1. Create an AWS account

A screenshot of a computer

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1. Create a billing alarm [1$]

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1. Identity and Access Management [IAM]
   1. Create 3 user groups: HCS-Admins, HCS-Developers, HCS-DevOps

* I added no policies because it was not specified

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* 1. Create 6 IAM users: David, <Your\_name>, Horatiu, Laurentiu, Olivia, Adrian.Note: The users need to have AWS Management Console access and a new password needs to berequested at the next sign-in.

Example for David + tag HCS-Foundation-Program

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* 1. Assign users to groups:HCS-DevOps group: Laurentiu, OliviaHCS-Developers group: David, <Your\_name>, HoratiuHCS-Admins group: Horatiu, Laurentiu

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* 1. Add a tag to all users: HCS-Foundation-Program
* See example at 3.2 for David
  1. Add MFA for users: <Your\_name> and Horatiu
* For Dana I used Autenticator app ( from Microsoft)
* For Horatiu I used IBM Verify

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A screenshot of a computer

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1. Amazon S3
   1. Create a S3 bucket, named <yourfullname>-hcs-foundation-program in us-east-2.Eg: horatiustaicovici-hcs-foundation-program

Note: Bucket – Private, Versioning – Disable, Tag: HCS-Foundation-Program

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4.2. Download a picture with the APPLE logo (black and white) and name it apple.png

4.3. Upload apple.png file into your bucket.

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4.4. Try to open the object’s URL.

- Accessing this <https://danabalasic-hcs-foundation-program.s3.us-east-2.amazonaws.com/apple.png>

Does not work, even if I am removing the HTTPS

A screenshot of a computer

Description automatically generated

But opening directly works

**A screenshot of a computer

Description automatically generated**

A black and white apple logo

Description automatically generated

Access for the bucket is blocked, must edit the policies to give access if I want.

4.5. Enable Versioning for <yourfullname>-hcs-foundation-program

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Description automatically generated

4.6. Download another picture with the APPLE logo (color) and name it apple.png.

4.7. Upload the new apple.png file into your bucket.

A colorful logo with a green leaf

Description automatically generated

4.8. List all the apple.png versions

A screenshot of a computer

Description automatically generated

4.9. Delete apple.png object (the new object)

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

4.10. Expend Versions in order to see if the image has been deleted or not

A screenshot of a computer

Description automatically generated

4.11. Restore the old apple.png image (black and white) without re-uploading the image.

A black and white apple logo

Description automatically generated

4.12. Permanently delete all objects

A screenshot of a computer

Description automatically generated

4.13. Enable replication for <yourfullname>-hcs-foundation-program into a new bucket<yourfullname>-hcs-foundation-program-replica

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Description automatically generated

A screenshot of a computer

Description automatically generated

4.14. Download a picture with the IBM logo and name it ibm.png

4.15. Upload ibm.png file into <yourfullname>-hcs-foundation-program and check the replication.

* It appeared after a while

A screenshot of a computer

Description automatically generated

4.16. Create a life cycle policy to move data from Standard Class IA after 30 days, IA to the Glacier after90 days, and expire after 360 days.

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1. Amazon EC2
   1. Create three EC2s:

Bastion-Server -> Windows VM [in HCS-Public]

Web-Server -> Linux VM [in HCS-Public]

DB-Server -> Linux VM [in HCS-Private]

So first I should create subnets in my default VPC (10.0.0.0/20)– it doesn’t work because the default VPC is public, I cannot make a subnet private, so I must create a new VPC.

HCS-Public 10.0.1.0/24

HCS-Private 10.0.2.0/24

Created the VPC in OHIO – us-east-2

https://assistanz.com/creating-vpc-public-private-subnets/index.html

The EC2 instance needs an public IP – an Elastic IP attached available in the zone BUT – I need to enable ICMP as well in SG

https://stackoverflow.com/questions/21981796/cannot-ping-aws-ec2-instance