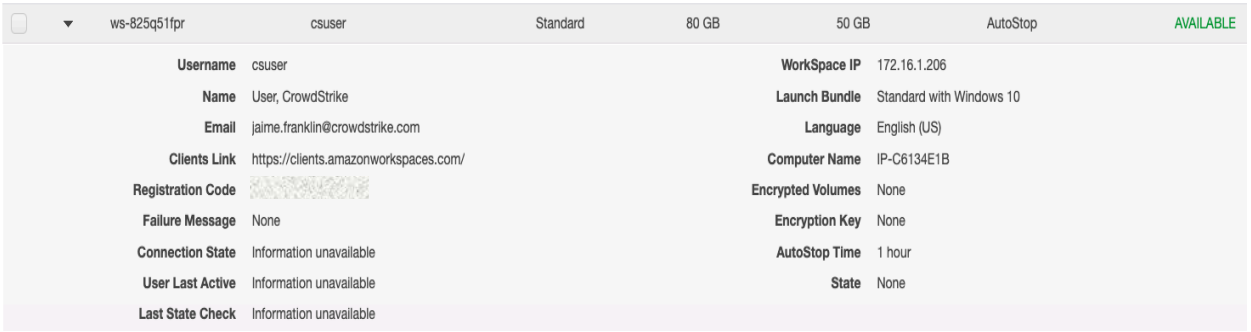
In this step review the choice you have made for the creation of the WorkSpace. Once you have completed review, click the ***Launch WorkSpaces*** button at the bottom of the screen.



Step 9: WorkSpace Creation

Your WorkSpaces environment is now creating. You will see your WorkSpace being created, beginning with the 'pending' state.

Once the WorkSpace build is complete, you will see the WorkSpace status Available. The user email address should also receive an email with information on how to set the username password and download instructions for the WorkSpace's client. This will allow you to connect to the WorkSpace.



Below is the email generated by WorkSpaces creation.

CROWDSTRIKE

Dear Amazon WorkSpaces User,

Your administrator has created an Amazon WorkSpace for you. Follow the steps below to quickly get started with your WorkSpace:

1. Complete your user profile and download a WorkSpaces client using the following link: https://d-92671d257b.awsapps.com/auth/?#invite:token=11670TvbzRB_26UWiRn5F0_IrCmfjJo7quhOyr86jzJJvRfXUHT4RFHbgsF_ijVdTiMfEZIc0b6EMfzM3x_Co3ACRfbK0k5dR6hbDB0bMWDOz1Qt_c0H2XYp0RASJCjAZ6ASv-JeZhFD1-R-QtG1k0P1s44NbHE4gAhq5atiifrWP7O6nGXASPFLilUXuktdhZSliu4s5TCqUXPQ&redirect_uri=https://clients.amazonworkspaces.com/&client_id=f6547774fae7346f

2. Launch the client and enter the following registration code

3. Login with your newly created password. Your username is csuser

You may download clients for additional devices at https://clients.amazonworkspaces.com/

Your WorkSpace is also enabled for Amazon WorkDocs - You can use Amazon WorkDocs to store, sync, and share your files. You can use the WorkDocs Sync client, an application that can automatically backup documents on your WorkSpace and sync documents to/from other devices such as a PC/Mac, so that you can access your data regardless of which desktop you are using. To use WorkDocs Sync, on your WorkSpace, click on the "Install WorkDocs Sync" desktop shortcut to complete the installation. On your PC/Mac desktop, download the client from https://amazonworkdocs.com/clients.

The first time you run WorkDocs Sync, you will need to register and login with the same credentials you use with your WorkSpace and select a folder to backup/sync. Once you've completed setup, your files will automatically sync between your PC/Mac and your WorkSpace.

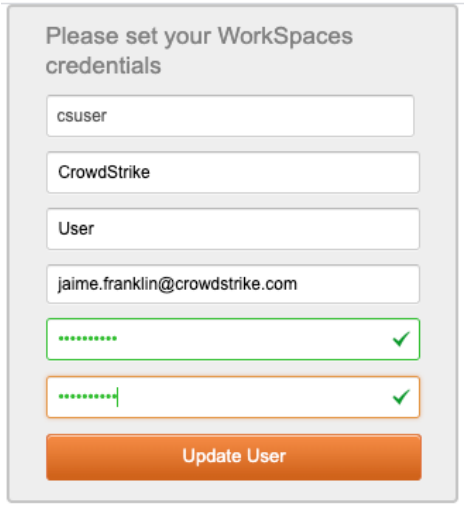
If you have any issues connecting to your WorkSpace, please contact your administrator.

Sincerely,

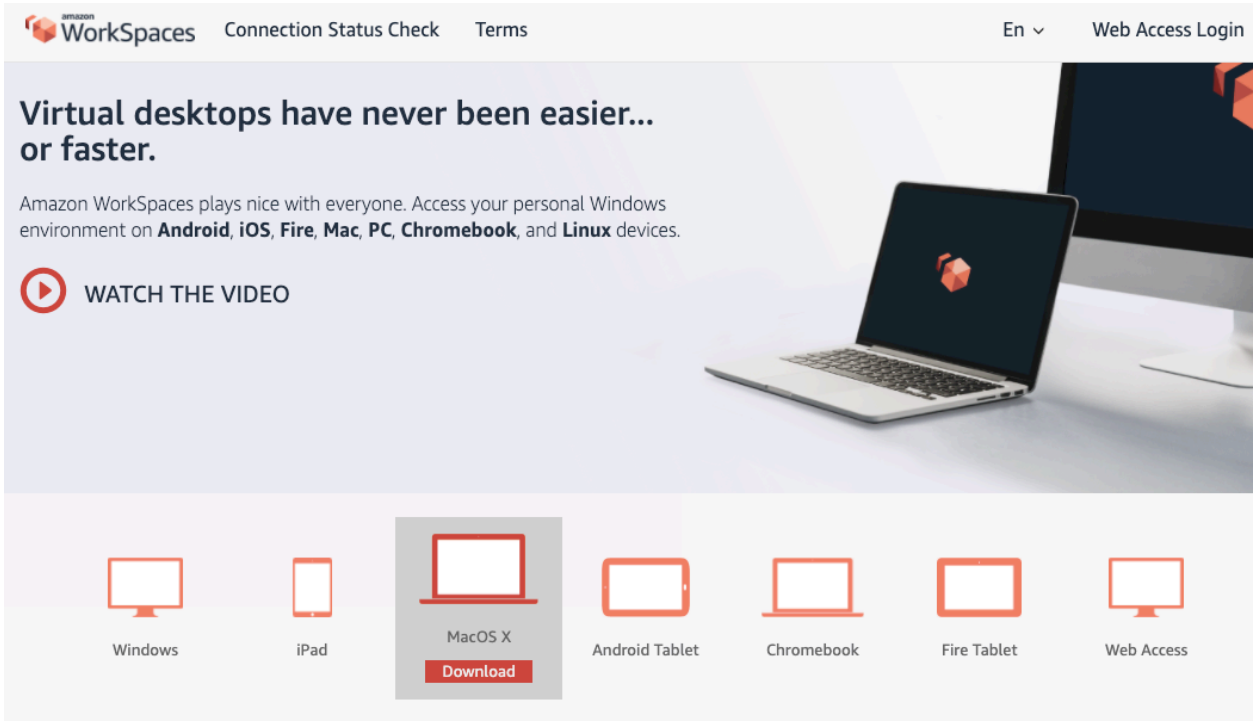
Amazon WorkSpaces

Step 10: Set WorkSpace Password

Click the link in the email to set the password for the user account used during the WorkSpace creation.



Once you have created your password, you will be taken to a website that will allow you to download the WorkSpaces Client for your OS.



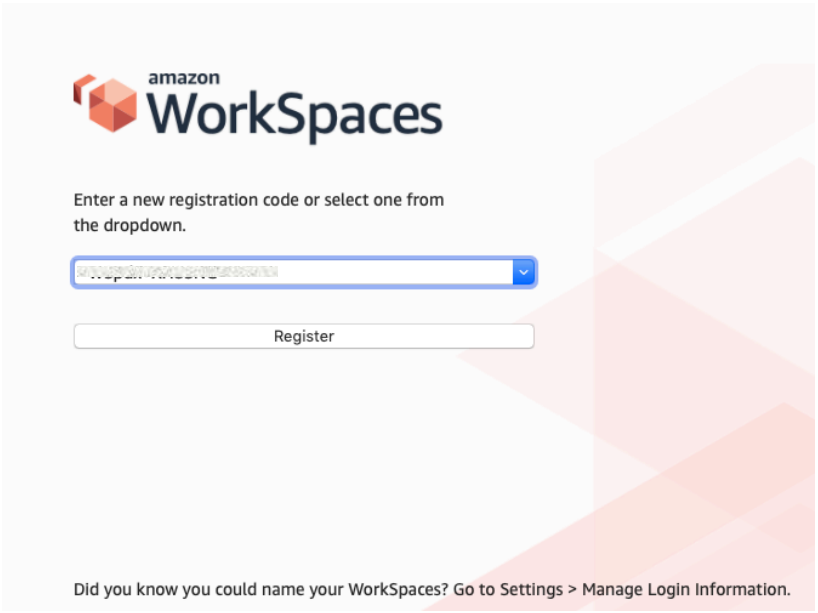
Once you have downloaded and installed the client, you are now ready to connect to your WorkSpace.

Step 11: Connecting to your WorkSpace

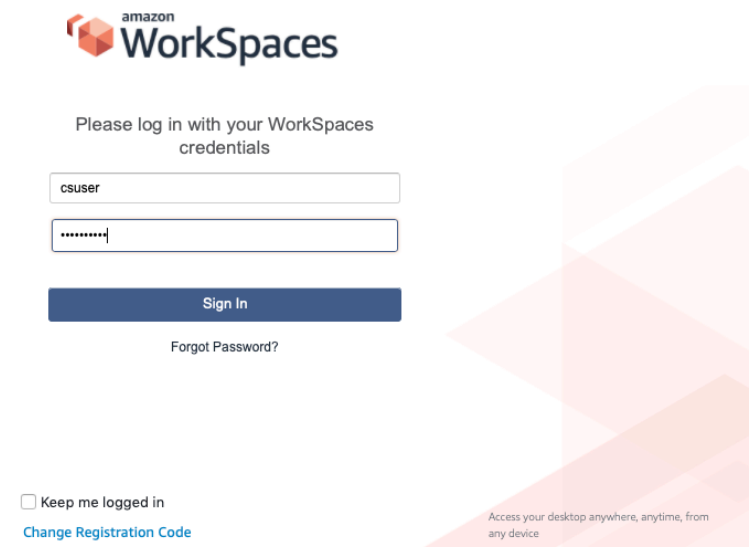
To connect to your WorkSpace, launch the WorkSpaces client software. You will need to copy your registration code that is listed in bullet 2 on the email sent from AWS.

2. Launch the client and enter the following registration code: [redacted]

In the initial login box for WorkSpaces, paste the registration code into the box and select Register.



From the next screen, you will enter the username and password that you created for the account.



This will connect you to the Amazon WorkSpaces environment. You will now be ready to install the Falcon Sensor and build your new Golden Image.

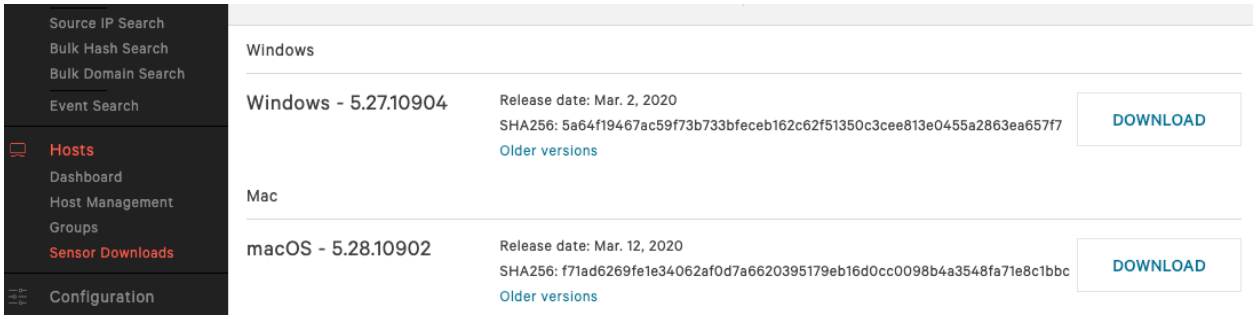
Deployment Steps: Installation of the CrowdStrike Falcon Sensor

Step 1: Install the CrowdStrike Falcon Sensor

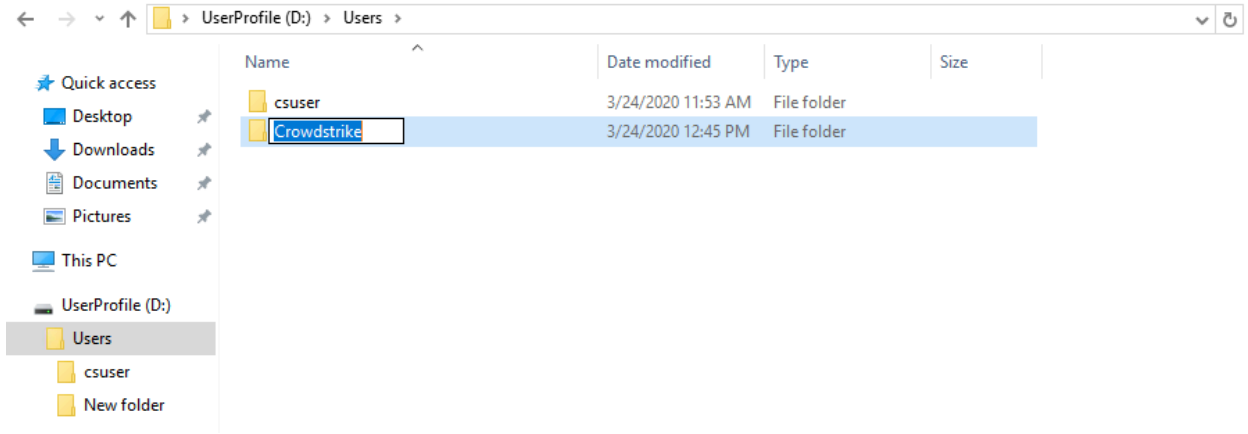
To install the CrowdStrike Falcon sensor, log into your Falcon Console to download the sensor installer file. Download the installer file and place the installer file into a folder on the D: drive of the WorkSpaces instance.

It is important to note that the entire contents of the C:\Drive and the entire D:\Users\username are included except for the some of the personal folder directories such as Contacts, Downloads, Music, etc. Since the downloads from the web browser usually are downloaded to the D:\Users\username\downloads folder, you will need to create a new folder and move the Falcon sensor installer file to that new folder.

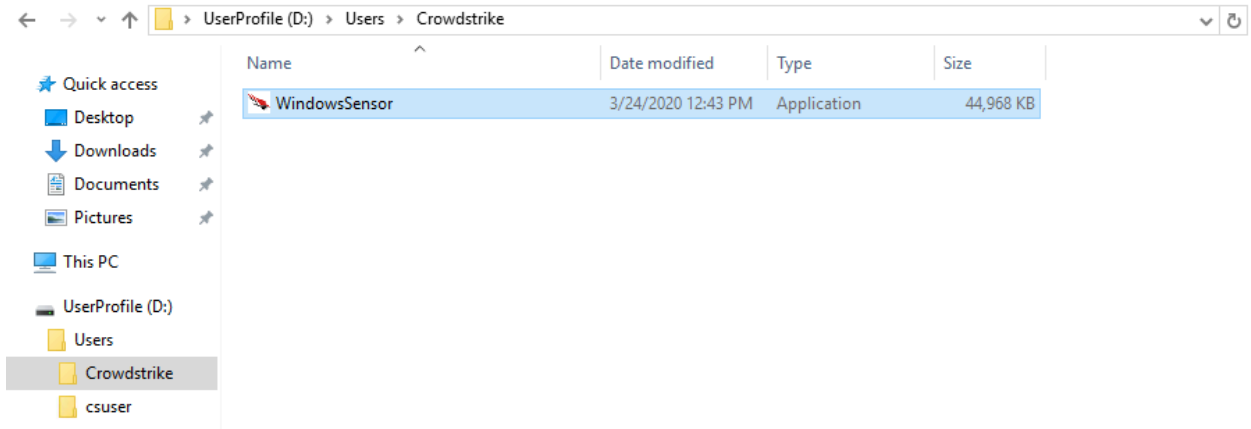
Download the Falcon Sensor installer file



Once the file is downloaded create a new folder in the D:\Users directory



Move the Falcon Sensor installer file to a new CrowdStrike folder



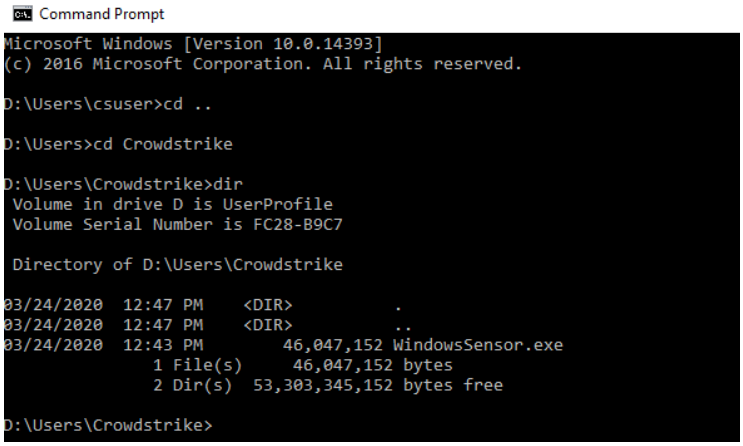
Once the installer file is in the CrowdStrike folder, we are ready to install the Falcon Sensor.

Step 2: Decide Pricing Model between Yearly or Metered Billing

You will need to decide the licensing model you would like to use for your sensor install. There are 2 models that you can choose from yearly licensing for existing license agreement or AWS metered billing that will be billed through AWS Marketplace based on hourly usage.
Sensor installation and building of the golden image of Amazon WorkSpace will depend on the selected licensing model. You have the option for creating 2 separate images - one for metered billing and one for yearly licensing.
For this document, we will detail both the installations of yearly and AWS Marketplace metered billing.

Option 1: Yearly Licensing model

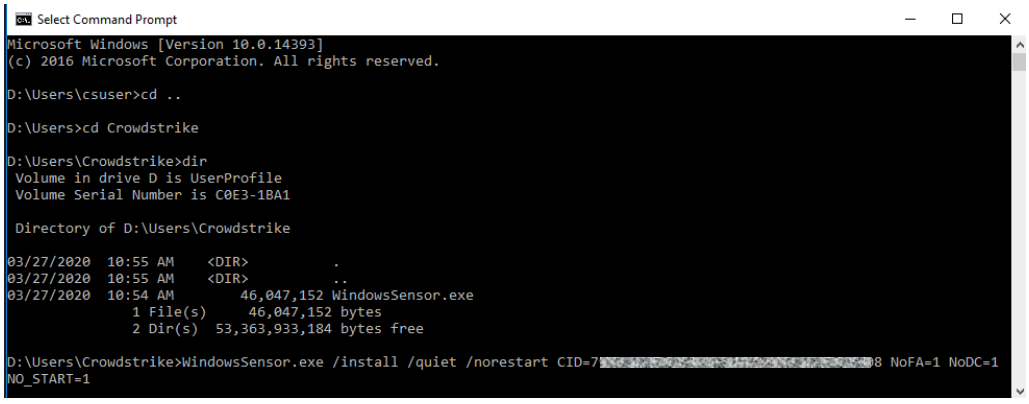
From the Amazon WorkSpace open up a Windows command prompt and navigate to D:\Users\Crowdstrike\



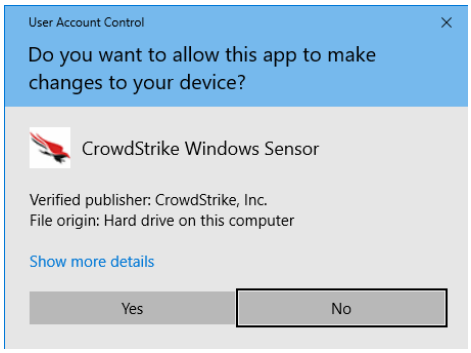
To install the Flacon sensor with a yearly license, you will need to run the following command to make sure that we identify the sensor as a VDI build that will need unique AID hardware identifiers in the console.

WindowsSensor.exe /install /quiet /norestart CID=<your CID> NoFA=1 NoDC=1 NO_START=1

In the above command, you will need to insert your Customer ID (CID) in the command above replacing <your CID> with your CID plus checksum. Your CID can be found on the sensor download page of the CrowdStrike Console.

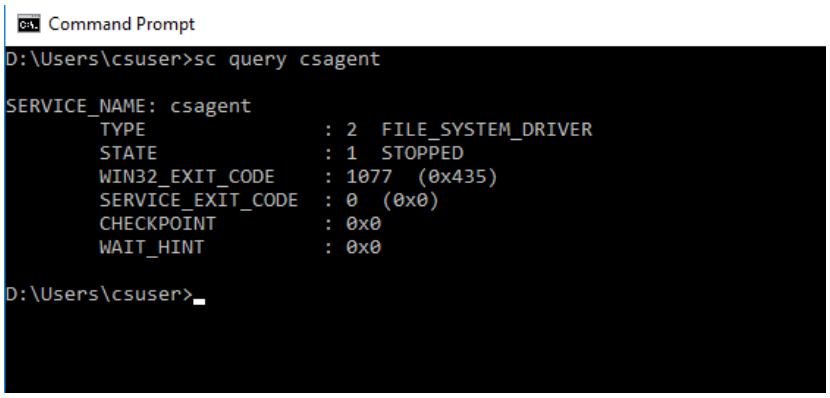


Once you run the command, you will see a window pop-up to allow the Falcon Sensor to make changes to the system. Select ***Yes*** to allow the Falcon Sensor to complete the installation.



Once the sensor install completes, you can check to validate that the sensor deployed by using the ***SC query csagent*** command at the command prompt. You will notice that the agent state shows a stopped state. This is expected due the NO_START=1 flag used in the sensor install command. This allows a new unique AID to be generated per WorkSpace that created from the image.

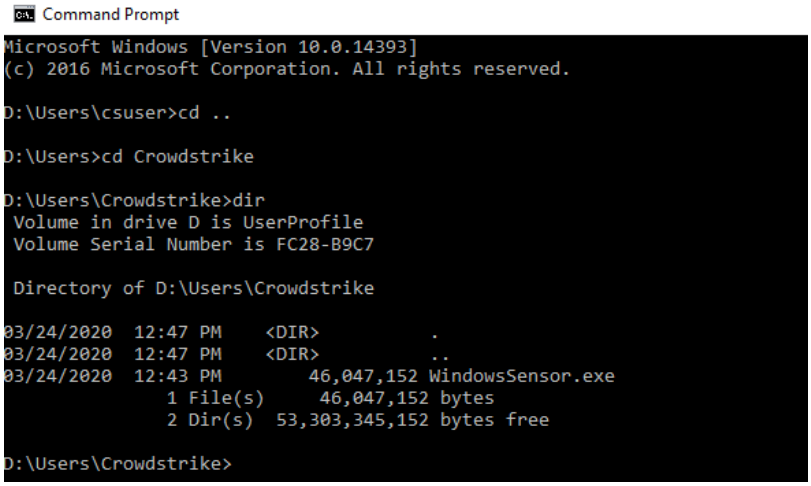
sc query csagent



Add Windows updates and software as needed for the WorkSpace image.

Option 2: Metered billing Licensing model:

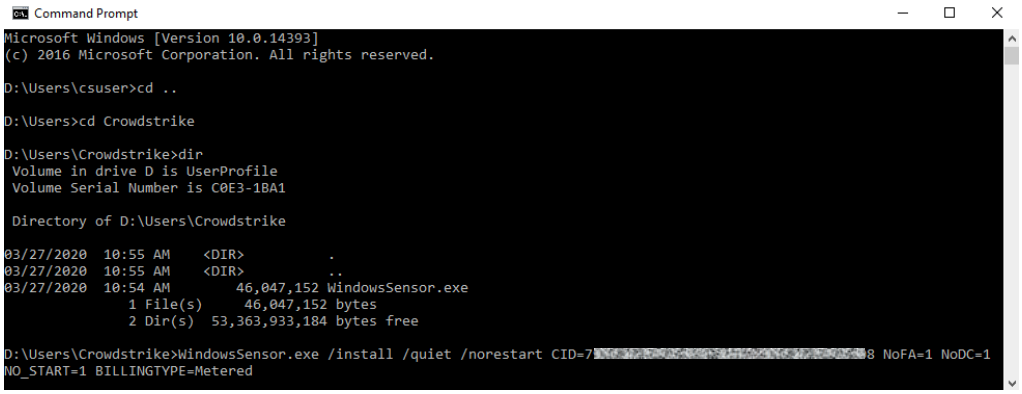
From the Amazon WorkSpace, open up a Windows command prompt and navigate to D:\Users\Crowdstrike\



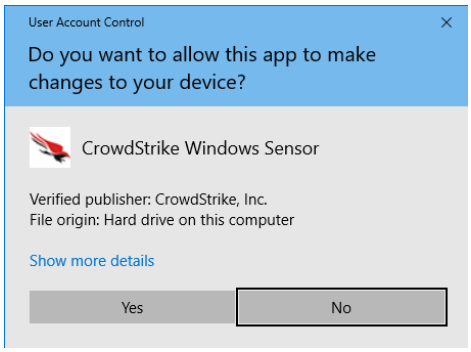
To install the Falcon sensor with metered billing, you will need to run the following command to make sure that we identify the sensor as a VDI build that will need unique AID hardware identifiers in the console.

WindowsSensor.exe /install /quiet /norestart CID=<your CID> NoFA=1 NoDC=1 NO_START=1 BILLINGTYPE=Metered

In the above command, you will need to insert your Customer ID (CID) in the command above replacing <your CID> with your CID with checksum. Your CID can be found on the sensor download page of the CrowdStrike Console.

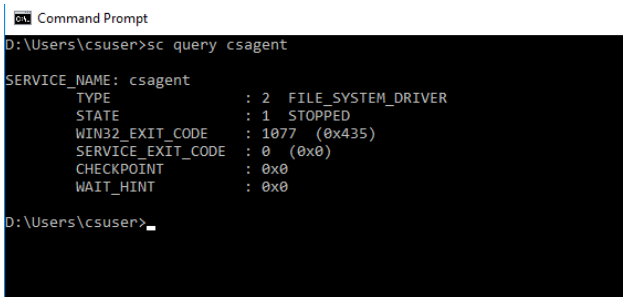


Once you run the command, you will see a window pop-up to allow the Falcon Sensor to make changes to the system. Select **Yes** to allow the Falcon Sensor to complete the installation.



Once the sensor install completes, you can check to validate that the sensor deployed by using the **SC query csagent** command at the command prompt. You will notice that the agent state shows a stopped state. This is expected due the NO_START=1 flag used in the sensor install command. This allows a new unique AID to be generated per WorkSpace that created from the image.

sc query csagent

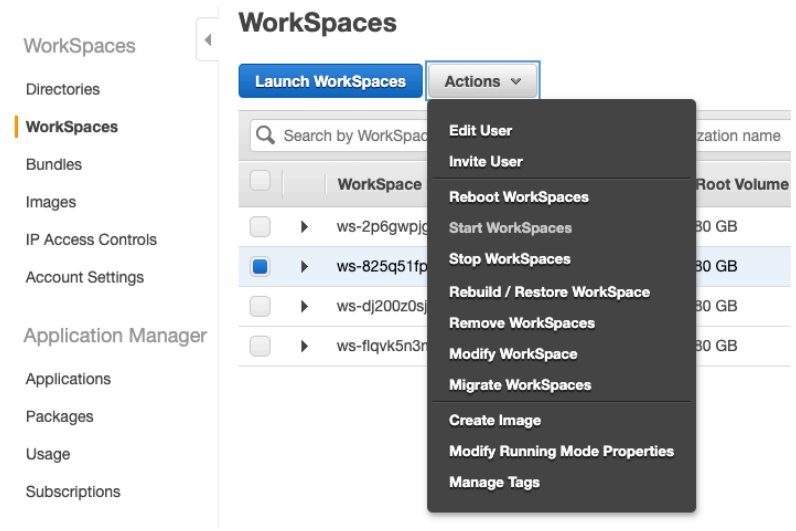


Add Windows updates and software as needed for the WorkSpace image.

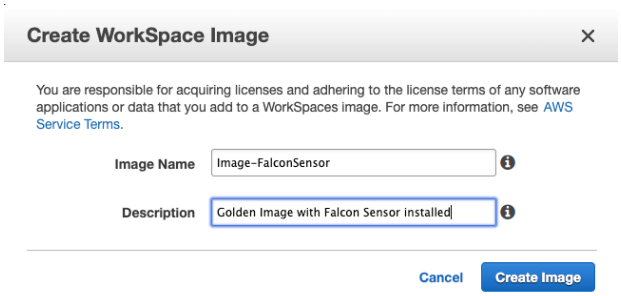
Step 3: Create Golden Image

You are now ready to create your WorkSpace image. Make sure you have logged out of your WorkSpace environment from the WorkSpace client. Validate that the WorkSpace status is in the Available status in the Aws WorkSpaces Console.

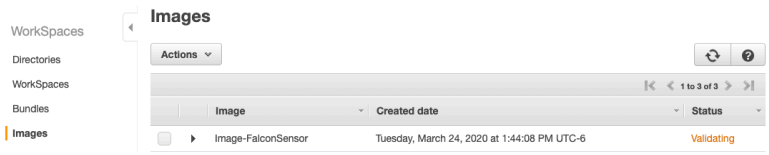
Make sure the box for the WorkSpace you created for the golden image is selected. Click on the **Actions** button and from the drop-down menu, choose **Create Image**.



You will be prompted to name your new image and provide a description of the image. After completion, click the **Create Image** button.



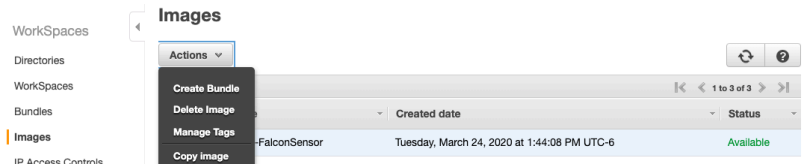
A new image will be created from your WorkSpace. This process can take up to 45 minutes to complete. You can check the status of the image build from the WorkSpaces console. You will see the status in a Validating state.



Once the image reaches the Available status, you can now create a new bundle that allows you to create a new WorkSpace with the new golden image.

Step 4: Create Bundle

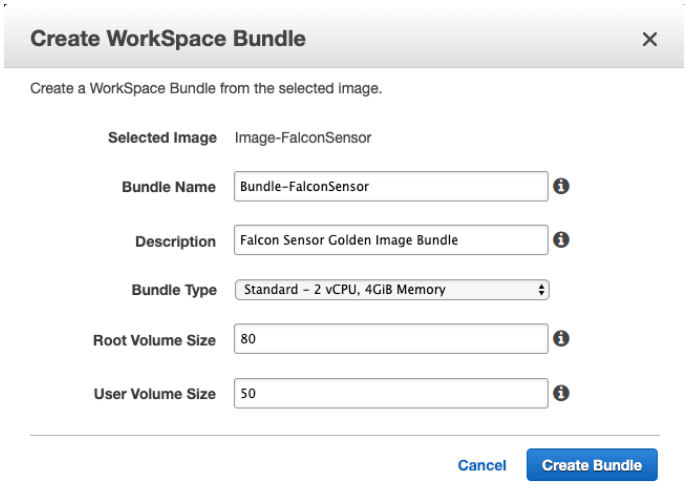
When the Image status is available, select the box next to the image and click the **Action**s drop-down menu and select **Create Bundle**.



The image you created in the last step will be listed as the Selected Image. Provide a Bundle Name and Description of the bundle.

Next select the Bundle Type. This will allow you to select the Resources (virtual CPU and Memory) required to run the applications in the WorkSpace. For this build, I have selected the standard bundle type.

Next set the Root and User Volume Sizes you would like. Once you have entered the information select **Create Bundle** at the bottom of the page.



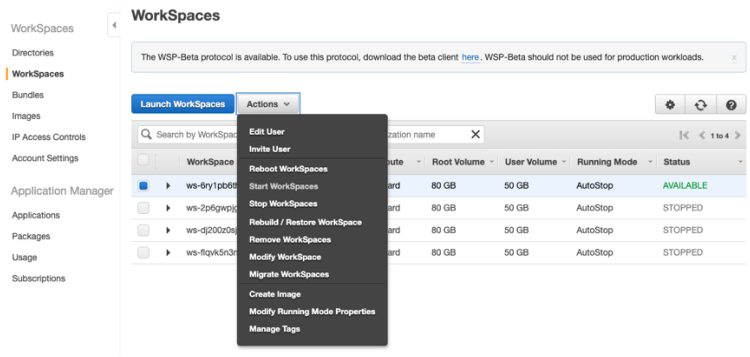
Once the bundle is created, if you select the **Bundles** tab in the WorkSpaces console, you will see your new bundle and image pair.

Step 5: Deploy a WorkSpace using the new Bundle with the baked-in Falcon Sensor

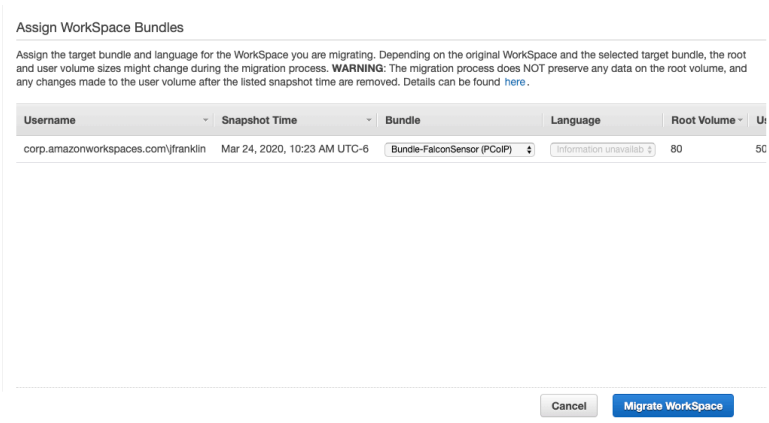
Next we will deploy a new WorkSpace with the created bundled image. Select **WorkSpaces** from the WorkSpaces console submenu.

Note: You may need to delete the WorkSpace created in the first step with the temp user (csuser). You can use the **Migrate WorkSpaces** option, if a snapshot has been created for the WorkSpace. If a snapshot has not been created, you will have to remove the WorkSpace and build a new WorkSpace.

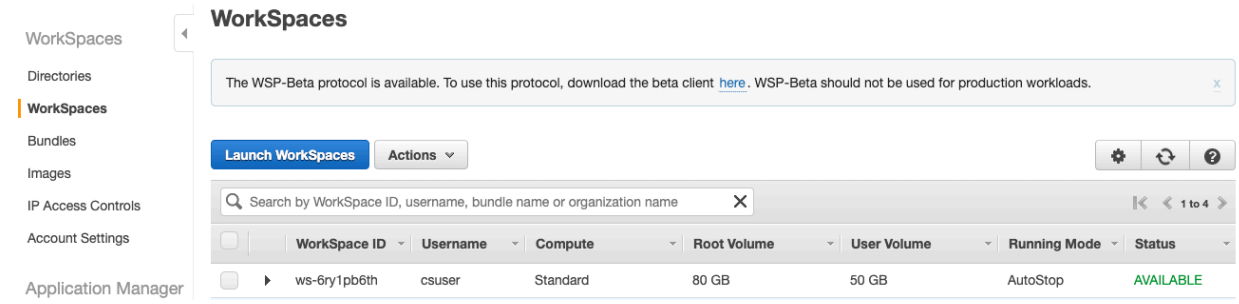
Select the box next to your WorkSpace. Select the **Modify WorkSpaces** option from the **Actions** drop-down menu.



In the **Migrate WorkSpace** menu select the Bundle you created above (Bundle-FalconSensor (PCoIP)) and select the **Migrate WorkSpace** button.



Once the migration is complete your WorkSpace should show a status of Available.

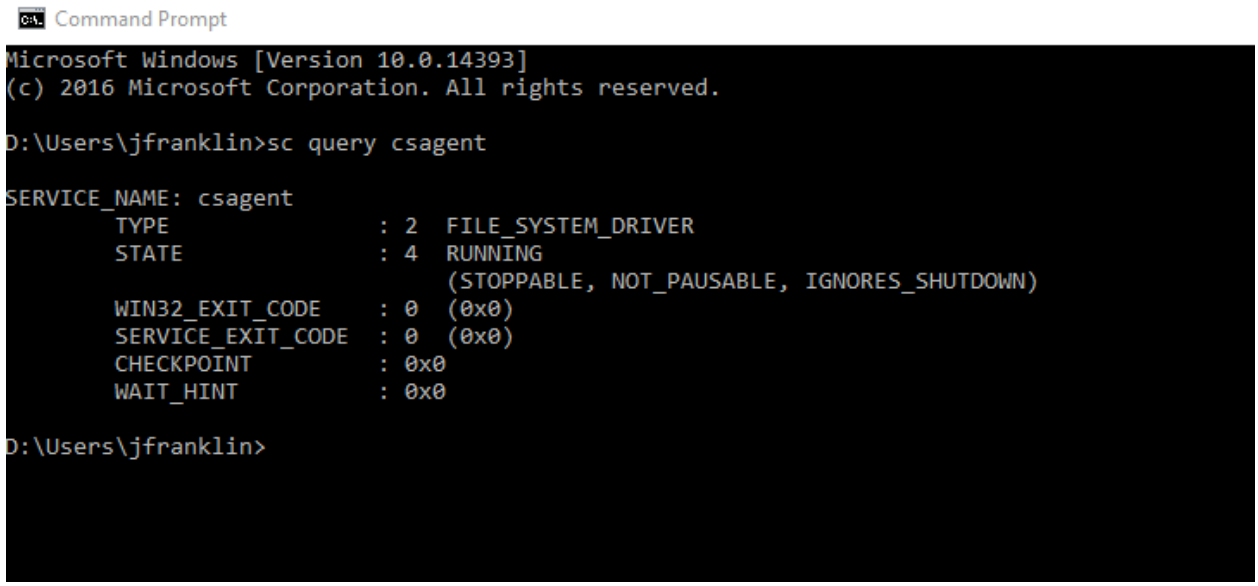


Step 6: Validate the Sensor is installed and running

Follow the steps above (Steps 9 – 11) to log into the WorkSpaces environment with the client. Once you have logged in, open a command prompt to validate the sensor is installed and running in the image. From the command prompt type the following command:

sc query csagent

The output of the command should show the following:



The state should show the Falcon sensor as Running.

This completes the build of your WorkSpace's environment with the CrowdStrike Falcon sensor deployed.
As you build new WorkSpaces, pointing the build to the custom bundle and image that was built will ensure that the Falcon sensor is running and protecting your WorkSpaces DaaS.

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Additional Resources

Learn how desktop-as-a-service (DaaS) solves the challenges you face with VDI, and how to deploy DaaS on AWS in minutes.

- Desktop-as-a-Service | AWS

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- AWS Directory Service | Amazon Web Services (AWS)
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