Encrypt S3 data using Encryption Key

Overview

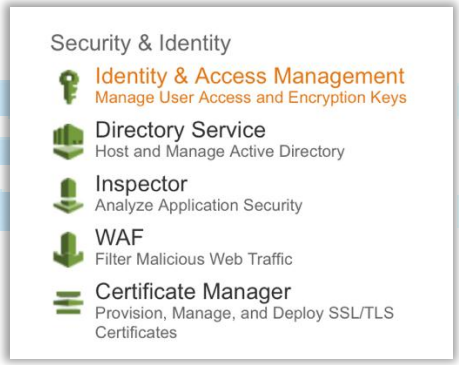
This guide introduces you to the Introduction to AWS Key Management Service (KMS) self-paced lab.

The lab will give you the basic understanding of KMS. It will demonstrate the basic steps required to get started with this service, creating keys, assigning management and usage permissions for the keys and encrypting data.

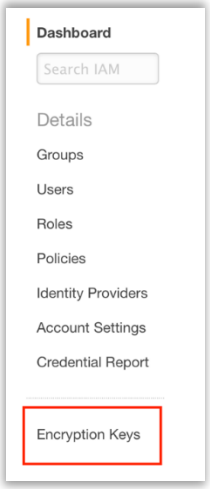
Creating Keys

You can use the IAM section of the AWS Management Console to create a customer master key (CMK).

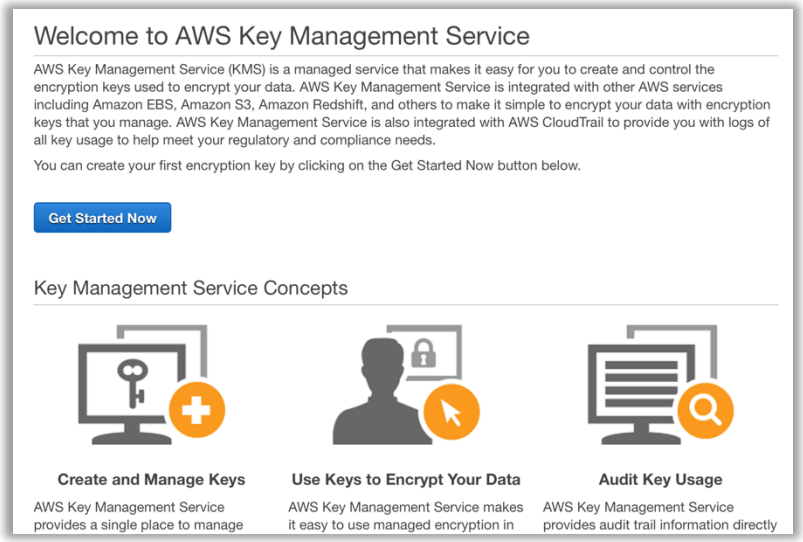
1. Login to AWS Management Console and click Identity and Access Management within Security & Identity section.



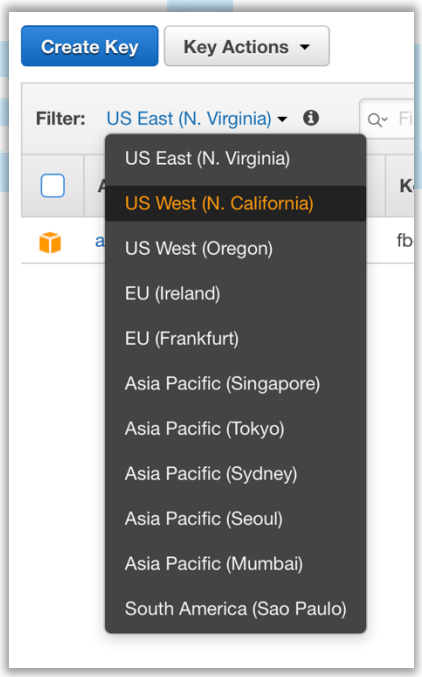
2. Click Encryption Keys on the IAM Dashboard.



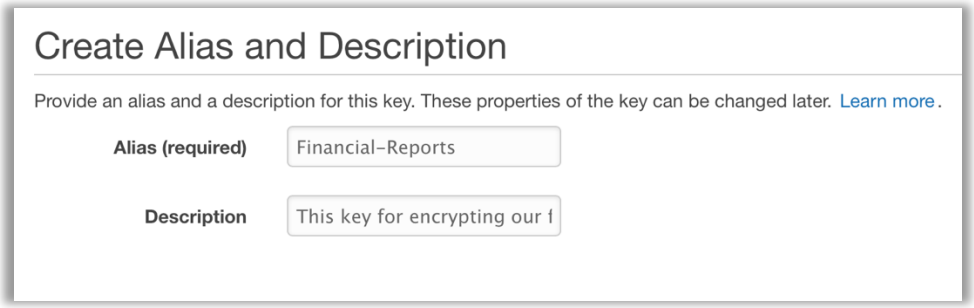
3. This will take you to AWS Key Management Service dashboard. Click Get Started Now.



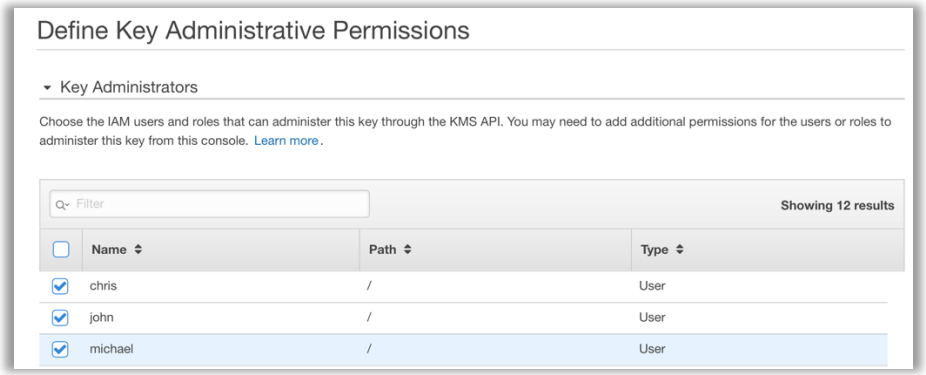
4. For Filter, choose the appropriate AWS region. Do not use the region selector in the menu bar (top right corner).



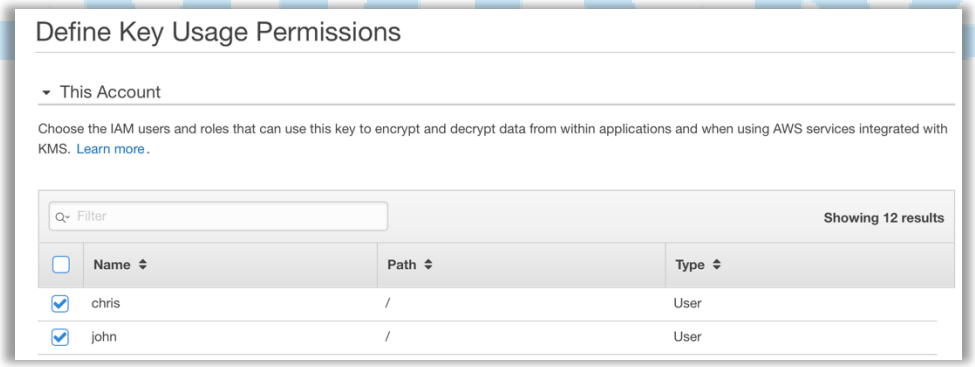
5. Choose Create Key.
6. Type an alias and a description for the CMK. Click Next Step.



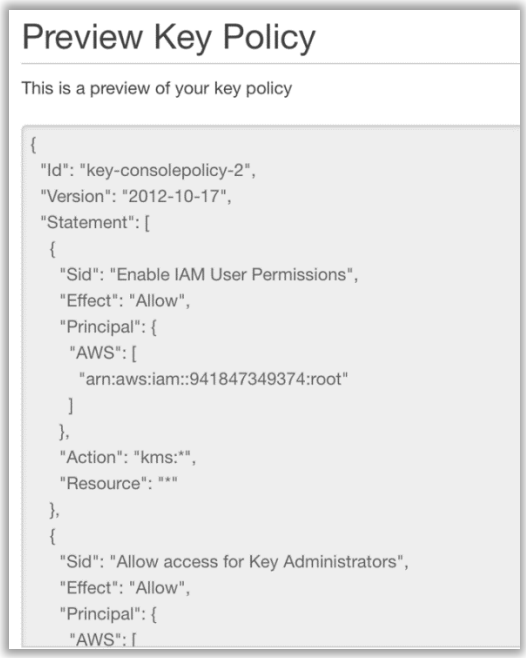
7. Select which IAM users and roles can administer the CMK. Choose Next Step.



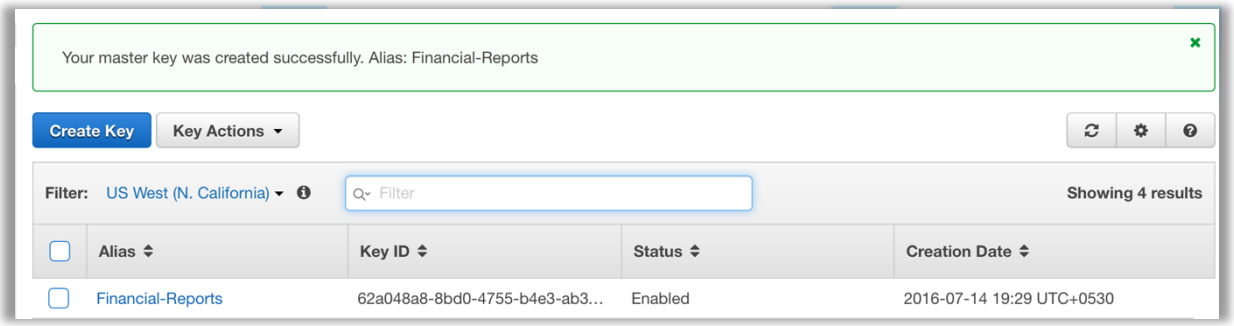
8. Select which IAM users and roles can use the CMK to encrypt and decrypt data with the AWS KMS API. Choose Next Step.



9. You will get a preview of your key policy. Choose Finish to create the CMK.



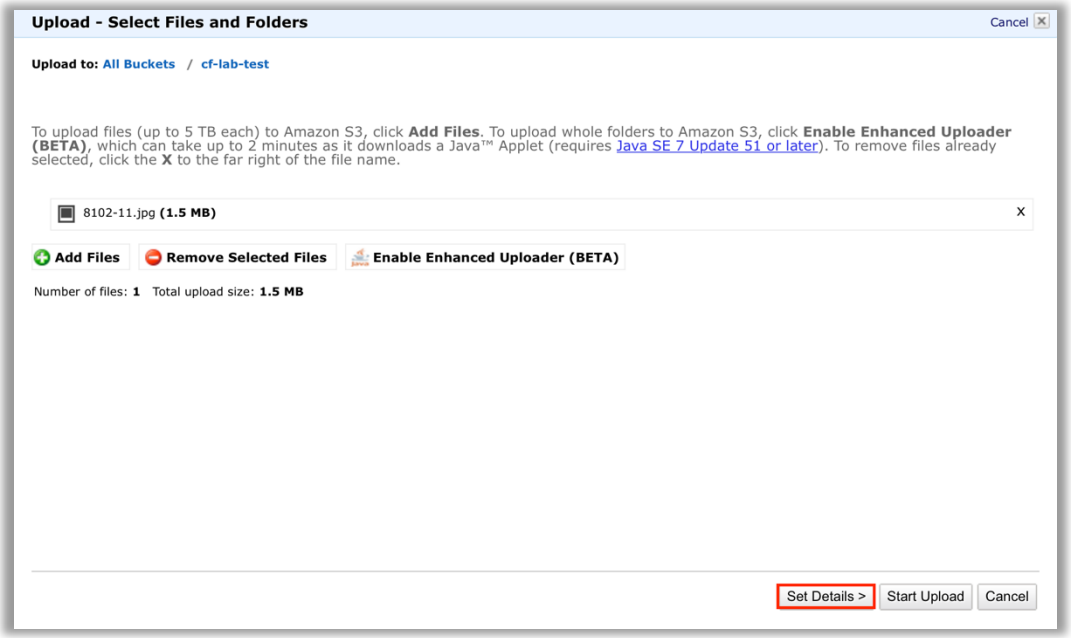
This creates your master key successfully.



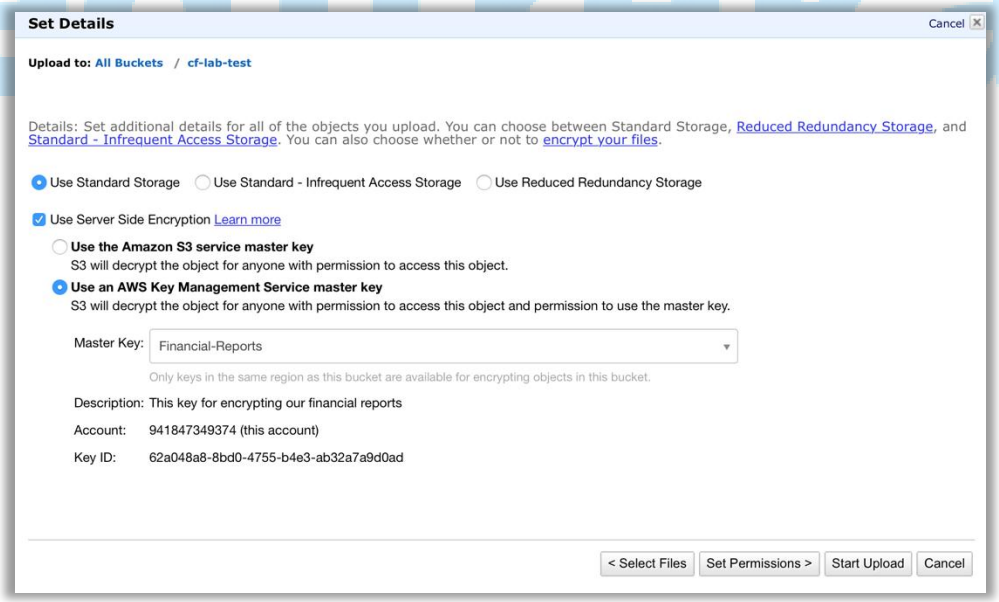
Encrypting Data in an S3 bucket

You will now upload a file to S3 and encrypt it using the encryption key you created earlier.

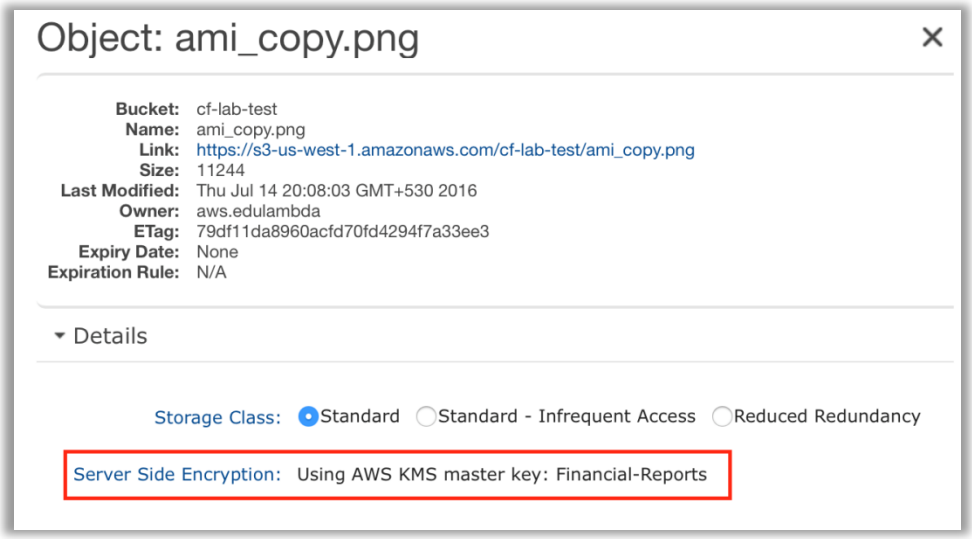
10. Open the S3 bucket and click Upload.
11. Click Add Files, then navigate to the file that you want to upload from your system and select it.
12. Click Set Details which is in the bottom right of the file upload dialog.



13. Select Use Server Side Encryption.
14. Select Use an AWS Key Management Service Master Key.
15. In the Master Key drop down box select the financial-reports key you created.
16. Click Start Upload.



17. Once the file has been uploaded right click and click Properties. Click Details to expand the details section and note that the Server Side Encryption: setting for this file is set to your encryption key.



Conclusion

Congratulations! You have now successfully:

→ Created an Encryption Key.

→ Encrypted data stored in a S3 bucket using an encryption key.